

**RICHTEK**  
your power partner.

**POWER MANAGEMENT**  
PRODUCT SELECTION GUIDE 2022



**RICHTEK**

## Introduction

### Who We Are

Founded in 1998, Richtek is one of the leading global analog companies in design and development of comprehensive power management IC products for consumer electronics, computers, communications equipment, industrial and automotive products. After the completion of merger with MediaTek in 2016, Richtek has broadened the product range for more diverse applications.

Richtek not only delivers the industry's innovative power management ICs, but also provides the complete system design-in service and support. With Richtek as "Your Power Partner" you can spend less time trouble-shooting issues with power management and more time working on your next big product.

### What We Offer

Richtek offers comprehensive power solutions from DC/DC regulators to power management multi-channel ICs. Richtek aims to accelerate your design with the variety of design support, such as *Richtek Designer™* the powerful online design generator and simulation tool, application notes, technical documents, and more. Additionally, you can sign up for 'My Richtek' for free samples, a selection of evaluation boards (EVBs) and the latest Richtek *technical and product sletters*.

### Quality and Reliability Commitment

Richtek has established an innovative and dynamic quality management system. As a result of this system, we have attained and continued to maintain ISO 9001, ISO 14001, ISO 45001 and ISO 26262 certifications. Richtek is committed to protecting the environment and conforming to the regulation requirements with the declaration of RoHS, the declaration of REACH and more green product files for *download*.

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# Linear Regulators

Low dropout linear regulators (LDOs) can be used in applications which require to drop a higher input voltage to a lower output voltage at relatively moderate power levels. Richtek has developed a broad portfolio of LDOs which feature high power supply ripple rejection (PSRR) to keep the output voltage free of noise and ripple, low quiescent current (Iq) to extend battery life and different packaging for various power dissipation. Our wide input-voltage LDOs can be applied in industrial applications. The high-performance AEC-Q100 LDOs are ideal for automotive applications.

## Richtek LDO's are grouped as following:

- Low Vin LDOs with Fixed/Adjustable Output Voltage (Vin max ≤ 6.5V)
- Wide Vin LDOs (Vin max ≤ 80V)
- Ultra Low Vin LDOs (Vin min ≤ 1.5V)
- Ultra Low Quiescent Current LDOs (Iq ≤ 2uA)
- Low Noise & High PSRR LDOs
- Automotive-graded and Industrial LDOs

## Low Vin LDOs with Fixed Output Voltage

Vin max ≤ 6.5V: This selection table is suitable for general linear regulator building block requiring minimal external components.

Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current		Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)				
RT9169	2	6	1.2	5	100	4	450@0.1A		Enable Input (Low)	SOT-23-3; SOT-23-5; SOT-89; TO-92	√
RT9169H	2	6	1.2	5	100	4	450@0.1A		Enable Input (High)	SOT-23-5	√
RT9030	1.65	5.5	1	3.3	150	25	100@0.15A		Enable Input	SC-70-5; WDFN1.6x1.6-6L	√
RT9073A	1.2	5.5	0.9	3.3	250	1	450@0.25A		Enable Input; Low Iq; Tiny package	ZQFN1x1-4; SC-82	√
RT9083	1.2	5.5	0.9	3.3	250	30	450@0.25A		Enable Input	TSOT-23-5	√
RT9086	2.2	5.5	1.2	4.5	250	16	120@0.25A		Enable Input; Ultra-Low Noise; Tiny package	WL-CSP0.67x0.67-4(BSC); SOT-25; ZQFN1x1-4	√
RT9078	1.2	5.5	0.8	3.45	300	2	150@0.3A		Enable Input; Low Iq	TSOT-23-5; ZQFN1x1-4	√
RT9013B	2.2	5.5	1.2	3.5	300	25	125@0.3A		Enable Input; Ultra-Low Noise	WDFN1.6x1.6-6; SC-70-5	√
RT9193	2.5	5.5	1.5	5	300	90	220@0.3A		Enable Input; Various packages	MSOP-8; (T)SOT-23-5; WDFN2x2-6; SC-70-5	√
RT9198	2.5	5.5	1.5	5	300	90	220@0.3A		Enable Input	SOT-23-3; (T)SOT-23-5; SC-70-5; WDFN2x2-6L; MSOP-8; SC-82	√



Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT9166	2.8	5.5	1.2	4.5	300	220	230@0.3A	Various 3-lead packages	SOT-223; SOT-23-3; SOT-89; TO-92; TO-252	√
RT9167	2.9	7	1.5	5	300	90	350@0.3A	Enable Input; Ultra-Low Noise	SOP-8; SOT-23-5	√
RT9011	2.5	5.5	1.2	3.5	300/300	29/29	240@0.3A	Dual LDO; Enable Input	TSOT-23-6; WDFN2x2-8; WDFN3x3-8; WDFN1.6x1.6-6; WDFN3x3-10	√
RT9055	1.5	5.5	0.9	3.5	300/300	29/29	240@0.3A	Dual LDO; Enable Input	WL-CSP0.8x1.2-6	√
RT9013	2.2	5.5	1.2	3.3	500	25	250@0.5A	Enable Input; Ultra-Low Noise	SC-70-5; SOT-25; WDFN2x2-6; SC-82	√
RT9020	2.2	5.5	1.2	3.3	500	25	250@0.5A	Adj. Soft-Start; Enable Input	SC-70-5; SOT-23-5	√
RT9041E	1	5.5	0.8	2.5	500	160	300@0.5A	Enable Input; Power Good	WDFN2x2-8	√
RT9167A	2.9	7	1.5	5	500	90	600@0.5A	Enable Input; Ultra-Low Noise	SOP-8; SOT-23-5	√
RT9186A	2.5	5.5	0.8	4.5	500	190	160@0.5A	Enable Input; Power Good; Adj. Output for option	MSOP-8; VDFN3x3-8	√
RT9080	1.2	5.5	0.8	3.3	600	2	310@0.6A	Enable Input	ZQFN1x1-4; TSOT-23-5	√
RT9166A	2.8	5.5	1.2	4.5	600	220	580@0.6A	OCP	SOT-223; SOT-23-3; SOT-89; TO-92; TO-252	√
RT9187	2.5	5.5	0.8	4.5	1000	380	240@1A	Enable Input; Adj. Output for Options	VDFN3x3-8; PSOP-8	√

## Low Vin LDOs with Adjustable Output Voltage

Adjustable output voltage via resistor divider and Vin max ≤ 6.5V: This selection table is suitable for general linear regulator building block with extra flexibility of adjustable output voltage and other features such as low noise or high PSRR.

Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT9179	3	5.5	1.175	4.5	300	150	300@0.3A	Enable Input	SOT-23-5	√
RT9043	2.2	5.5	1.2	5	400	35	230@0.4A	Enable Input; High PSRR	SOT-23-5	√
RT9053A	2.2	5.5	0.8	5	400	35	230@0.4A	Enable Input	SOT-23-5; WDFN2x2-6	√
RTQ2531W	1.7	5.5	0.6	5.3	500	160	150@0.5A	Enable Input; High PSRR 48dB @500kHz; Low Noise 25uVrms; Industrial Grade	WDFN2x2-8S	√
RT9065	2.2	5.5	0.8	4.5	500	90	370@0.5A	Enable Input; Ultra-Fast; Ultra-Low Noise	SOT-23-6	√
RT9179A	3	5.5	1.175	4.5	500	150	400@0.5A	Enable Input	SOP-8	√



Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT9187B	2.5	5.5	0.8	4.5	600	380	100@0.5A	Enable Input; Ultra-Fast; Ultra-Low Noise	SOT-23-5	√
RT9187C	2.5	5.5	0.8	4.5	600	300	100@0.5A	Enable Input; Ultra-Fast; Ultra-Low Noise	SOT-23-5	√
RT2519	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Adj. Soft-Start; High PSRR 38dB @1MHz; Low Noise of 15.6 x Vout Vrms; Industrial Grade	VDFN3x3-8A	√
RTQ2510-QA	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Ultra-Low Noise; High PSRR; AEC-Q100	VDFN3x3-8	√
RTQ2521A	1.1	6.5	0.5	5.5	1500	3700	110@1.5A	Enable Input; Power Good; Adj. Soft-Start; High PSRR 38dB @500kHz; Low Noise 7uVrms; Industrial Grade	WDFN3x3-8E	
RT9048A	1.6	6	0.65	5.5	1500	700	180@1.5A	Enable Input; Low Dropout; Industrial Grade	VDFN3x3-8	√
RT9094A	0.8	5.5	0.8	3.6	2000	-	100@2A	2.7-5.5V VBIAS; Enable Input; Adj. Soft-Start; Power Good	WDFN3x3-10	
RTQ2520	1.1	6.5	0.5	5.5	2000	3700	125@2A	Enable Input; Power Good; Adj. Soft-Start; High PSRR 38dB @500kHz; Low Noise 7uVrms; Industrial Grade	WDFN3x3-8E	√
RTQ2532W	1.1	6.5	0.8	5.5	2000	3700	125@2A	Enable Input; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); High PSRR 40dB @500kHz; Low Noise 6.8uVrms; Industrial Grade	VQFN5x5-20	√
RTQ2532N	1.1	6.5	0.8	5.5	2000	3700	125@2A	Enable Input; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); High PSRR 40dB @500kHz; Low Noise 6.8uVrms; Industrial Grade	VQFN3.5x3.5-20	
RTQ9091	1.4	6	0.5	5.5	2000	700	240@2A	Enable Input; Low Dropout; Industrial Grade	PSOP-8	
RTQ2516-QT	1.4	6	0.5	5.5	2000	700	240@2A	Enable Input; Low Dropout; AEC-Q100	PSOP-8	√
RT9048	1.4	6	0.5	5	2000	700	240@2A	Enable Input; Low Dropout; Industrial Grade	PSOP-8	√
RT9059A	1	5.5	0.8	4	3000	600	350@3A	Enable Input; Power Good	WDFN3x3-10	√
RTQ2533W	1.1	6.5	0.8	5.5	3000	4300	110@3A	Enable Input; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); High PSRR 40dB @500kHz; Low Noise 6.8uVrms; Industrial Grade	VQFN3.5x3.5-20	√
RTQ2513T	1.1	6.5	0.5	5.5	3000	4200	110@3A	Enable Input; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); High PSRR 40dB @500kHz; Low Noise 7uVrms; Industrial Grade	WQFN3.5x3.5-20	√
RTQ2537	1.1	6.5	0.8	5.5	4000	4300	110@4A	Enable Input; Power Good; High PSRR 40dB @500kHz; Low Noise 6.8uVrms; 0.8-5.5Vout (Set by a Resistive Divider); 0.8-3.95Vout (Set via PCB Layout)	VQFN3.5x3.5-20	



## Wide Vin LDOs

LDOs with input voltage higher than 6.5V can be used in applications with wider input voltage range up to 80V. Please note that the LDO power dissipation is  $(V_{in}-V_{out}) * I_{load}$  so a high  $(V_{in} - V_{out})$  drop will quickly lead to high LDO dissipation at moderate load currents.

Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT9072B	4.5	80	1.25	60	20	23	180@0.02A	Very Wide Input Voltage Range; Enable Input (B: high shutdown)	SOT-23-5	√
RT9070B	4.5	70	1.25	60	20	23	180@0.02A	Very Wide Input Voltage Range	SOT-23-5	√
RT9068	4.5	60	1.25	60	50	30	150@0.05A	Very Wide Input Voltage Range; Enable Input	MSOP-8(PP); PSOP-8	√
RT9022	5	20	1.25	18	60	40	200@0.03A	Adj. Soft-Start; Enable Input	SOT-23-6; SC-70-6	√
RT9058	3.5	36	2.5	12	100	2	300@0.01A	Ultra-Low Noise; High PSRR; Low Iq	SOT-23-3; SOT-89	√
RT9074	4.5	60	1.23	60	100	30	240@0.1A	Very Wide Input Voltage Range; Enable Input	PSOP-8; SOT-223	√
RTQ2569-QA	3.5	36	2.5	12	200	2	200@0.01A	Low Iq; Enable Input; <a href="#">AEC-Q100</a>	WDFN3x3-8	√
RT9069	3.5	36	2.5	12	200	2	200@0.01A	Enable Input; Low Dropout; Low Iq	PSOP-8; SOT-23-5; SOT-89-5; UDFN1.6x1.6-6	√
RT9077	3.5	14	2.5	9	200	70	400@0.1A	Enable Input	TSOT-23-5	√
RT9161	4.5	12	1.5	5	300	110	450@0.3A	Electrolytic Cout	SOT-223; SOT-23-3; SOT-89	√
RT9161A	4.5	12	1.5	5	500	110	750@0.5A	Electrolytic Cout	SOT-223; SOT-23-3; SOT-89	√
RT9194	4.5	13.5	0.8	12	1000	450	-	LDO Controller; Power Good; Electrolytic Cout	SOT-23-6	√
RT9008	4.5	13.5	0.8	-	-	300	-	LDO Controller; Adj. Soft-Start	SOT-23-6	√



## Ultra Low Vin LDOs

Ultra-low Vin LDOs are specially designed for low drop-out voltage in applications with relatively low input voltage. Some of these LDOs require an external low power bias voltage which needs to be at least 1.5V higher than the output voltage and thereby limits the maximum output voltage for these parts. LDOs with internal charge pump do not need the external bias voltage and have a wider output voltage range.

Part Number	Vin		Vout		Iout max (mA)	Iq typ (uA)	Vdropout@ rated current typ (mV)	Features	Vbias	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)							
RT9081A	0.8	5.5	0.8	3.6	500	80	140@0.5A	Enable Input; ±1.5% output accuracy	Needs Ext. 2.4 ~ 5.5V Bias Voltage	ZADFN1.2x1.2-6	√
RT9081D	0.8	5.5	0.8	3.6	500	80	140@0.5A	Enable Input; ±1% output accuracy	Needs Ext. 2.4 ~ 5.5V Bias Voltage	ZADFN1.2x1.2-6	
RT9085A	0.8	5.5	0.5	3.9	1000	35	60@1A	Enable Input; Low Noise; High PSRR; Tiny Package	Needs Ext. 3 ~ 5.5V Bias Voltage	WL-CSP0.8x1.2-6 (BSC)	√
RTQ2521A	1.1	6.5	0.5	5.5	1500	3700	110@1.5A	Enable Input; Adj. Soft-Start; Power Good; Low Noise; High PSRR	Int. Charge Pump	WDFN3x3-8E	
RTQ2522A	0.8	5.5	0.8	3.6	2000	1000	135@2A	Adj. Soft-Start; Power Good;	Needs Ext. 2.7 ~ 5.5V Bias Voltage	WDFN3x3-10	√
RTQ2532W	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-Low Noise 10µV; Ultra High PSRR 40dB @500kHz; Adj. Soft -Start; Industrial Grade	Int. Charge Pump	VQFN5x5-20	√
RTQ2532N	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-low Noise 10µV; Ultra High PSRR 40dB @500kHz; Adj. Soft -Start; Industrial Grade	Int. Charge Pump	VQFN3.5x3.5-20	
RTQ9091	1.4	6	0.5	5.5	2000	700	240@2A	Enable Input; Low Dropout; Industrial Grade	Int. Charge Pump	PSOP-8	
RTQ2533W	1.1	6.5	0.8	5.5	3000	4300	110@3A	Ultra-low Noise 10µV; Ultra-high PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	Int. Charge Pump	VQFN3.5x3.5-20	√
RT9059	1	5.5	0.8	4	3000	600	350@3A	Enable Input; Power Good	Needs Ext. 3 ~ 5.5V Bias Voltage	PSOP-8; WDFN3x3-10	√
RT9059B	1	5.5	0.8	4	3000	600	350@3A	1% Vref; Enable Input; Power Good	Needs Ext. 3 ~ 5.5V Bias Voltage	WDFN3x3-10	
RTQ2513T	1.1	6.5	0.5	5.5	3000	4200	110@3A	Ultra-low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	Int. Charge Pump	WQFN3.5x3.5-20	√
RTQ2537	1.1	6.5	0.8	5.5	4000	4300	110@4A	Enable Input; Ultra-low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Power Good	Int. Charge Pump	VQFN3.5x3.5-20	





## Ultra Low Quiescent Current LDOs

LDOs with ultra-low quiescent current have an important feature that reduces LDO ground current at light load and helps extend battery life in portable applications. Richtek's low Iq products also have dynamic ground current that will quickly increase ground current when load increases. This helps improve load transient response, which makes it ideal for applications that run in burst mode conditions. All low Iq LDOs are fixed output voltage versions.

Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT2560Q	3.5	36	2.5	12	100	2	320@0.01A	AEC-Q100	PSOP-8	√
RT9058	3.5	36	2.5	12	100	2	300@0.01A	Ultra-Low Noise; High PSRR	SOT-23-3; SOT-89	√
RTQ2569-QA	3.5	36	2.5	12	100	2	200@0.01A	Enable Input; AEC-Q100	WDFN3x3-8	√
RT9069	3.5	36	2.5	12	200	2	200@0.01A	Enable Input	PSOP-8; SOT-23-5; SOT-89-5; UDFN1.6x1.6-6	√
RT9073A	1.2	5.5	0.9	3.3	250	1	450@0.25A	Enable Input; Tiny Packages	ZQFN1x1-4; SC-82	√
RT9078	1.2	5.5	0.8	3.45	300	2	150@0.3A	Enable Input	TSOT-23-5; ZQFN1x1-4	√
RT9080	1.2	5.5	0.8	3.3	600	2	310@0.6A	Enable Input	ZQFN1x1-4; TSOT-23-5	√



## Low Noise & High PSRR LDOs

For noise-sensitive systems to filter out input ripple and provide low noise/high PSRR at the output.

Part Number	Vin		Vout		Iout	Iq	Vdropout@ rated current	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (uA)	typ (mV)			
RT9058	3.5	36	2.5	12	100	2	300@0.01A	Ultra-Low Noise; High PSRR; Low Iq	SOT-23-3; SOT-89	✓
RTQ2510-QA	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Ultra-Low Noise; High PSRR; <a href="#">AEC-Q100</a>	VDFN3x3-8	✓
RT2519W	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Ultra-Low Noise; Ultra-High PSRR; High BW; Industrial Grade	VDFN3x3-8A	✓
RTQ2521	1.1	6.5	0.8	5.5	1200	3700	75@1.2A	Ultra-Low Noise 6µVrms; Ultra-High PSRR 38dB @500kHz; Power Good; Industrial Grade	WDFN3x3-8E	✓
RTQ2521A	1.1	6.5	0.5	5.5	1500	3700	110@1.5A	Enable Input; Ultra-Low Noise; High PSRR; OCP; Power Good; Industrial Grade	WDFN3x3-8E	
RTQ2532W	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-Low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN5x5-20	✓
RTQ2532N	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-Low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN-20L 3.5x3.5	
RTQ2513T	1.1	6.5	0.5	5.5	3000	4200	110@3A	Adj. Soft-Start; Enable Input; Ultra-Low Noise; High PSRR; OCP; Power Good	WQFN3.5x3.5-20	✓
RTQ2533W	1.1	6.5	0.8	5.5	3000	4300	110@3A	Ultra-Low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN3.5x3.5-20	✓
RTQ2537	1.1	6.5	0.8	5.5	4000	4300	110@4A	Enable Input; Ultra-Low Noise 10µV; Ultra-High PSRR 40dB @500kHz; Power Good; Industrial Grade	VQFN3.5x3.5-20	



## Automotive Graded & Industrial LDOs

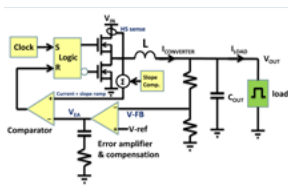
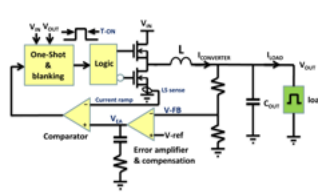
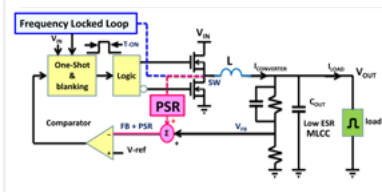
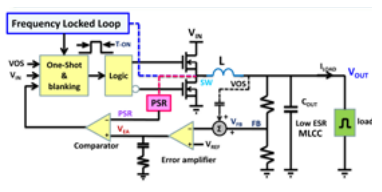
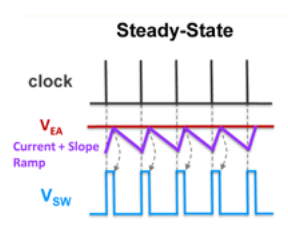
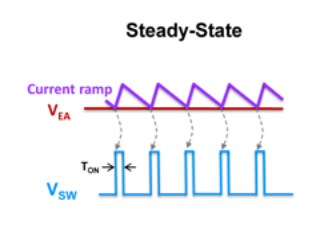
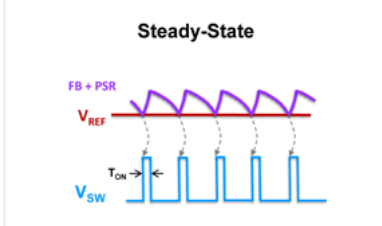
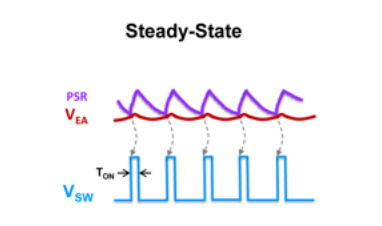
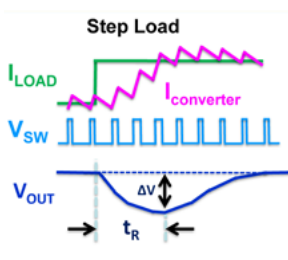
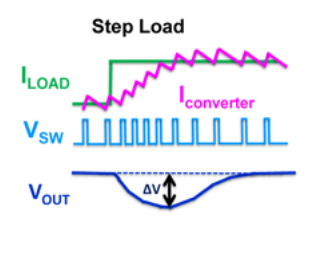
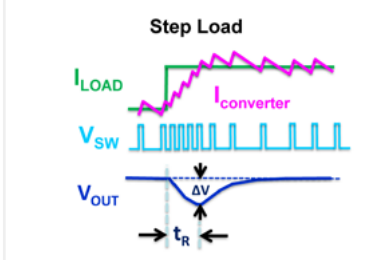
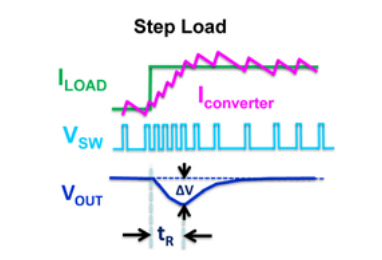
Automotive graded LDOs are fully AEC-Q100, specifically designed to meet automotive requirements, such as low quiescent current for always on systems, or low noise and High PSRR for noise sensitive applications.

Part Number	Vin		Vout		Iout max (mA)	Iq typ ( $\mu$ A)	Vdropout@ rated current typ (mV)	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)						
RT2560Q	3.5	36	2.5	12	100	2	320@0.01A	Low Iq; AEC-Q100	PSOP-8	
RTQ2569-QA	3.5	36	2.5	12	200	2	200@0.01A	Low Iq; Enable Input; AEC-Q100	WDFN3x3-8	√
RTQ2511-QA	3.5	14	2.5	9	200	2	400@0.1A	Enable Input; OCP; AEC-Q100	WDFN3x3-8	
RT2517B	2.2	6	1.2	5	1000	700	200@1A	Enable Input; OCP; AEC-Q100	PSOP-8	
RTQ2510-QA	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Ultra-Low Noise; High PSRR; AEC-Q100	VDFN3x3-8	√
RT2519	2.2	6	0.8	5.5	1000	190	170@1A	Enable Input; Ultra-Low Noise; Ultra High PSRR; High BW; Adj. Soft-Start; Industrial Grade	VDFN3x3-8A	
RTQ2521A	1.1	6.5	0.5	5.5	1500	3700	110@1.5A	Enable Input; Ultra-Low Noise; High PSRR; OCP; Power Good; Industrial Grade	WDFN3x3-8E	
RTQ2522A	0.8	5.5	0.8	3.6	2000	1000	135@2A	Adj. Soft-Start; Low Dropout; Power Good; Industrial Grade	WDFN3x3-10	√
RTQ2522B	0.8	5.5	0.8	3.6	2000	1000	135@2A	Adj. Soft-Start; Low Dropout; Power Good; Industrial Grade	WQFN5x5-20	√
RTQ2532W	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-Low Noise 10 $\mu$ V; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN5x5-20	√
RTQ2532N	1.1	6.5	0.8	5.5	2000	3700	125@2A	Ultra-Low noise 10 $\mu$ V; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN-20L 3.5x3.5	
RTQ9091	1.4	6	0.5	5.5	2000	700	240@2A	Enable Input; Low Dropout; Industrial Grade	PSOP-8	
RTQ2516-QT	1.4	6	0.5	5.5	2000	700	240@2A	Enable Input; Low Dropout; AEC-Q100	PSOP-8	
RTQ2533W	1.1	6.5	0.8	5.5	3000	4300	110@3A	Ultra-Low Noise 10 $\mu$ V; Ultra-High PSRR 40dB @500kHz; Adj. Soft-Start; Industrial Grade	VQFN3.5x3.5-20	√
RTQ2537	1.1	6.5	0.8	5.5	4000	4300	110@4A	Enable Input; Ultra-Low Noise 10 $\mu$ V; Ultra-High PSRR 40dB @500kHz; Power Good; Industrial Grade	VQFN3.5x3.5-20	

# Switching Regulators

## Buck Converters

Buck converter control loop topology has great impact on the converter transient behavior, stability criteria and switching frequency behavior. Below overview shows different Buck converter control topologies in the Richtek portfolio and their advantages/disadvantages:

Current Mode Buck	Current Mode COT	High Voltage ACOT <sup>®</sup> Buck	Low Voltage ACOT <sup>®</sup> Buck
			
<b>Steady-State</b> 	<b>Steady-State</b> 	<b>Steady-State</b> 	<b>Steady-State</b> 
<b>Step Load</b> 	<b>Step Load</b> 	<b>Step Load</b> 	<b>Step Load</b> 
Current mode Buck topology takes several switch cycles to react on load transient. A larger output capacitor (C <sub>out</sub> ) is required for small ΔV.	Current mode COT Buck topology is faster than pure current mode, but still takes several switch cycles to react on load transient. A larger C <sub>out</sub> is required for small ΔV.	ACOT <sup>®</sup> reaction speed is almost instantly. C <sub>out</sub> can be small for the same ΔV.	ACOT <sup>®</sup> reaction speed is almost instantly. C <sub>out</sub> can be small for the same ΔV.

Topology	Switching Frequency	Transient Response	Stability	PSM Pulse Skip Ripple	Duty-Cycle Range	Over-Current Protection	Ext Sync Possibility	Ext. Component Selection
Current Mode	Fixed	Poor	Difficult	Low	Low-High	Peak Current	Yes	Critical
Current Mode-COT (CM-COT)	Variable	Medium	Medium	Medium	Low-Medium	Valley Current	No	Medium
Advanced-COT HV ACOT <sup>®</sup>	Variable	Excellent (Incl. PSM transition)	Simple	Medium	Very Low-Medium	Valley or Peak & Valley Current	No	Not Critical
Advanced-COT LV ACOT <sup>®</sup>	Variable	Excellent (Incl. PSM transition)	Medium	Medium	Low-High	Valley or Peak & Valley Current	No	Medium



## General Buck converter Features and function description:

- PSM parts will automatically skip pulses at light load thereby enhancing light load efficiency, at the expense of higher ripple and worse transient response in light load range.
- Force PWM parts will maintain their nominal switching frequency also at light load, which gives lowest ripple and best transient response.
- 100% Duty-Cycle parts can maintain regulation even at very low Vin-Vout difference, and the parts can operate in drop-out mode which can be useful in battery-powered applications.
- External Sync. parts can have their internal switching frequency clock synchronized to an external clock, making it possible to run several Buck converters at the same frequency and controlling the frequency precisely to avoid noise in certain sensitive frequency bands.
- External Soft-Start makes it possible to adjust the converter rise time during start-up via an external capacitor, to reduce inrush currents when using large output capacitors.
- External Comp. allows users to tune the converter control-loop response. This adds extra flexibility in the choices of output capacitors in current mode converters.
- Power Good signal can be used to signal other devices that the voltage rail is within specification. It can also be used to drive the enable pin of another converter, thereby giving a specific power sequence during start-up.

## ► Low Voltage Buck Converters

Input voltage range up to 7V

Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (uA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT5707A	2.2	5.5	0.7	3.1	0.4	1200	350	250	0.46	PSM	HCOT*	-	-	Ultra-low Iq; 100% Duty Cycle; Tiny Package	WL-CSP0.9x1.6-8 (BSC)	√
RT8024	2.5	5.5	0.6	5.5	0.4	1500	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5	√
RT5707	2.2	5.5	1.2	3.3	0.6	1200	350	250	0.46	PSM	HCOT*	-	-	Ultra-low Iq; 100% Duty Cycle; Tiny Package	WL-CSP0.9x1.6-8 (BSC)	√
RT8099	2.7	5.5	0.7	5	0.6	1500	280	250	0.02	PSM	CM	-	-	100% Duty Cycle	UDFN1.6x1.6-6	√
RT8008	2.5	5.5	0.6	5.5	0.6	1500	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5	√
RT8009	2.5	5.5	0.5	5.5	0.6	1250	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5	√
RT8035	2.5	5.5	0.6	5.5	0.8	1250	250	260	70	Force PWM	CM	-	-	Dual Buck; 100% Duty Cycle	WDFN3x3-10	√
RT5710F	2.5	6	0.6	3.8	1	1000	160	110	22	PSM	CMCOT	-	Y	UVP Hiccup	WDFN2x2-6	√
RT8010	2.5	5.5	0.6	5.5	1	1500	280	250	50	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-6	√
RT8010A	2.5	5.5	0.6	5.5	1	1500	280	250	50	Force PWM	CM	-	-	100% Duty Cycle	WQFN3x3-16	√
RT8016	2.5	5.5	0.6	5.5	1	1200 ~1800	280	250	50	Force PWM	CM	-	-	100% Duty Cycle	WQFN2x2-6	√
RT8020	2.5	5.5	0.6	5.5	1	1200 ~1800	280	250	50	Force PWM	CM	-	-	Dual Buck; 100% Duty Cycle	WQFN3x3-12	√
RT8020C	2.5	5.5	0.6	5.5	1	1200 ~1800	280	250	50	PSM	CM	-	-	Dual Buck; 100% Duty Cycle	WQFN3x3-12	√
RT5751A	2.5	6	0.6	6	1	1500	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-6	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (uA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT5751B	2.5	6	0.6	6	1	1500	120	80	300	Force PWM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-6	
RT8096C	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	Y	Medium Speed	TSOT-23-5; TSOT-23-6	√
RT8096B	2.5	6	0.6	3.4	1	1500	160	110	300	Force PWM	CMCOT	-	Y	Fast Speed	(T)SOT-23-5; (T)SOT-23-6	√
RT8096A	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	Y	Fast Speed	(T)SOT-23-5; (T)SOT-23-6	√
RT5710B	2.5	6	0.6	3.4	1	1500	160	110	300	Force PWM	CMCOT	-	-	Fast Speed; Small Package	WDFN2x2-6	√
RT5710A	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	-	Fast Speed; Small Package	WDFN2x2-6	√
RT5760A	2.5	6	0.6	6	1	2200	120	80	25	PSM	ACOT	-	Y	Low Iq; 100% Duty Cycle	SOT-563 (FC)	√
RT5760B	2.5	6	0.6	6	1	2200	120	80	300	Force PWM	ACOT	-	Y	100% Duty Cycle	SOT-563 (FC)	
RT5750B	2.5	6	0.6	6	1	1500	120	80	300	Force PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6	√
RT5750A	2.5	6	0.6	6	1	1500	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6	√
RT5761B	2.5	6	0.6	6	1	2200	120	80	300	Force PWM	ACOT	-	Y	100% Duty Cycle; 1% Vref; Ultra Small Package	UDFN1.4x1-6 (FC)	
RT5761A	2.5	6	0.6	6	1	2200	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle; 1% Vref; Ultra Small Package	UDFN1.4x1-6 (FC)	
RT5760D	2.5	6	0.6	3.8	1	2200	120	80	300	Force PWM	ACOT	-	-	100% Duty Cycle; 1% Vref	SOT-563(FC)	√
RT5760C	2.5	6	0.6	3.8	1	2200	120	80	25	PSM	ACOT	-	-	100% Duty Cycle; 1% Vref	SOT-563(FC)	√
RT8075	2.5	5.5	0.6	5	1	1250	250	260	70	PSM	CM	-	-	Dual Buck; 100% Duty Cycle	WDFN3x3-10	√
RT8057	2.7	5.5	0.6	5	1	2250	250	200	81	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-6S	√
RT8059	2.8	5.5	0.6	5.5	1	1500	280	250	78	PSM	CM	-	-	100% Duty Cycle	TSOT-23-5	√
RT8012A	2.6	5.5	0.8	5	1; 1.5	1200	180; 300	260; 90	830	Force PWM	CM	-	Y	Dual Buck; 100% Duty Cycle	WQFN4x4-16	√
RTQ2102A- QA	3	6	0.45	3.3	1.5	2700	110	90	30	PSM	ACOT	-	Y	Low Iq; High Freq.; 100% Duty Cycle; <a href="#">AEC-Q100</a>	WDFN3x3-8	√
RT5796C	2.5	6	0.6	3.4	1.5	1000	160	110	22	PSM	CMCOT	-	-	Medium Speed	TSOT-23-5	√
RT5796A	2.5	6	0.6	3.4	1.5	1000	160	110	22	PSM	CMCOT	-	Y	Medium Speed	TSOT-23-5; TSOT-23-6	√
RT8077	2.6	5.5	0.8	5	2	300 ~2000	90	90	270	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-8	√
RT8058	2.6	5.5	0.6	5	2	1000	142	96	340	Force PWM	CM	-	-	100% Duty Cycle	WQFN3x3-16	√
RT8058A	2.6	5.5	0.6	5	2	1200	142	96	340	Force PWM	CM	-	Y	100% Duty Cycle	WDFN3x3-10	√
RT8015	2.6	5.5	0.8	5	2	300 ~2000	110	110	460	Force PWM	CM	-	-	100% Duty Cycle; Adj. Freq.	PSOP-8	√
RT8064	2.7	5.5	0.8	5	2	200 ~2000	180	120	460	PSM	CM	Y	Y	100% Duty Cycle; Adj. Freq.	WDFN3x3-8; PSOP-8	√
RT8011A	2.6	5.5	0.8	5	2	300 ~4000	110	110	460	Force PWM	CM	-	Y	100% Duty Cycle; Adj. Freq.	WDFN3x3-10; WDFN3x3-8E	√
RT5752A	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (uA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT5752B	2.5	5.5	0.6	5.5	2	1200	100	70	23	Force PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6	√
RT5762A	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	Y	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6 (FC)	
RT5762B	2.5	5.5	0.6	5.5	2	1200	100	70	23	Force PWM	ACOT	-	Y	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6 (FC)	√
RT5762C	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	-	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6 (FC)	√
RT5762D	2.5	5.5	0.6	5.5	2	1200	100	70	23	Force PWM	ACOT	-	-	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6 (FC)	√
RT5795A	2.5	5.5	0.45	3.3	2	2700	100	80	30	PSM	ACOT	-	Y	Low Iq; High Freq.; 100% Duty Cycle	WDFN2x2-8S	√
RT5715	2.5	5.5	0.45	3.3	2	2700	100	80	30	PSM	ACOT	-	Y	Low Iq; 1% Vref Accuracy; 100% Duty Cycle	WDFN2x2-8S	√
RT2101B	2.95	6	0.827	3.6	2	700 ~2200	45	42	550	Force PWM	CM	Y	Y	Current Mode; Adj. Freq.; Ext. Comp.; Ext. Sync.; <a href="#">AEC-Q100</a>	WQFN3x3-16	√
RTQ2103A- QA	3	6	0.45	3.3	2	2700	130	105	30	PSM	ACOT	-	Y	Low Iq; High Freq.; 100% Duty Cycle; <a href="#">AEC-Q100</a>	PSOP-8	√
RT8097C	2.7	6	0.6	3.4	2	1000	100	70	22	PSM	CMCOT	-	Y	Medium Speed	SOT-23-5; SOT-23-6	√
RT8097B	2.7	6	0.6	3.4	2	1000	100	70	300	Force PWM	CMCOT	-	Y	Fast Speed	SOT-23-6	√
RT8097A	2.7	6	0.6	3.4	2	1000	100	70	22	PSM	CMCOT	-	Y	Fast Speed	SOT-23-6	√
RT5785A	2.5	6	0.6	5	2	1500	100	60	25	PSM	ACOT	-	Y	Low Iq; 100% Duty Cycle	TSOT-23-8(FC)	√
RT5785B	2.5	6	0.6	5	2	1500	100	60	600	PWM	ACOT	-	Y	Low Iq; 100% Duty Cycle	TSOT-23-8(FC)	√
RT5784A	2.5	6	0.6	5	2	1500	100	60	25	PSM	ACOT	-	Y	Low Iq; 100% Duty Cycle; Small Package	WDFN2x1.5-8J (FC)	√
RT5784B	2.5	6	0.6	5	2	1500	100	60	600	PWM	ACOT	-	Y	Low Iq; 100% Duty Cycle; Small Package	WDFN2x1.5-8J (FC)	√
RT8098D	2.7	6	0.6	3.4	2.5	1000	100	70	300	Force PWM	CMCOT	-	Y	Medium Speed	SOT-23-6	√
RT5753A	2.5	5.5	0.6	5.5	3	1200	100	70	35	PSM	ACOT	-	Y	Low Iq; 100% Duty Cycle	WDFN2x2-8; WDFN2x2-8S	√
RT5753B	2.5	5.5	0.6	5.5	3	1200	100	70	35	Force PWM	ACOT	-	Y	Low Iq; 100% Duty Cycle	WDFN2x2-8; WDFN2x2-8S	
RT8082	2.7	5.5	1	5	3	2000	75	55	570	Force PWM	CM	-	-	100% Duty Cycle	WDFN3x3-12E	√
RT8061A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10	√
RT8055	2.6	5.5	0.8	5	3	300 ~2000	100	100	500	Force PWM	CM	-	-	100% Duty Cycle	PSOP-8; WDFN3x3-10	√
RT8015A	2.6	5.5	0.8	5	3	300 ~2000	110	110	460	Force PWM	CM	-	-	100% Duty Cycle	WDFN3x3-10	√
RT8015B	2.6	5.5	0.8	5	3	300 ~2000	110	110	460	Force PWM	CM	-	Y	100% Duty Cycle	WDFN3x3-10	√
RT5768A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10	√
RT8068A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10; PSOP-8	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (uA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT8065	2.7	5.5	0.8	5	3	200 ~2000	120	80	460	PSM	CM	Y	Y	100% Duty Cycle; Adj. Freq.	PSOP-8; WDFN3x3-8	√
RT8088A	2.5	5.5	0.6	1.4	3	2700	48	22	75	PSM/ Force PWM	CMCOT	-	-	Fast Speed; I <sup>2</sup> C Control for Vout; Selectable PSM/Force PWM, OCP; OTP; Tiny Package	WL- CSP1.31x2.11-15	√
RT8079A	2.95	6	0.827	3.6	3	300 ~2000	45	42	550	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.	WQFN3x3-16	√
RT8079	2.95	6	0.827	3.6	3	300 ~2000	45	42	550	PSM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.	WQFN3x3-16	
RT2101A	2.95	6	0.827	3.6	3	700 ~2000	45	42	550	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync; <a href="#">AEC-Q100</a> .	WQFN3x3-16	√
RT5797B	2.7	6	0.6	3.4	3	1000	100	70	300	Force PWM	CMCOT	-	Y	Fast Speed; Small Package	WDFN2x2-8	√
RT5797A	2.7	6	0.6	3.4	3	1000	100	70	22	PSM	CMCOT	-	Y	Fast Speed; Small Package	WDFN2x2-8; WDFN2x2-8S	√
RT8086B	2.8	5.5	0.6	3.3	3.5	1200	50	40	60	PSM	CMCOT	-	Y	Fast Speed; Small Package	UQFN2x2-12 (FC)	√
RT8074	2.7	5.5	0.8	5	4	200 ~2000	110	70	460	PSM	CM	Y	-	100% Duty Cycle; Adj. Freq.	PSOP-8	√
RT8078A	2.7	5.5	0.6	5.5	4	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10	√
RT8070	2.7	5.5	0.8	5	4	200 ~2000	110	70	460	PSM	CM	Y	Y	100% Duty Cycle; Adj. Freq.	PSOP-8; WDFN3x3-8	√
RT5788B	2.5	6	0.6	6	4	1500	22	20	600	Force PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)	√
RT5788A	2.5	6	0.6	6	4	1500	22	20	35	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)	√
RT8072	2.9	5.5	0.8	4.84	5	300 ~2000	50	35	250	PSM	CM	Y	Y	Adj. Freq.	PSOP-8; WDFN3x3-12	√
RTQ2134-QA	3	6	0.3	1.85	5.5	2100	25	15	70	PSM/ PWM	ACOT	-	-	I <sup>2</sup> C Control; <a href="#">AEC-Q100</a>	WET-WQFN 4.5x5-30(FC)	√
RT5789B	2.5	6	0.6	6	6	1500	18	16	600	Force PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)	√
RT5789A	2.5	6	0.6	6	6	1500	18	16	35	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)	√
RT8073	2.9	5.5	0.8	4.84	6	300 ~2000	50	35	250	PSM	CM	Y	Y	Adj. Freq.	PSOP-8; WDFN3x3-12	√
RT2659H	1	6	0.6	2	6	600; 1000	20	10	1100	PSM/ Force PWM	CMCOT	-	Y	DDR Supply with Mode Selection; REF and REFIN	VQFN3.5x4-20	√
RTQ2158B- QA	2.85	6.5	0.6	3.3	8	460	15	10	500	Force PWM	ACOT	Y	Y	Fast Transient Response; <a href="#">AEC-Q100</a>	WET-WQFN 4x4-21 (FC)	
RTQ2158-QA	2.85	6.5	0.6	3.3	8	2100	15	10	500	Force PWM	ACOT	Y	Y	Fast Transient Response; <a href="#">AEC-Q100</a>	WET-WQFN 4x4-21 (FC)	
RTQ2159-QA	2.85	6.5	0.6	1.5	8	2100	15	10	500	Force PWM	ACOT	Y	Y	Fast Transient Response; I <sup>2</sup> C Control; <a href="#">AEC-Q100</a>	WET-WQFN 4x4-21(FC)	
RT5758	3	6	0.6	3.3	9	1000	12	8	100	PSM	ACOT	Y	Y	Fast Transient Response	UQFN3x3-13 (FC)	
RT5759	3	6.5	0.6	1.5	9	600 ~1500	12	8	100	PSM/ Force PWM	ACOT	Y	Y	I <sup>2</sup> C Control	UQFN3x3-13 (FC)	√





Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (uA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT5759A	3	6.5	0.6	1.725	9	600 ~1500	12	8	100	PSM	ACOT	Y	Y	I <sup>2</sup> C Control for Vout, OCP, OTP	UQFN3x3-13 (FC)	
RT5800	3	6	0.3	1.85	10	2100	25	15	70	PSM/ Force PWM	ACOT	-	-	10A+10A or 10A+5A+5A; 2 or 3CH; I <sup>2</sup> C Control	WQFN4.5x5-30 (FC)	
RTQ2134-QA	3	6	0.3	1.85	10	2100	25	15	70	PSM/ Force PWM	ACOT	-	-	10A+10A or 10A+5A+5A; 2 or 3CH; I <sup>2</sup> C Control; <a href="#">AEC-Q100</a>	WQFN4.5x5-30 (FC)	√
RTQ2158A-QA	2.85	6.5	0.6	3.3	12	460	15	10	500	Force PWM	ACOT	Y	Y	Fast Transient Response; <a href="#">AEC-Q100</a>	WET-WQFN 4x4-21 (FC)	

\* HCOT control is a hysteretic control mode for ultra-low Iq parts.



## Medium Voltage Buck Converters

Input voltage range 7V to 30V

Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT8258	4.5	24	0.8	15	1.2	700	300	300	0.55	Force PWM	CM	-	-	Int. Comp.	(T)SOT-23-6	√
RT8259	4.5	24	0.8	15	1.2	1400	300	300	0.55	Force PWM	CM	-	-	Int. Comp.	(T)SOT-23-6	√
RT8297B	4	17	0.8	12	1.5	800	145	140	0.6	Force PWM	CM	-	Y	Int. Comp.; Small Package	WDFN2x2-8	√
RT8297A	4	17	0.8	12	1.5	340	145	140	0.6	Force PWM	CM	-	Y	Int. Comp.; Small Package	WDFN2x2-8	
RT7251B	4	17	0.8	12	1.5	800	145	140	0.6	PSM	CM	-	Y	Int. Comp.; Small Package	WDFN2x2-8	√
RT7251A	4	17	0.8	12	1.5	340	145	140	0.6	PSM	CM	-	Y	Int. Comp.; Small Package	WDFN2x2-8	√
RT7285C	4.3	18	0.6	8	1.5	500	230	130	0.5	Force PWM	ACOT	-	-	Fast Transient Response	(T)SOT-23-6	√
RT7250B	4	17	0.8	12	2	800	155	150	0.6	Force PWM	CM	-	Y	Int. Comp.	PSOP-8	√
RT6296D	4.5	17	0.807	5	2	800	100	40	0.8	PSM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	
RT6296C	4.5	17	0.807	5	2	1400	100	40	0.8	Force PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	√
RT6296B	4.5	17	0.807	5	2	500	100	40	0.8	Force PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	
RT6296A	4.5	17	0.807	5	2	500	100	40	0.8	PSM/ Force PWM	CM	-	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	√
RT7247C	4.5	18	0.8	12	2	800	150	130	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7247B	4.5	18	0.8	12	2	1200	150	130	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7247A	4.5	18	0.8	15	2	340	150	130	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7237C	4.5	18	0.8	12	2	800	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7237B	4.5	18	0.8	12	2	1200	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7237A	4.5	18	0.8	15	2	340	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT6222D	4.3	18	0.6	8	2	1400	150	90	0.5	Force PWM	ACOT	-	-	Fast Transient Response; Valley & peak OCP	TSOT-23-6 (FC)	√
RT6218B	4.5	18	0.765	6.5	2	650	120	65	0.5	Force PWM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6218A	4.5	18	0.765	6.5	2	650	120	65	0.5	PSM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6212B	4.5	18	0.765; ;0.8	6.5	2	500	163	86	0.5	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6( FC)	√
RT7274	4.5	18	0.765	8	2	700	150	105	0.7	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT6212A	4.5	18	0.765; 0.8	6.5	2	500	163	86	0.5	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	√
RT6215B	4.5	24	0.791	5	2	500	100	85	0.17	Force PWM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6215A	4.5	24	0.791	5	2	500	100	85	0.17	PSM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6215E	4.5	24	0.791	5	2	500	100	85	0.17	Force PWM/ PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6252B	4.5	17	0.765; 0.807	7	2	580	140	84	0.28; 0.295	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); SOT-563 (FC)	√
RT6252A	4.5	17	0.765; 0.807	7	2	580	140	84	0.28;0.295	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC); SOT-563 (FC)	√
RT6352B	4.5	17	0.6	7	2	580	140	84	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); SOT-563 (FC)	
RT6352A	4.5	17	0.6	7	2	580	140	84	0.28	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC); SOT-563 (FC)	
RT6372B	4.5	17	0.6	7	2	1400	140	84	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	
RT6372A	4.5	17	0.6	7	2	1400	140	84	0.28	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC)	
RT6272B	4.5	17	0.765	7	2	1400	140	84	280	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6272A	4.5	17	0.765	7	2	1400	140	84	280	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC)	
RT6262B	4.5	17	0.765	7	2	650	125	56	180	Force PWM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6262A	4.5	17	0.765	7	2	650	125	56	180	PSM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-8 (FC)	
RT7279	4.5	18	0.765	8	2	700	150	105	0.7	Force PWM	ACOT	Y	Y	Fast Transient Response	TSSOP-14 (PP); WDFN3x3-10	√
RT7281	4.5	18	0.765	8	2	700	150	105	0.7	Force PWM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT8286	4.5	21	0.808	15	2	500	150	60	0.7	Force PWM	CM	-	-	Int. Comp.	PSOP-8	√
RT8284N	4.5	23	0.923	20	2	340	130	130	0.8	Force PWM	CM	Y	-	Enable Input	(P)SOP-8	√
RT8292A	4.5	23	0.8	20	2	340	130	130	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT8292B	4.5	23	0.8	15	2	1200	130	130	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT8294	4.5	23	0.923	20	2	340	130	130	0.8	Force PWM	CM	Y	-	Enable Input	(P)SOP-8	√
RT8295B	4.5	23	0.8	15	2	1200	130	130	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT8267	4.75	22	1.222	16	2	400	180	10000	0.7	Force PWM	CM	-	-	Enable Input	SOP-8	√
RT8270	4.75	22	1.222	16	2	1200	180	10000	0.7	Force PWM	CM	-	-	Enable Input	SOP-8	√
RT8268	4.75	24	0.92	16	2	400	180	10000	0.6	Force PWM	CM	Y	-	Enable Input	MSOP-10 (PP); SOP-8	√
RT6222B	4.3	18	0.6	8	2.5	500	150	90	0.5	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	
RT6222A	4.3	18	0.6	8	2.5	500	150	90	0.5	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	
RT7294C	4.3	18	0.6	8	2.5	500	150	90	0.5	Force PWM	ACOT	-	-	Fast Transient Response	TSOT-23-6 (FC)	√
RT7296F	4.5	17	0.807	5	3	500	80	30	0.8	PSM	CM	-	Y	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	√
RT7296C	4.5	17	0.807	5	3	1400	80	30	0.8	Force PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	
RT7296B	4.5	17	0.807	5	3	500	80	30	0.8	Force PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT7296A	4.5	17	0.807	5	3	500	80	30	0.8	PSM/ Force PWM	CM	-	-	Selectable PSM/Force PWM; Int. Comp.; Ext. Sync.	TSOT-23-8 (FC)	√
RT6253A	4.5	17	0.765; 0.807	7	3	580	95	50	0.28	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC); SOT-563 (FC)	√
RT6253B	4.5	17	0.765; 0.807	7	3	580	95	50	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP;	TSOT-23-6 (FC); SOT-563 (FC)	√
RT2859A	4.5	18	0.765	7	3	650	70	70	1	PSM	ACOT	Y	Y	Fast Transient Response	WDFN 3x3-16	√
RT6213B	4.5	18	0.8	5	3	500	150	70	0.5	PWM	ACOT	-	-	Fast Transient Response	TSOT-23-6	√
RT6214B	4.5	18	0.765; 0.8	6.5	3	500; 650	100	50	0.5	PWM	ACOT	Y	-	Fast Transient Response	TSOT-23-6; TSOT-23-8	√
RT6214A	4.5	18	0.765; 0.8	6.5	3	500; 650	100	50	0.5	PSM	ACOT	Y	Y	Fast Transient Response;	TSOT-23-6 (FC); TSOT-23-8 (FC)	√
RT7278	4.5	18	0.765	8	3	700	90	60	0.7	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT7277	4.5	18	0.765	8	3	700	90	60	0.7	Force PWM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT7276	4.5	18	0.765	8	3	700	100; 90	60	0.7	PSM	ACOT	Y	Y	Fast Transient Response	WDFN 3x3-10	√
RT7275	4.5	18	0.765	8	3	700	100; 90	60	0.7	Force PWM	ACOT	Y	Y	Fast Transient Response	WDFN 3x3-10	√
RT7257G	4.5	18	0.8	12	3	800	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT7257A	4.5	18	0.8	15	3	340	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	
RT2853B	4.5	18	0.765	7	3	650	110	30	1	Force PWM	ACOT	Y	Y	ACOT Fast Transient Response; Industrial Grade	WQFN3x3-16	√
RT6224D	4.3	18	0.6	5	3	1400	90	45	0.5	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	√
RT6224A	4.3	18	0.6	5	3	500	90	45	0.5	PSM	ACOT	-	-	Fast Transient Response	TSOT-23-6 (FC)	√
RT7297A	4.5	18	0.8	15	3	340	110	90	0.8	Force PWM	CM	Y	-	Fast Transient Response	PSOP-8	√
RT7297C	4.5	18	0.8	12	3	800	110	90	0.8	Force PWM	CM	Y	-	Fast Transient Response	PSOP-8	√
RT6263B	4.5	17	0.765	7	3	650	66	36	0.18	Force PWM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6263A	4.5	17	0.765	7	3	650	66	36	0.18	PSM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-8 (FC)	√
RT6273B	4.5	17	0.765	7	3	1400	95	50	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	√
RT6273A	4.5	17	0.765	7	3	1400	95	50	0.28	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC)	
RT6353A	4.5	17	0.6	7	3	580	95	50	0.28	PSM	ACOT	-	-	Fast Transient Response; Both FETs OCP	TSOT-26 (FC); SOT-563 (FC)	
RT6353B	4.5	17	0.6	7	3	580	95	50	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Both FETs OCP	TSOT-26 (FC); SOT-563 (FC)	
RT6373A	4.5	17	0.6	7	3	1400	95	50	0.28	PSM	ACOT	-	-	Fast Transient Response; Both FETs OCP	TSOT-26(FC)	
RT6373B	4.5	17	0.6	7	3	1400	95	50	0.28	Force PWM	ACOT	-	-	Fast Transient Response; Both FETs OCP	TSOT-26(FC)	
RT7266	4.5	18	0.765	8	3	700	90	60	0.7	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT7257B	4.5	18	0.8	12	3	1200	110	90	0.8	PSM	CM	Y	-	OCP; OTP	PSOP-8	√
RT7257C	4.5	18	0.8	15	3	340	110	90	0.8	PSM	CM	Y	-	OCP; OTP	PSOP-8	√
RT7270H	4.5	18	0.925	15	3	340	110	90	0.8	Force PWM	CM	Y	-	OCP; OTP	PSOP-8	√
RT7263A	4.5	21	0.808	15	3	500	120	40	0.7	Force PWM	CM	Y	Y	Enable Input; Ext. Sync.; OCP; UVP	WDFN 4x3-14; PSOP-8	
RT8287	4.5	21	0.808	15	3	500	120	40	0.7	Force PWM	CM	Y	Y	Enable Input; OCP; UVP	WDFN 4x3-14	√
RT8296B	4.5	23	0.8	15	3	1200	85	85	0.8	PSM	CM	Y	-	Enable Input; OCP;UVP	PSOP-8	√
RT8296A	4.5	23	0.8	20	3	340	85	85	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT8293B	4.5	23	0.8	15	3	1200	85	85	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT8293A	4.5	23	0.8	20	3	340	85	85	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT8290A	4.5	23	0.925	20	3	340	100	85	0.8	PSM/ PWM	CM	Y	-	Ext. Comp.	PSOP-8	√
RT8290	4.5	23	0.925	20	3	340	100	85	0.8	Force PWM	CM	Y	-	Ext. Comp.	PSOP-8	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT8272	4.75	24	0.92	15	3	1200	100	10000	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT8299A	3	24	0.8	15	3	500	100	100	1	PSM	CM	-	Y	Wide Input Range	WDFN 3x3-10; PSOP-8	√
RT8299	3	24	0.8	15	3	500	100	100	1	Force PWM	CM	-	Y	Wide Input Range	PSOP-8; WDFN 3x3-10	√
RT6217E	4.5	24	0.791	6	3	500	85	40	0.15	PSM/ Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6217A	4.5	24	0.791	6	3	500	85	40	0.15	PSM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT6217B	4.5	24	0.791	6	3	500	85	40	0.15	Force PWM	ACOT	Y	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-8 (FC)	√
RT8265	4.75	24	0.8	15	3	1000	110	10000	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT8269	4.75	24	0.92	15	3	400	100	10000	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT6283B	4.5	30	0.8	24	3	500	150	80	0.9	PSM	CM	-	-	Adj. Current Limit; Enable Input	PSOP-8	√
RT8250	4.5	23	0.925	20	3	340	100	85	0.7	Force PWM	CM	Y	-	Enable Input	PSOP-8	√
RT7295A	4.3	18	0.6	8	3.5	500	90	45	0.5	PSM	ACOT	-	-	Fast Transient Response	TSOT-23-6 (FC)	√
RT7295C	4.3	18	0.6	8	3.5	500	90	45	0.5	Force PWM	ACOT	-	-	Fast Transient Response	TSOT-23-6 (FC)	√
RT6274D	4.5	18	0.765	7	3.5	1200	66	36	0.18	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC)	√
RT6274C	4.5	18	0.765	7	3.5	1200	66	36	0.18	PSM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP; Reduced PSM Ripple	TSOT-23-6 (FC)	√
RT7234	4.5	18	0.765	8	4	650	120	50	1	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT7233	4.5	18	0.765	8	4	650	120	50	1	Force PWM	ACOT	Y	-	Fast Transient Response	PSOP-8	√
RT7231	4.5	18	0.765	8	4	650	120	50	1	Force PWM	ACOT	Y	Y	Fast Transient Response	TSSOP-14 (PP); WDFN 3x3-10	√
RT6254A	4.5	18	0.6	5	4	500	48	25	0.115	PSM	ACOT	-	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); TSOT-23-8 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6254B	4.5	18	0.6	5	4	500	48	25	0.115	Force PWM	ACOT	-	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); TSOT-23-8 (FC)	✓
RT6264A	4.5	18	0.765	7	4	650	66	36	0.18	PSM	ACOT	-	-	Fast Transient Response; Valley & peak OCP; Reduced PSM ripple	TSOT-23-6 (FC)	✓
RT6264B	4.5	18	0.765	7	4	650	66	36	0.18	Force PWM	ACOT	-	-	Fast Transient Response; Valley & Peak OCP;	TSOT-23-6 (FC)	✓
RT7264E	4.5	21	0.808	15	4	500	120	40	0.7	PSM	CM	Y	Y	Enable Input; Ext. Sync.; OCP; UVP	PSOP-8; WDFN 4x3-14	✓
RT8287A	4.5	21	0.808	15	4	500	120	40	0.7	Force PWM	CM	Y	Y	Enable Input; OCP; UVP	WDFN 4x3-14	✓
RT8288A	4.5	21	0.808	15	4	500	120	40	0.7	Force PWM	CM	-	-	Enable Input; OCP; UVP	PSOP-8	✓
RT6219A	5	23	0.6	5	4	500	67	41	0.1	PSM	ACOT	-	Y	Fast Transient Response	WDFN 3x3-10	✓
RT7240	4.5	18	0.765	8	5	650	120	35	1	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8	✓
RT7235	4.5	18	0.765	8	5	650	120	35	1	Force PWM	ACOT	Y	Y	Fast Transient Response	TSSOP-14 (PP); WDFN 3x3-10	✓
RT7236	4.5	18	0.765	8	5	650	120	35	1	PSM	ACOT	Y	Y	Fast Transient Response	TSSOP-14 (PP); WDFN 3x3-10	✓
RT7239	4.5	18	0.765	8	5	650	120	35	1	Force PWM	ACOT	Y	-	Fast Transient Response	PSOP-8	✓
RT6255B	4.5	18	0.6	5	5	500	45	23	0.115	Force PWM	ACOT	-	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); TSOT-23-8 (FC)	✓
RT6255A	4.5	18	0.6	5	5	500	45	23	0.115	PSM	ACOT	-	Y	Fast Transient Response; Valley & Peak OCP	TSOT-23-6 (FC); TSOT-23-8 (FC)	✓
RT6203B	4.5	18	0.72	8	5	700	60	30	0.55	Force PWM	ACOT	Y	Y	Fast Transient Response; I <sup>2</sup> C Adj. VID 072V~1.48V; I <sup>2</sup> C Adj. OCP	WQFN 4x4-20	✓
RT8251	4.75	24	0.8	15	5	570	70	15	0.8	Force PWM	CM	Y	-	Enable Input	PSOP-8; WQFN 3x3-16	✓
RT6285	5.5	30	1.222	24	5	500	110	-	0.6	Force PWM	CM	-	-	Async. Buck; Enable Input	PSOP-8	✓
RT8289	5.5	32	1.222	26	5	500	100	10000	0.8	Force PWM	CM	-	-	Async. Buck; Enable Input	PSOP-8	✓





Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6206A	4.5	18	0.765	7	5.5	650	80	35	1	Force PWM	ACOT	Y	-	Fast Transient Response	PSOP-8; TSSOP-14; WDFN 3x3-10L	✓
RT6206B	4.5	18	0.765	7	5.5	650	80	35	1	PSM	ACOT	Y	-	Fast Transient Response	PSOP-8; TSSOP-14; WDFN 3x3-10L	✓
RT7298B	4.5	18	0.6	5	6	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.; 100% Duty Cycle	WQFN 3.5x3.5-14A	✓
RT7298A	4.5	18	0.6	5	6	200~ 1600	26	19	0.6	PSM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.	WQFN 3.5x3.5-14A	✓
RT6257B	4.5	18	0.6	5	6	500	30	20	0.115	PSM	ACOT	-	-	Fast Transient Response	TSOT-23-6 (FC)	✓
RT2857B	4.5	18	0.6	15	6	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Sync.	WQFN 3.5x3.5-14A	✓
RT7243	4.5	18	0.8	16	6	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.; 100% Duty Cycle	WQFN 3.5x3.5-14A	✓
RT2856	4.5	18	0.8	16	6	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.	WQFN 3.5x3.5-14A	✓
RT6203F	4.5	18	0.6	1.62	6	700	48	25	0.55	PSM	ACOT	-	-	Fast Transient Response; I <sup>2</sup> C Adj. VID; I <sup>2</sup> C Adj. OCP; UVP	PSOP-8	✓
RT6203E	4.5	18	0.6	1.62	6	700	48	25	0.55	PSM	ACOT	-	-	Fast Transient Response; I <sup>2</sup> C Adj. VID; I <sup>2</sup> C Adj. OCP	PSOP-8	✓
RT6236A	4.5	18	0.7	8	6	650	51	18	0.8	PSM	ACOT	Y	Y	Fast Transient Response	UQFN 2x3-13J (FC)	✓
RT6236B	4.5	18	0.7	8	6	650	51	18	0.8	Force PWM	ACOT	Y	Y	Fast Transient Response	UQFN 2x3-13J (FC)	✓
RTQ2816	4.5	18	0.8	15	6	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; 100% Duty Cycle; Industrial Grade	WQFN 3.5x3.5-14A	✓
RT6276B	4.5	23	0.6	6	6	500	30	15	0.13	Force PWM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit; Bypass Pin Option	UQFN 3x3-12H (FC)	✓



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6276A	4.5	23	0.6	6	6	500	30	15	0.13	PSM/ USM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit; Bypass Pin Option	UQFN 3x3-12H (FC)	√
RT6316B	4.5	23	3.267	3.333	6	500	30	15	0.1	PSM/ USM)	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-12H (FC)	√
RT6220A	4.5	23	0.6	5	6	500	31	20	0.1	PSM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-16 (FC)	√
RT6220B	4.5	23	0.6	5	6	500	31	20	0.1	Force PWM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-16 (FC)	√
RT6220D	4.5	23	0.6	5	6	500	31	20	0.11	Force PWM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-16 (FC)	√
RT6226A	4.5	23	0.6	5.1	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V/5V LDO Output	UQFN 3x3-12H (FC)	√
RT7290A	5	23	3.267	3.333	6	500	31	20	0.1	PSM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-16 (FC)	√
RT7291A	5	23	4.95	5.05	6	500	31	20	0.1	PSM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN3x3-16(FC)	√
RT7291B	5	23	5.049	5.151	6	500	31	20	0.1	PSM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN 3x3-16 (FC)	√
RT6256C	5.5	23	5.049	5.151	6	750	30	15	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN 3x3-12H (FC)	√
RT6256B	4.5	23	3.267	3.333	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-12H (FC)	√
RT6230A	6	23	5	12	6	500	31	20	0.1	PSM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-16 (FC)	√
RT6230B	6	23	5	12	6	500	31	20	0.11	Force PWM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-16 (FC)	√
RT6256CH	5.1	23	5.049	5.151	6	750	30	15	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN 3x3-12H (FC)	√
RT6256BH	4.5	23	3.267	3.333	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-12H (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RTQ2823A	4.5	17	0.6	5.5	8	1200; 400; 800	9.8	4.5	0.6	DCM/ Force PWM	ACOT	Y	Y	Fast Transient Response; Adj. Current Limit; EN Internal Pull High	VQFN 3.5x3.5-18 (FC)	√
RTQ2823B	4.5	17	0.6	5.5	8	1200; 400; 800	9.8	4.5	0.6	DCM/ Force PWM	ACOT	Y	Y	Fast Transient Response; Adj. Current Limit; EN Internal Pull Low	VQFN 3.5x3.5-18 (FC)	
RT6238B	4.5	18	0.7	8	8	500	35	14	0.6	Force PWM	ACOT	Y	Y	ACOT Fast Transient Response; Adj. Current Limit	UQFN 2x3-14 (FC)	√
RT7299B	4.5	18	1	5	8	200~ 1600	26	19	0.6	Force PWM	CM	Y	Y	Adj. Freq.; Ext. Comp.; Ext. Sync.	WQFN 3.5x3.5-14A	
RT6238A	4.5	18	0.7	8	8	500	35	14	0.6	PSM	ACOT	Y	Y	Adj. Current Limit	UQFN 2x3-14 (FC)	
RT6318C	5.1	23	5.049	5.151	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-12H (FC)	√
RT6278B	4.5	23	0.6	6	8	500	24	12	0.13	Force PWM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit; Bypass Pin Option	UQFN 3x3-12H (FC)	√
RT6278A	4.5	23	0.6	6	8	500	24	12	0.13	PSM/ USM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit; Bypass Pin Option	UQFN 3x3-12H (FC)	
RT6228A	4.5	23	0.6	5.1	8	500	20	10	0.1	PSM	ACOT	-	Y	Fast Transient Response	UQFN 3x3-12H (FC)	√
RT6228C	5.1	23	5.049	5.151	8	750	20	10	0.1	PSM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-12H (FC)	√
RT6258C	5.1	23	5.049	5.151	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN3x3- 12H(FC)	√
RT6258B	4.5	23	3.267	3.333	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-12H (FC)	√
RT6338A	4.5	23	0.6	5.5	8	500	26	14	0.085	PSM/ USM	ACOT	-	Y	Fast Transient Response; Adj. OCP	UQFN 3x3-23 (FC)	



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6338B	4.5	23	3.267	3.333	8	500	26	14	0.095	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output	UQFN 3x3-23 (FC)	
RT6338C	5.2	23	5.049	5.151	8	500	26	14	0.095	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output	UQFN 3x3-23 (FC)	
RT6258CH	5.1	23	5.049	5.151	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output; UVP Hiccup	UQFN 3x3-12H (FC)	√
RT6258BH	4.5	23	3.267	3.333	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 3.3V LDO Output; UVP Hiccup	UQFN 3x3-12H (FC)	√
RT6308A	4.5	23	0.6	5.1	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit	UQFN 3x3-12H (FC)	√
RT7258	4.5	24	0.808	15	8	600	45	-	0.9	Force PWM	CM	-	Y	Gate Drive for Ext. Low Side MOSFET	PSOP-8; WDFN 4x3-14	√
RT2810B	4.5	18	0.7	8	10	300~700	12	5.4	0.8	Force PWM	ACOT	Y	Y	Adj. Freq.; Adj. Current Limit	UQFN 3x3-16J (FC)	
RT6250B	4.5	18	0.6	6	10	500	20	10	0.13	Force PWM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit	UQFN 3x3-12H (FC)	√
RT6280A	4.5	23	0.6	6	10	500	20	10	0.13	PSM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit	UQFN 3x3-12H (FC)	
RT6280B	4.5	23	0.6	6	10	500	20	10	0.13	Force PWM	ACOT	-	Y	Fast Transient Response; Adj. Current Limit	UQFN 3x3-12H (FC)	
RT6260C	5.1	23	5.049	5.151	10	600	20	10	0.1	PSM/ USM	ACOT	-	Y	Fast Transient Response; 5V LDO Output; Latch UVP	UQFN 3x3-12H (FC)	
RT6243B	4.5	17	0.6	5.5	12	400, 800, 1200	9.8	4.5	0.6	PSM/ Force PWM	ACOT	Y	Y	Adj. Freq.; Adj. Current Limit	VQFN 3.5x3.5-18 (FC)	
RT6243A	4.5	17	0.6	5.5	12	400, 800, 1200	9.8	4.5	0.6	PSM/ Force PWM	ACOT	Y	Y	Fast Transient Response; Adj. Freq.; Adj. Current Limit	VQFN 3.5x3.5-18 (FC)	
RTQ2822A	4.5	17	0.6	5.5	12	400, 800, 1200	9.8	4.5	0.6	PSM/ Force PWM	ACOT	Y	Y	Fast Transient Response; Adj. Freq.; Adj. Current Limit	VQFN 3.5x3.5-18 (FC)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RTQ2822B	4.5	17	0.6	5.5	12	400, 800, 1200	9.8	4.5	0.6	PSM/ PWM	ACOT	Y	Y	Fast Transient Response; EN Internal Pull Low	VQFN 3.5x3.5-18 (FC)	
RT6242B	4.5	18	0.7	8	12	500	12	5.4	0.8	Force PWM	ACOT	Y	Y	Fast Transient Response; Adj. Freq.; Adj. Current Limit	UQFN 3x3-16J (FC)	√
RT6245A	4.5	17	0.4375	1.3875	14	400, 800, 1200	9.8	4.5	0.6	PSM	ACOT	Y	Y	Fast Transient Response; VID Control	VQFN 3.5x3.5-19 (FC)	
RT6245B	4.5	17	0.4375	1.3875	14	400, 800, 1200	9.8	4.5	0.6	Force PWM	ACOT	Y	Y	Fast Transient Response; VID Control	VQFN 3.5x3.5-19 (FC)	
RTQ2822T	4.5	17	0.6	5.5	15	400, 800, 1200	9.8	4.5	0.6	PSM/ PWM	ACOT	Y	Y	Fast Transient Response	VQFN 3.5x3.5-18 (FC)	



## High Voltage Buck Converters

Input voltage range > 30V

Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM/ Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6208	4.75	36	0.8	15	0.1	-	3000	1500	0.16	-	Hysteretic Mode	-	Y	Enable Input; OCP; OVP; PSM	SOT-23-6; SOT-23-8	√
RTQ2940-QA	4	42	0.8	42	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	
RT6340	4	42	0.8	42	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 3x3-10S	
RTQ6340	4	42	0.8	42	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	
RT6360	4	60	0.8	60	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 3x3-10S	√
RTQ6360	4	60	0.8	60	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	
RTQ2960-QA	4	60	0.8	60	0.5	100~ 2500	170	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	
RT6204	5.2	60	0.8	50	0.5	350	660 ;890	330	0.6	PSM	CM	Y	-	Enable Input; OCP; SCP; UVP	PSOP-8	√
RT6210	5.2	80	0.8	72	0.5	350	660	330	0.6	PSM	CM	Y	-	Wide input Range	PSOP-8	
RT6200	4.5	36	0.8	15	0.6	1200	350	-	-	PWM	CM	-	-	Asynch.	SOT-23-6	√
RTQ2130B- QT	3	36	0.8	36	0.7	2100	200	160	1.1	Force PWM	CM	-	-	Ext. Comp; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	WDFN 2x3-8S	√
RTQ2131B- QA	3	36	0.8	36	1	2100	200	160	1.1	Force PWM	CM	-	Y	Ext. Comp; Spread- Spectrum; 100% Duty- Cycle; <a href="#">AEC-Q100</a>	WDFN 3x3-10S	√
RTQ2132B- QT	3	36	0.8	36	1.2	2100	200	160	1.1	Force PWM	CM	Y	Y	Ext. Comp; Spread-Spectrum; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	TSSOP-14 (PP)	
RTQ2941-QA	4	42	0.8	42	1.5	100~ 2500	160	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	
RTQ6341	4	42	0.8	42	1.5	100~ 2500	160	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	
RTQ2961-QA	4	60	0.8	60	1.5	100~ 2500	160	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM/ Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT6361	4	60	0.8	60	1.5	100~ 2500	160	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 3x3-10S	√
RTQ6361	4	60	0.8	60	1.5	100~ 2500	160	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	
RT6266	7.5	36	0.8	5.5	2.4	100	100	-	0.8	PSM	CM	-	-	Asynch.	PSOP-8	√
RTQ2942-QA	4	42	0.8	42	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	
RT6342	4	42	0.8	42	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 3x3-10S	
RTQ6342	4	42	0.8	42	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	
RTQ2962-QA	4	60	0.8	60	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 3x3-10S	√
RT6362	4	60	0.8	60	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 3x3-10S	√
RTQ6362	4	60	0.8	60	2.5	100~ 2500	150	-	0.09	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 3x3-10S	√
RTQ2117A- QA	3	36	0.8	6	3	300~ 2200	70	70	0.15	PSM/ PWM	COT	Y	Y	USB Charging Port Controller; BCM, DH+/DH- pins; <a href="#">AEC-Q100</a>	WETD-VQFN 5x5-32	√
RTQ2118A- QA	3	36	0.8	6	3	300~ 2200	70	70	0.15	PSM/ PWM	COT	Y	Y	Charging Port Controller; <a href="#">AEC-Q100</a>	WETD-VQFN 5x5-32	
RTQ2106-QA	3	36	0.8	36	3	300~ 2200	90	90	0.04	PSM/ Force PWM	CM	Y	Y	Spread-Spectrum; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	TSSOP-14 (PP)	√
RTQ2105-QA	3	36	0.8	36	3	300~ 2200	70	70	0.04	PSM/ Force PWM	CM	Y	Y	Spread-Spectrum; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	WET-WQF N4x4-24S	√
RTQ2104-QA	3	36	0.8	36	3	2100	80	80	0.04	PSM	CM	-	Y	Spread-Spectrum for Low EMI; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	PSOP-8	√
RTQ2104B- QA	3	36	0.8	36	3	2100	80	80	1.2	Force PWM	CM	-	Y	Spread-Spectrum for Low EMI; 100% Duty-Cycle; <a href="#">AEC-Q100</a>	PSOP-8	√
RT7272B	4.5	36	0.8	30	3	500	150	80	0.9	PSM	CM	-	-	Adj. Current Limit	PSOP-8	√
RT7272A	4.5	36	0.8	30	3	500	150	80	0.9	Force PWM	CM	-	-	Adj. Current Limit	PSOP-8	√
RT2875BQ	4.5	36	0.6	24	3	300~ 2100	95	70	1.3	Force PWM	CM	Y	Y	Adj. Current Limit; Ext. Sync; 100% Duty-Cycle; Hiccup Mode UVP; <a href="#">AEC-Q100</a>	TSSOP-14 (PP)	√



Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM/ Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RT2875AQ	4.5	36	0.6	24	3	300~ 2100	95	70	1.3	Force PWM	CM	Y	Y	Adj. Current Limit; Ext. Sync; 100% Duty-Cycle; Latched UVP; <a href="#">AEC-Q100</a>	TSSOP-14 (PP)	
RT2875DQ	4.5	36	0.6	24	3	300~ 2100	95	70	1.3	Force PWM	CM	-	Y	Ext. Sync; 100% Duty-Cycle; Hiccup Mode UVP; <a href="#">AEC-Q100</a>	TSSOP-14 (PP)	
RT2872	4.5	36	0.8	30	3	300~ 1000	105	80	1	Force PWM	CM	-	-	Adj. Freq.; Ext. Comp.; <a href="#">AEC-Q100</a>	PSOP-8	√
RT2862A	4.5	36	0.8	30	3	500	105	80	1	PSM	CM	-	-	Adj. Freq.; Ext. Comp.	PSOP-8	√
RT2862	4.5	36	0.8	30	3	500	105	80	1	Force PWM	CM	-	-	Adj. Freq.; Ext. Comp.	PSOP-8	
RT2808A	5.5	36	1.222	26	3	500	110	-	0.6	Force PWM	CM	Y	-	Asynch.; Enable Input	PSOP-8	
RTQ2949A- QA	4	42	0.8	42	3	100~ 2500	150	-	0.09	PSM	CM	-	-	100% Duty-Cycle; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8	
RTQ2949-QA	4	42	0.8	42	3	100~ 2500	150	-	0.09	PSM	CM	-	-	100% Duty-Cycle; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8	√
RTQ2117C- QA	3	36	0.8	5.5	3.5	300~ 2200	70	70	0.15	PSM/ PWM	COT	Y	Y	USB Type-C DFP with Charging Port Controller; BCM, DH+/DH- pins; <a href="#">AEC-Q100</a>	WETD-VQFN 6x6-40	√
RTQ2118C- QA	3	36	0.8	5.5	3.5	300~ 2200	70	70	0.15	PSM/ PWM	COT	Y	Y	USB Type-C DFP with Charging Port Controller; <a href="#">AEC-Q100</a>	WETD-VQFN 6x6-40	
RTQ2943-QA	4	42	0.8	42	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 4x4-10	√
RT6343	4	42	0.8	42	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 4x4-10	
RTQ6343	4	42	0.8	42	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 4x4-10	
RT6363	4	60	0.8	60	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 4x4-10	√
RTQ6363	4	60	0.8	60	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 4x4-10	
RTQ2963-QA	4	60	0.8	60	3.5	100~ 2500	80	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 4x4-10	√
RT8279	5.5	36	1.222	26	5	500	110	10000	0.6	Force PWM	CM	-	-	Enable Input	PSOP-8	√
RT6345	4	42	0.8	42	5	100~ 2500	70	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 4x4-10	√





Part Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM/ Force PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)								
RTQ2945-QA	4	4.2	0.8	42	5	100~2500	70	-	0.1	PSM	CM	Y	Y	Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 4x4-10	
RTQ2945A-QA	4	42	0.8	42	5	100~2500	70	-	0.1	PSM	CM	Y	-	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8	√
RTQ6345	4	42	0.8	42	5	100~2500	70	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 4x4-10	
RTQ2965-QA	4	60	0.8	60	5	100~2500	70	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; <a href="#">AEC-Q100</a>	PSOP-8; WDFN 4x4-10	√
RT6365	4	60	0.8	60	5	100~2500	70	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.	PSOP-8; WDFN 4x4-10	√
RTQ6365	4	60	0.8	60	5	100~2500	70	-	0.1	PSM	CM	Y	Y	100% Duty-Cycle; Asynch.; Adj. Freq.; Industrial Grade	PSOP-8; WDFN 4x4-10	



## Buck Controllers

Buck Controllers will step down the input voltage to lower output voltage with external switches. The output current is limited by external MOSFETs which gives designers the flexibility to optimize performance.

### ➤ Buck Controllers

Part Number	Vin		Vout		Freq	Gate Drive	Iq	Control Mode	Power Good	Features	Package	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	typ (kHz)	(V)	typ (mA)					
RT9232B	3.3	12	0.8	5	50-800	12	3	Voltage Mode	-	Adj. Freq.; Adj. Soft-Start; Enable Input	SOP-14	√
RT8125H	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	Richtek Mach Response™ for 100ns "instant-on" Response to Load Transients	WDFN 3x3-20	√
RT8123A	1.5	19	0.8	5	100-1000	5; 12	3.5	Voltage Mode	Y	Enable Input; Ext. Sync.	WQFN 3x3-16	√
RT8115C	2.5	21	0.8	12	300	5; 12	2	Green Voltage Mode	Y	Enable Input; OCP; OVP	WDFN 3x3-10	√
RT8125C	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	Richtek Mach Response™ for 100ns "instant-on" Response to Load Transients	WDFN 3x3-10	√
RT8125D	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	Richtek Mach Response™ for 100ns "instant-on" Response to Load Transients; OCP Scaling During Soft-Start	WDFN 3x3-10	√
RT8125E	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	Richtek Mach Response™ for 100ns "instant-on" Response to Load Transients	WDFN 3x3-10	√
RT8126B	2.5	24	0.6	5	300	5; 12	0.5	COT	Y	Audio Skipping Mode	WDFN 3x3-10	√
RT8130B	2.5	21	0.8	-	300	5; 12	2	Green Voltage Mode	Y	Adj. OCP; Ultrasonic Mode Control	WDFN 3x3-10	√
RT8130C	2.5	21	0.8	-	300	5; 12	2	Green Voltage Mode	Y	Adj. OCP; Ultrasonic Mode Control	WDFN 3x3-10	√
RT6575A	5	25	2	4/5.5	300/355	5	0.42	CCRCOT	Y	Dual Low Iq Buck Controller; 3.3V LDO Always On; Adj. OCP; OVP; Bypass Function; Charge Pump Drive	WQFN 3x3-20	√
RT6575B	5	25	2	4/5.5	300/355	5	0.42	CCRCOT	Y	Dual Low Iq Buck Controller; 3.3V & 5V LDO Always On; Adj. OCP; OVP; Bypass Function; Charge Pump Drive	WQFN 3x3-20	√
RT6585C	5	25	2	5.5	500/600	5	0.12	CCRCOT	Y	Dual Channels; 5V & 3.3V LDOs; Diode-emulation Mode in Light Load	WQFN 3x3-20	√
RT6585B	5	25	2	5.5	400/475	5	0.12	CCRCOT	Y	Dual Channels; 5V & 3.3V LDOs; Diode-emulation Mode in Light Load	WQFN 3x3-20	√
RT8129A	2.5	25	0.8	3.3	300	5; 12	-	COT	Y	Adj. Latch OCP; Latch OVP; Ultrasonic PSM Mode	WDFN 3x3-10	√
RT8129B	2.5	25	0.8	3.3	150	5; 12	-	COT	Y	Adj. Latch OCP; Latch OVP; Ultrasonic PSM Mode	WDFN 3x3-10	√
RT8129C	2.5	25	0.8	3.3	300	5; 12	-	COT	Y	Adj. Hiccup OCP; Latch OVP; Ultrasonic PSM Mode	WDFN 3x3-10	√
RT6543A	3	24	1.1	1.8	400-800	5	0.3	COT	Y	DCR Current Sense; Droop Control; 2-bit VID with Slew Down Mode	WDFN 3x3-20	√
RT6543B	3	24	1.1	1.8	400-800	5	0.3	COT	Y	DCR Current Sense; Droop Control; 2-bit VID with Decay Down Mode	WQFN 3x3-20	√



Part Number	Vin		Vout		Freq	Gate Drive	Iq	Control Mode	Power Good	Features	Package	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	typ (kHz)	(V)	typ (mA)					
RT8131B	5.5	26.5	4.5	22	300	5	2	Voltage Mode	Y	Wide Vout; Adj. OVP Window; Adj. OCP; Ext. Comp.; Int. 17msec Soft-Start	WDFN 3x3-10	√
RT6541A	3	26	0.7	1.05	560	5	0.14	ACOT	Y	Fast Transient Response; Adj. OCP	WDFN 3x2-14	√
RT6542A	3	26	0.75	1.05	560	5	0.2	ACOT	Y	Fast Transient Response	WDFN 3x2-14	√
RT6575C	5	25	2	5.5	300;355	-	0.42	COT	Y	Dual Channels; 3.3V LDO3 Output Always On	WQFN 3x3-20	√
RT6575D	5	25	2	5.5	300;355	-	0.42	COT	Y	Dual Channels; 5V/3.3V LDO3/5 Output Always On	WQFN 3x3-20	√
RT6575E	5	25	2	5.5	300;355	-	0.42	COT	Y	Dual Channels; 5V/3.3V LDOs Output	WQFN 3x3-20	√
RT6576D	5	25	2	5.5	300;355	-	0.42	COT	Y	Dual Channels; 5V/3.3V LDOs Output	WQFN 3x3-20	√
RT8110B	10	28	0.8	5	400	5	3	Voltage Mode	-	OCP; SCP; UVP	TSOT-28	√
RT8204L	4.5	26	0.75	3.3	200~600	5	0.34	COT	Y	Adj. OCP; Adj. Freq.	WQFN 3x3-16	√
RT8205L	6	25	2	5.5	300;375	19	0.2	COT	Y	5V/3.3V LDOs Output; Main Power Supply Controller for Notebook Computer	WQFN 4x4-24	√
RT8205M	6	25	2	5.5	300;375	19	0.2	COT	Y	5V/3.3V LDOs Output; Secondary Feedback Input Maintains Charge Pump Voltage; Main Power Supply Controller for Notebook Computer	WQFN 4x4-24	√
RT8207L	4.5	26	0.75	3.3	200~600	12	0.47	COT	Y	for DDR2/3/Low-Power & DDR3/4 Memory System	WQFN 4x4-24	√
RT8207M	4.5	26	0.75	3.3	200~600	12	0.47	COT	Y	for DDR2/3/Low-Power & DDR3/4 Memory System	WQFN 3x3-20	√
RT8207P	4.5	26	0.75	3.3	200~600	12	0.47	COT	Y	for DDR2/3/Low-Power & DDR3/4 Memory System	WQFN 3x3-20	√
RT8209M	4.5	26	0.75	3.3	200~600	5	0.5	COT	Y	Adj. OCP; Adj. Freq.	WQFN 3.5x3.5-14	√
RT8230A	5	25	2	5.5	300;355	-	0.15	COT	-	5V/3.3V LDOs Output	WQFN 3x3-20	√
RT8231A	4.5	26	0.675	3.3	260~1500	5	0.135	COT	Y	VDDQ and VTT Discharge Control A: Tracing Mode; for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory System	WQFN 3x3-20	√
RT8231B	4.5	26	0.675	3.3	260~1500	5	0.135	COT	Y	VDDQ and VTT Discharge Control B: Non-Tracing Mode; For DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory System	WQFN 3x3-20	√
RT8231C	4.5	26	0.675	3.3	260~1500	5	0.135	COT	Y	VDDQ and VTT Discharge Control B: Non-Tracing Mode; for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory System	WQFN 3x3-20	√
RT8248A	4.5	26	0.675	3.3	260~1500	5	0.135	COT	Y	for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory System	WQFN 3x3-20	√
RT8237C	4.5	26	0.7	3.3	290~430	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WDFN 3x3-10	√
RT8237E	2.7	26	0.7	3.3	290~430	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WDFN 3x3-10	√



Part Number	Vin		Vout		Freq	Gate Drive	Iq	Control Mode	Power Good	Features	Package	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	typ (kHz)	(V)	typ (mA)					
RT8237F	4.5	26	0.7	3.3	290~430	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WDFN 3x3-10	√
RT8237H	4.5	26	0.7	3.3	290~430	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WDFN 3x3-10	√
RT8238B	4.5	26	0.5	3.3	200~500	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WQFN 2x2-12	√
RT8239B	5.5	25	2	5.5	200~466	19	1	COT	Y	Adj. Freq.; Adj. OCP	WQFN 3x3-20	√
RT8240B	4.5	26	1	3.6	400	5	0.5	COT	Y	Adj. Freq.; Adj. OCP	WQFN 2x2-12	√
RT8243A	5.5	25	2	5.5	200~466	19	1	COT	Y	Adj. Freq.; Adj. OCP; Selectable Operation Mode with Switcher Enable Control	WQFN 3x3-20	√



Part Number	Vin		Freq	VCC	VID Table Support	Numbers of Phases	Numbers of MOSFET Drivers	Features	Package	Buy from Disty
	min (V)	max (V)	typ (kHz)	(V)						
RT8152B	5	25	300	5	INTEL IMVP6.5	1	1	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OVP; Power Good; SCP; UVP	WQFN5x5-32	√
RT8167A	5	25	300	5	INTEL IMVP7; VRI2	1;1	1;1	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OVP; Power Good; SCP; UVP	WQFN6x6-48	√
RT8172A	5	25	300	5	INTEL IMVP7; VRI2	1;1	1;1	Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; UVP	WQFN5x5-40	√
RT8179B	4.5	26	300	5	AMD SVI2	1;1	1;1	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WQFN5x5-40	√
RT8802A	10.8	13.2	300	5	AMD K8; K8_M2; INTEL VR10.x; VR11.0	5	0	Adj. Freq.; Adj. Soft-Start; DCR Current Sense; Droop Control; Enable Input; OCP; OVP; Power Good; SCP	WQFN6x6-40	√
RT8809B	4.5	13.2	300	12	GPU Core Power	2	2	Adj. OCP; Adj. Freq.; Built-in Bootstrap Switch; DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; G-NAVP Control; OVP; PSM; SCP; UVP; Ultrasonic Mode Control	WQFN4x4-24	√
RT8810D	4.5	13.2	200	12	GPU Core Power	2	2	Adj. OCP; Adj. Freq.; Adj. Soft-Start; Built-in Bootstrap Switch; Enable Input; SCP	WQFN4x4-24	√
RTQ8825	4.5	17	400	5	Networking System	3;2	0	Adj. Freq.; Adj. Soft-Start; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; I <sup>2</sup> C; OCP; OVP; Power Good; SCP	WQFN7x7-48	
RTQ8826	4.5	17	400	5	Networking System	6	0	Adj. Freq.; Adj. Soft-Start; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; I <sup>2</sup> C; OCP; OVP; Power Good; SCP	WQFN7x7-48	
RT8811B	7	20	250~800	12	GPU Core Power	2	2	Adj. OCP; Adj. Freq.; Adj. Soft-Start; Built-in Bootstrap Switch; Enable Input; Power Good; SCP	WQFN4x4-24	√
RT8816A	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20	√
RT8816B	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20	√
RT8820A	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20	√
RT8843B	2.7	25	300	5	GPU Core Power for OVR3i+ Spec	3	0	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; UVP	WQFN3x3-20	



Part Number	Vin		Freq	VCC	VID Table Support	Numbers of Phases	Numbers of MOSFET Drivers	Features	Package	Buy from Disty
	min (V)	max (V)	typ (kHz)	(V)						
RT8848A	2.8	24	300	5	GPU Core Power for OVR4i+ Spec	8	0	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; I <sup>2</sup> C Control; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WDFN5x5-40	✓
RT8848C	2.8	24	300	5	GPU Core Power for OVR4i+ Spec	8	0	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; I <sup>2</sup> C Control; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WDFN5x5-40	
RT8878B	4.5	13.2	300	5	AMD SVI2	4:2	2:0	Adj. Freq.; DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WQFN6x6x-52	✓
RT8880C	4.5	24	300	5	AMD SVI2 Mobile CPU	3:2	2:1	Adj. Freq.; DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WQFN6x6x-52	✓
RT8884B	10.8	13.2	300	5	INTEL VRI2.5	4	0	Adj. Freq.; DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; UVP	WQFN4x4-32	✓

## ➤ Gate Drivers

Part Number	Ugate				Lgate				Vcc	Disable pin	Built-in bootstrap switch	Iq typ (mA)	Features	Package(s)	Buy from Disty
	rise time (ns)	fall time (ns)	Source (Ω)	Sink (Ω)	rise time (ns)	fall time (ns)	Source (Ω)	Sink (Ω)	typ (V)						
RT9610B	8	8	1	1	8	4	1	0.5	5	Y	Y	0.08	Tri-state Input	WDFN2x2-8	✓
RT9610C	8	8	1	1	8	4	1	0.5	5	Y	Y	0.08	Tri-state Input	WDFN2x2-8	✓
RT9611A	25	12	-	1.4	24	10	-	1.1	12	Y	Y	1.2	Tri-state Input	WDFN3x3-8E; (P)SOP-8	✓
RT9611C	25	12	-	1.4	24	10	-	1.1	12	Y	Y	1.2	Tri-state Input; Short Dead Time	WDFN3x3-8	✓
RT9611D	25	12	-	1.4	24	10	-	1.1	12	Y	Y	1.2	Tri-state Input; Long Dead Time	WDFN3x3-8	
RT9612B	25	12	-	1.4	24	10	-	1.1	12	-	Y	1.2	Tri-state Input	WDFN3x3-8E; SOP-8	✓
RT9614C	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.12	Tri-state Input	WDFN2x2-8S	✓
RT9624C	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.12	Tri-state Input	WDFN2x2-8S	✓
RT9624D	25	12	1.7	1.4	24	10	1.6	1.1	12	-	Y	0.12	Tri-state Input	WDFN2x2-8S	✓
RT9624F	25	12	1.7	1.4	24	10	1.6	1.1	12	-	Y	0.12	Tri-state Input	WDFN3x3-8	✓
RT9624G	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.12	Tri-state Input	WDFN2x2-8S	✓
RT9629B	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.25	Tri-state Input	WQFN5x5-24	✓



## Boost Converters

Boost converters will step up the input voltage to a higher output voltage. This is accomplished by charging an inductor via an internal MOSFET switch and discharging the inductor via a rectifier to the load when the MOSFET switch is off. The current rating of the MOSFET switch together with step-up ratio will determine the maximum load current, and the MOSFET voltage rating will determine the maximum output voltage capability. In some boost converters, the rectifier is integrated as a MOSFET to provide synchronous rectification.

Part Number	Vin		Vout		SW Current Limit	Iq	Freq	Switch Ron	Rectifier Ron	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	typ (A)	typ (mA)	typ (kHz)	typ (Ohm)	typ (Ohm)			
RT9261B	1	7	1.5	5	0.16	0.036	190	-	-	VFM Boost; Only 3 ext. components; Enable Input	SOT-23-5; SOT-89	√
RT9276	1.2	5	3.3	5	2	0.1	1200	0.24	-	With Voltage Detector; Enable Input	WDFN3x3-10	√
RT9278	1.5	5.5	2.4	5.5	2	0.2	650	0.24	-	High Power WLED Driver	VDFN3x3-10	√
RT9266	2	6	2.6	6	2	0.55	450	0.3	-	1V Low Start-Up Input; Enable Input	SOT-23-5; SOT-89-5	√
RT9266B	2	6.5	2.6	6	0.5	0.15	550	0.35	-	1V Low Start-Up Input; Enable Input	SOT-23-6	√
RT9277C	2.5	5.5	3	16	1.6	2	640; 1200	0.2	-	Adj. Soft-Start; Enable Input	MSOP-8; WDFN3x3-8	√
RT9297	2.6	5.5	2.6	24	3.8	0.5	640; 1200	0.125	-	Adj. Soft-Start; Enable Input	WDFN3x3-10	√
RTQ9297-QT	2.6	5.5	2.6	24	3.8	0.5	640; 1200	0.125	-	AEC-Q100; Adj. Soft-Start; Enable Input	WDFN3x3-10S	
RT8509	2.8	14	3.5	24	3.5	1	1200	0.1	-	Adj. Soft-Start; Enable Input	WDFN3x3-10	√
RT8509A	2.8	14	3.5	24	5	5	1200	0.1	-	Adj. Soft-Start; Enable Input	WDFN5x5-12	√
RT4812	1.8	5.5	1.8	5.5	3.5	0.09	500	0.03	0.045	Synchronous; Selectable Current Limit; Load Disconnect; I <sup>2</sup> C Control	TSOT-23-8 (FC)	√
RT4803	1.8	5.0	2.85	4.4	5	0.065	2500	0.06	0.04	Synchronous; I <sup>2</sup> C Control; Adj. Current Limit; Power Good; Low Iq Force-Bypass; Load Disconnect	WL-CSP 1.67x1.67-16 (BSC)	
RT4803A	1.8	5.0	2.85	4.4	4	0.055	2500	0.06	0.04	Synchronous; I <sup>2</sup> C Control; Adj. Current Limit;	WL-CSP-16B 1.67x1.67 (BSC)	√
RT4813	1.8	5.5	1.8	5.5	6	0.12	500	0.026	0.043	Synchronous; Adj. Current Limit; Adj. Freq.; Spread Spectrum; Load Disconnect	UQFN2x2-9 (FC)	
RT4813A	1.8	5.5	1.8	5.5	6	0.12	500	0.026	0.043	Synchronous; Adj. Current Limit; Load Disconnect	UQFN2x2-9 (FC)	√
RT4841	8.6	15.9	8.6	15.9	5.5	5	500	0.08	-	Asynchronous; Isolation Switch Controller; Ext. Compensation	WQFN4x4-20	√



## Boost Controllers

Boost Controllers will step up the input voltage to a higher output voltage with external switches. The output current is limited by external MOSFETs which gives designers the flexibility to optimize performance. With boost controllers, designers can achieve higher levels of output power and operating temperature range that might be not possible with boost converters.

Part Number	Vin		Iq	VFB	Freq	Gate Drive		Duty	Features	Package(s)	Buy from Disty
	min (V)	max (V)	typ (mA)	typ (V)	typ (kHz)	sink Ron (Ω)	source Ron (Ω)	max (%)			
RT8525D	4.5	25	1.3	1.25	200	1	1.5	90	High Power Boost or SEPIC; Adj. Current Limit; Adj. Freq.;; Adj. Soft-Start;Adj. OVP; FAULT Output	WDFN3x3-12	√
RT8525	4.5	29	1.3	1.25	200	1	1.5	90	Adj. Current Limit; Adj. Freq.;; Adj. Soft-Start; Power Good	SOP-14	√





## Buck-Boost Converters

Buck-Boost converters are used in applications where input voltage can vary, either below or above the output voltage. The four internal MOSFET switches will be automatically configured to form a Buck when VIN exceeds VOUT and change to Boost operation when VIN falls below VOUT. This makes Buck-Boost ideal for battery-powered applications to extend battery life when the battery voltage falls below the regulated output voltage. The efficiency of the Buck-Boost converter is very good because of the fully synchronous operation. The output current capability in Buck mode is normally higher than in Boost mode. This is because the Boost mode requires higher switching current at the same load conditions compared to the Buck mode. The MOSFET voltage ratings will determine the maximum input and output voltage range.

Part Number	Vin		Vout		Iout	Current Limit	Freq	Ron		Iq	Features	Package(s)	Buy from Disty
	min (V)	max (V)	min (V)	max (V)	max (A)	min (A)	typ (kHz)	HS typ (mOhm)	LS typ (mOhm)	typ (uA)			
RT6150B	1.8	5.5	2.5	5.5	0.8	1.6	1000	150	150	60	PSM/Force PWM Mode Switch; Load Disconnect	WDFN 2.5x2.5-10	√
RT6150A	1.8	5.5	2.5	5.5	0.8	1.6	1000	150	150	60	PSM/Force PWM Mode Switch; Load Disconnect	WDFN 3x3-10	√
RT6158A	2.5	5	2.1	5.2	2	4.3	2000	20	20	8	Low Iq; PSM/Force PWM Mode Switch; Load Disconnect; Ext. Sync.	WL-CSP 2.07x2.33-25 (BSC)	√
RT6158H	2.5	5.5	2.1	5.2	3	6.5	2000	20	20	8	Low Iq; PSM/Force PWM Mode Switch; Load Disconnect; Ext. Sync.	WL-CSP 2.07x2.33-25 (BSC)	√
RT1741A	1.8	5.5	1.8	5.5	3	4.5	2400	50	50	20	PSM/Force PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN 4x3-14A	
RT6160A	2.2	5.5	2.025	5.2	3	5	2200	25	38	2	I <sup>2</sup> C control; ACOT; Low Iq; PFM/Force PWM Mode; Ultra-Sonic Mode	WL-CSP1. 4x2.3-15(BSC)	√
RTQ1741A	1.8	5.5	1.8	5.5	3	4.5	2400	50	50	20	PSM/Force PWM Mode Switch; Load Disconnect; Ext. Sync.; Industrial Grade	WDFN4x3-14A	
RT6154B	1.8	5.5	3.3	3.3	4	2.6; 5	2400	50	50	20	PSM/Force PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN4x3-14A	
RT6154A	1.8	5.5	1.8	5.5	4	2.6; 5	2400	50	50	20	PSM/Force-PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN4x3-14A	√



# Memory Power Solutions

DDR memory terminator LDOs have both source and sink functionality and require very tight output voltage regulation. These products can be used with many types of DDR memory from DDR1 to DDR4 as well as Low Power (LP) DDR3/4. The low Vin LDOs require an external low power bias voltage. Selecting a suitable product for your application should be based on DDR type, current rating and features, such as output voltage sensing, REFOUT and different power state settings via S3 / S5 pins.

## DDR I/II/III/IV Power Solutions

Part Number	Supported DDR type	Vin	Vout	Vcntl	VTT Output Tolerance	Isource/Isink	Standby Current	Current Limit	Features	Package(s)	Buy from Disty
		max (V)	min (V)	(V)	max (+/- mV)	max (A)	typ (mA)	typ (A)			
RT9173	DDR1/2	1.5	2.5	3.3;5	20	±1.5	0.05	3	REFEN	SOP-8; TO-252-5; TO-263-5	√
RT9173B	DDR1/2	1.7	2.5	3.3;5	20	±2	0.05	2.6	REFEN	SOP-8; TO-252-5	√
RT9199	DDR2/3	1.4	5.5	5	10	±2	0.002	2.91	REFEN	(P)SOP-8	√
RT9173C	DDR1/2/3	1.5	2.5	3.3;5	20	±2	0.05	2.2	REFEN	PSOP-8	√
RT9173D	DDR1/2/3	1.5	2.5	3.3;5	20	±3	0.05	3.4	REFEN	PSOP-8	√
RT9045	DDR1/2/3/4; LP3	1	5.5	5	13	±1.8	0.02	1.8	REFEN; MLCC Stable	PSOP-8	√
RT9045A	DDR1/2/3/4; LP3	1	5.5	5	13	±3.5	0.02	3.5	REFEN; MLCC Stable	PSOP-8	√
RT9089A	DDR1/2/3; LP3/4	1.1	3.5	2.9~ 5.5	25	±2	0.7	2	S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN2x2-10	
RT9088A	DDR2/3/4	1.1	3.5	2.9~ 5.5	25	±3	0.7	4.5	S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10	√
RTQ2508	DDR1/2/3/4	1.1	3.5	2.9~ 5.5	25	±3	0.7	4.5	S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable; Industrial Grade	WDFN3x3-10	√
RT2568	DDR1/2/3; LP3/4	1.1	3.5	2.9~ 5.5	25	±2	0.7	4.5	S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable; Industrial Grade	WDFN3x3-10	
RT2568A	DDR1/2/3; LP3/4	1.1	3.5	2.9~ 5.5	25	±2	0.7	4.5	S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10	√
RT9026	DDR1/2/3; LP3/4	1.2	3.3	-	40	±3	0.3	4	S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	MSOP-10(PP); PSOP-8; WDFN3x3-10	√
RT9040	DDR1/2/3; LP3/4	1.1	3.5	2.375~ 5.5	10	±5	0.02	5	S3; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10	√
RTQ2536-QA	DDR1/2/3/4; LP3/4	1	3.5	2.9~ 5.5	30	±2	0.5	2	S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable; <a href="#">AEC-Q100</a>	WDFN3x3-10S	

# Battery Management

Richtek's battery management products and supporting tools speed-up the design of highly efficient and high-performance battery-powered applications. Richtek offers a wide range of chargers including battery gauges and protection.

## Single Cell Li-Ion Linear Battery Chargers

Single cell Li-Ion battery charger ICs can be used to provide the correct charge current and voltage in battery-powered applications. The battery charger will measure battery charge current and battery voltage and will control the pass MOSFET in such a way that the charge current follows the required battery charge operation modes: pre-conditioning – constant current – constant voltage – current cut-off. The maximum charge current can be programmed by an external resistor, and an NTC coupled to the battery will send the battery temperature information to the charger. Charging status pins will signal the charge condition. Most linear chargers for single cell Li-Ion batteries are fed by 5V supply and are normally used for charge currents up to 1A, suitable for battery cells up to 1Ah.

Part Number	Vin		Battery CV Charge Voltage (V)	Battery Charge Current		Power Good	Charger Status	Input Source	Features	Package(s)	Buy from Disty
	min (V)	max (V)		min (A)	max (A)						
RT9527	4.4	6	4.2	0.01	0.6	Y	Y	AC Adapter; USB	Low Power; Adj. I-Charge; NTC Input; Safety Timer; OVP	WDFN 2x2-8	√
RT9532	4.3	6.2	4.2	0.2	1	Y	Y	AC Adapter; USB	Adj. I-Charge & I-End-of-Charge; Iset/USB500/USB100 Modes; 4.2V Factory Mode; 4.9V LDO; OVP	WDFN 3x2-10	√
RT9525	4.2	6	4.2	0.1	1.2	Y	Y	AC Adapter; USB	Auto Power Path; Adj. I-Charge; NTC Input; Safety Timer; 1.5A/USB500/USB100 Modes; System Disconnect; OVP	WQFN 3x3-16	√
RT9505	4.5	6	4.2	0.1	1.2	Y	Y	AC Adapter	Automatic Recharge; Battery Temp. Monitoring	WDFN 3x3-10	√
RT9519B	4.4	6	4.2	0.1	1.2	Y	Y	AC Adapter	Auto Power Path; Selectable OCP; OVP; UVP	WQFN 3x3-20	√
RT9524	4.3	5.5	4.2	-	1	Y	Y	AC Adapter; USB	4.2V Factory Mode; 50mA LDO; Adj. OCP; OVP; UVP	WDFN 3x2-10	√
RT9526A	4.5	6	4.2	-	1	Y	Y	AC Adapter; USB	Programmed Charging Current; Input OVP; UVP	SOT-23-6; WDFN2x3-8	√
RT9527A	4.4	6	4.4	0.01	0.6	Y	Y	AC Adapter; USB	Adj. Charging Current; Programmable Safe Charge Timer; NTC Input; OVP; UVP	WDFN 2x2-8	√
RT9528	4.35	6	4.2	0.066	1.2	Y	Y	AC Adapter; USB	I <sup>2</sup> C; Auto Power Path; USB/Audio/Video Switches; Integrated 3.3V LDO; OVP; UVP	WQFN 4x4-28	√



## Single Cell Li-Ion Switching Chargers

The single cell battery chargers provide higher charge current for high-capacity batteries in smartphones and portable devices. They are I<sup>2</sup>C controlled, and include input detection, Boost (OTG) function and many protection functions.

Part Number	Vin		Battery CV Charge		OTG Boost		Switch Freq (MHz)	Power Good Signal	Charge Status signal	Interface	Features	Package(s)	Buy from Disty
	min (V)	max (V)	Voltage (V)	Current (A)	Voltage (V)	Current (A)							
RT9466	4	14	3.9~4.71	0.1~5	4.425~5.825	0.5~2.4	0.75; 1.5	Y	Y	I <sup>2</sup> C	OTG; Power Select; 2-Charge Reporting; IR Compensation; Shipping Mode; NTC Input	WQFN 4x4-24	√
RT9465	3.9	14	3.8~5.06	0.6~3	-	-	0.75; 1.5	-	-	I <sup>2</sup> C	Adj. OCP; OCP; UVP; OVP	WQFN 3x3-16	√
RT9470	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; AICR, MIVR	WL-CSP 2.1x2.5-30 (BSC)	
RT9470D	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; AICR, MIVR; Support D+/D-	WL-CSP 2.1x2.5-30 (BSC)	√
RT9472	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; OCP; OVP; SCP; UVP; Adj. Current Limit; AC adapter & USB input	WQFN 4x4-24	
RT9472D	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	-	Y	I <sup>2</sup> C	OTG; OCP; OVP; SCP; UVP; Adj. Current Limit; AC adapter & USB input	WQFN 4x4-24	
RT9467	4	14	3.9~4.71	0.1~5	4.425~5.825	0.5~2.4	0.75; 1.5	-	Y	I <sup>2</sup> C	OTG; USB Device Detection; 2-Charge Reporting; IR Compensation; Shipping Mode; NTC Input	WQFN 4x4-24	√
RT9471	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; AICR, MIVR	WQFN 4x4-24	√
RT9471D	3.9	13.5	3.9~4.7	0~3.15	4.85~5.3	0.5;1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; AICR, MIVR; Support D+/D-	WQFN 4x4-24	√



## Smart Chargers

Part Number	Vin		Battery Charge		Charge		Switch Freq (MHz)	Charge Status Indicator	Interface	Features	Package(s)	Buy from Disty
	min (V)	max (V)	Voltage max (V)	Current max (A)	Type	Input Source						
RT9758	4	21	10.5	5	Switching	AC Adapter; USB	0.3~1.5	-	I <sup>2</sup> C	High Voltage Smart Cap Divider Charger for USB-PD Divide/2; Dual-Phase Charge Pump Core; Ext. OVP;10-Way System Protection	WL-CSP 2.74x2.84-36 (BSC)	√
RT9759	2.8	17	5	8	Switching	USB	0.25~0.75	Y	I <sup>2</sup> C	Smart Cap Divider Charger for USB-PD Divide/2; Dual-Phase Charge Pump Core; Ext. OVP;10-Way System Protection	WL-CSP 3.35x3.35-56 (BSC)	√

## Multi-Cell Li-Ion Switching Battery Chargers

Part Number	Description	Vin		Battery Charge		OTG Boost		Switch Freq (MHz)	Power Good Signal	Charge Status signal	Interface	Features	Package(s)	Buy from Disty
		min (V)	max (V)	VBAT (V)	IBAT (A)	Voltage (V)	Current (A)							
RT9490	1-4 Cell Buck-Boost Switching Battery Charger	3.6	24	18.8	5	2.8~22	0.12~3.32	0.75/1/1.5	Y	Y	I <sup>2</sup> C	Supports USB OTG; Dual Input Selection; BC1.2, Host Mode and FRS/Seamless; Full Protection	WL-CSP-56B 2.93x3.46 (BSC)	
RT9492	1-4 Cell Buck-Boost Switching Battery Charger	3.6	24	18.8	5	2.8~22	0.12~3.32	0.75/1/1.5	Y	Y	I <sup>2</sup> C	Supports USB OTG; Dual Input Selection; BC1.2, Host Mode and FRS/Seamless; Full Protection	VQFN-29TL 4x4 (FC) (V-Type)	



# Battery Fuel Gauge

Richtek's battery gauges use Voltaic Gauge with current sensing (VGCS) to determine the State of Charge, State of Health, Full Charge Capacity, Time to Empty and Cycle Count of Li-Ion cells. They use an internal algorithm to calculate these parameters and communicate it back to the host microcontroller via I<sup>2</sup>C.

Part Number	Description	Vin		Voltage Error (mV)	Current Error (%)	Active Current (uA)	Sleep Current (uA)	Shut-Down Current (uA)	Interface	Features	Package(s)	Buy from Disty
		min (V)	max (V)									
RT9422	Battery Pack Side Single Li-Ion Cell Fuel Gauge	2.5	5.5	±7.5	±1	14	5	0.5	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Temperature; NVM for Lifetime, Battery Characterize, Manufacturer Info.	WDFN 2.5x4-12	√
RT9422A	Battery Pack Side Single Li-Ion Cell Fuel Gauge	2.5	5.5	±7.5	±1	14	5	0.5	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Temperature; NVM for Lifetime, Battery Characterize, Manufacturer Info.	WDFN 2.5x4-12	
RT9426	System Side Single Li-Ion Cell Fuel Gauge	2.5	5.5	±7.5	±1	14	5	0.5	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Current, Temperature; Battery Presence	WDFN 2.5x4-12; WL-CSP 2.29x1.74-9 (BSC)	√
RT9426A	System Side Single Li-Ion Cell Fuel Gauge	2.5	5.5	±7.5	±1	14	5	0.5	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Current, Temperature; Battery Presence	WL-CSP 2.29x1.74-9 (BSC); WDFN 2.5x4-12; WL-CSP 2.29x1.74-9 (BSC)	√
RT9427	5uA System Side Single Cell Fuel Gauge	2.5	5.5	±5	±0.5	14	5	1	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; 5uA Ultra Low Power Consumption	WL-CSP 1.68x1.81 -9B (BSC); WDFN 2x2.5 -10L (FC) (W-Type)	
RT9427R	5uA System Side Single Cell Fuel Gauge with Built-in Sense Resistor	2.5	5.5	±5	±1	14	5	1	I <sup>2</sup> C	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; 5uA Ultra Low Power Consumption, Built-in Sense Resistor	WL-CSP 1.68x1.81 -9B (BSC)	
RT9428	Host Side Single Li-Ion Cell Fuel Gauge	2.5	4.5	±7.5	-	22	-	-	I <sup>2</sup> C	Accurate Relative Capacity (RSOC) Calculated from Voltaic Gauge Algorithm with Temperature Compensation; No Battery Relearning Necessary; No Current Sense Resistor Required	WL-CSP 1.6x1.52-8 (BSC)	√



## Monitoring & Protection

The overvoltage protection devices monitor the input power supply and system conditions to protect smart phones and handheld devices.

Part Number	Description	Vin		Vin_ovp	Delay Time	Iocp	Ron	Features	Package(s)	Buy from Disty
		range (V)	max (V)	typ (V)	max (us)	typ (A)	typ (mOhm)			
RT9746H	VBUS OVP with a PTVS Diode	3 ~ 6.7	28	6.8	0.25	-	35	Int. Fixer or Ext. Adj. Input OVP	WL-CSP1.92x1.27-12 (BSC)	√
RT9746	VBUS OVP with a PTVS Diode	3 ~ 6.7	28	6.8	0.25	4.5	35	Int. Fixer or Ext. Adj. Input OVP; OCP	WL-CSP1.92x1.27-12 (BSC)	√

Part Number	Description	Vin		Amplifier Ratio	Vcc Operating Current	Vcc Shutdown Current	Features	Package(s)	Buy from Disty
		min (V)	max (V)		(uA)	(uA)			
RT9553A	Current/Voltage Sensing and Protection	5	24	20	200	10	Programmable current limit; Enable Input	WDFN3x3-10	√
RT9553B	Current/Voltage Sensing and Protection	5	24	100	200	10	Programmable current limit; Enable Input	WDFN3x3-10	√
RT9554A	Battery Output Current Sense Protection	5	24	200	200	5	Programmable current limit; Enable Input	WDFN2x2-8	√

Part Number	Description	Vin		Vin OVP	Delay Time	I <sub>sd</sub>	Features	Package(s)	Buy from Disty
		min (V)	max (V)	typ (V)	max (us)	typ (uA)			
RT9718B	Over Voltage Protection	4	6.9	5.85	1	65	Enable Input; OCP	WDFN2x2-8	√
RT9718C	Over Voltage Protection	4	6.9	6.25	1	65	Enable Input; OCP	WDFN2x2-8	√

## Secure Authentication

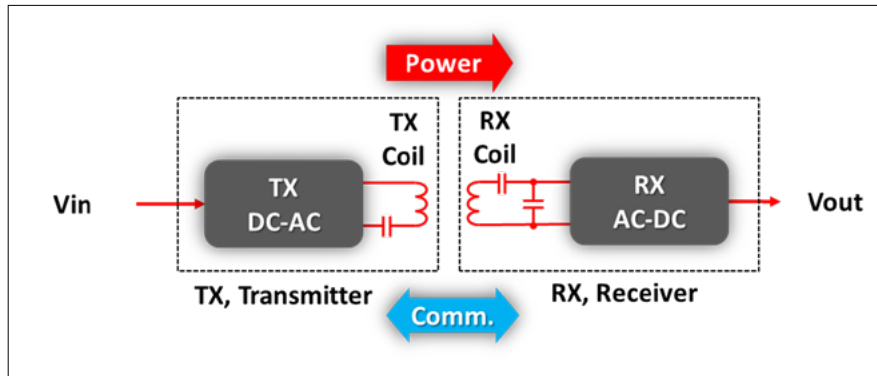
Providing secure authentication for anticounterfeit protection in mobile phones and portable devices.

Part Number	Description	Features	Package(s)	Buy from Disty
RT9430	SHA-256 FIPS 180-3 Symmetric-Key-Based Secure Authentication Model with 34 Bytes User Memory	34 bytes of User NVM; 32 Bytes of Secret; 8 Bytes of ROM_ID; 4 Bytes of Device ID; Supporting NVM Write and Read Protect; Supporting Anonymous Authentication Mode; Single-Wire Interface	TWL-CSP1.46x1.16-6 (BSC)	



# Wireless Power Solutions

Supporting the major wireless power standards – WPC (Qi).



Application	Tx, Transmitter	Rx, Receiver
5W WPC/BPP Base-line Power Profile	<p>RT3181A</p>	<p>RT1652 BPP State Machine + MTP</p>
	<p>RT3182A + RT1716 for PD Input</p>	
Up to 15W WPC/EPP Extended Power Profile	<p>RT3181C</p>	<p>RT1653 MCU + OTP + MTP</p>
	<p>RT3182C + RT1716 for PD Input</p>	





# LCD and OLED Display Power

Richtek offers an extensive display power portfolio, including LCD bias and OLED power drivers, ideal for portable or wearable applications. Supporting high responsiveness to deliver the best picture quality, our driver products in unique topologies can optimize power efficiency for various display sizes. Richtek has built on the essentials to offer next-generation applications with higher current loads. We also provide design tools and technical resources to accelerate your design time.

## White LED Drivers for Display Backlighting

Single string or multi-string LED drivers are suitable for small battery powered devices or large LCD panel backlighting with accurate dimming.

Part Number	Vin		Vout	Iswitch	LED Channels	Topology	SW Freq	LEDs per String	Iout per Channel	Rdson	Dimming Control	Features	Package(s)	Buy from Disty
	min (V)	max (V)	max (V)	min (A)			(kHz)	max (pcs)	max (mA)	(Ω)				
RT4533	2.5	5.5	36.5	1	1	Boost	1100	10	30	0.4	PWM	OVP; OCP	TSOT-23-6	√
RT4526	2.5	5.5	37	1	1	Boost	1000	10	20	0.7	PWM	OVP; OCP	TSOT-23-6	√
RT4531	2.5	5.5	36	1.15	2	Boost + Current Source	1000	10	20	0.27	PWM; Pulse	OVP; OCP	WL-CSP-9B 1.35x1.35 (BSC)	√
RT9300A	2.5	5.5	-	-	4	Current Source	-	1	15	-	PWM	Enable Input; UVP	SOT-23-6	√
RT9284A	2.7	5.5	20	0.75	1	Boost	1200	5	100	0.75	PWM	OVP; OCP	TSOT-23-5; TSOT-23-6	√
RT9285B	2.7	5.5	20	-	3	Boost	1000	5	-	0.75	PWM	OVP; OCP	TSOT-23-6; WDFN2x2-8	√
RT4537	2.7	24	36	2	6	Boost + Current Source	100~1600	11	25	-	PWM	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming & Freq.	WQFN 3x3-24	
RT4540	2.7	24	36	2	6	Boost + Current Source	100~1600	11	25	-	PWM; Analog	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming & Freq.	WQFN 3x3-24	
RT4527A	2.7	24	36	2	6	Boost + Current Source	100~1600	11	25	-	PWM	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming & Freq.	WQFN 3.5x3.5-20	√
RT8511B	2.7	24	43	1.66	1	Boost	500	10	-	0.4	PWM	Adj. OVP; Ext. Dim Filter; OCP	WDFN 2x2-8	√
RT8532	2.5	24	43	2.2	6	Boost + Current Source	300~1500	10	50	0.2	PWM; PWM to Analog, Mix mode	Adj. Freq.; Adj. String Current; OCP; Adj. OVP	WQFN 3x3-20	√
RT8532A	2.5	24	43	2.2	6	Boost + Current Source	300~1500	10	50	0.2	PWM; PWM to Analog, Mix mode	Adj. String Current; OCP; Adj. OVP	WQFN 3x3-20	√



Part Number	Vin		Vout	Iswitch	LED Channels	Topology	SW Freq	LEDs per String	Iout per Channel	Rdson	Dimming Control	Features	Package(s)	Buy from Disty
	min (V)	max (V)	max (V)	min (A)			(kHz)	max (pcs)	max (mA)	( $\Omega$ )				
RT8543	2.5	24	43	2.2	6	Boost + Current Source	600	13	50	0.2	PWM	Adj. Freq.; OCP; OVP	UQFN 4x4-20; WQFN 4x4-20	✓
RT8555	2.7	24	36	2	6	Boost + Current Source	900	11	35	0.1	PWM; PWM to Analog	Adj. Freq.; Adj. Soft-Start; OCP; OVP	WL-CSP 1.65x2.05-20 (BSC)	✓
RT8547	2.8	5.5	6.5	2.16	1	Boost + Current Source	2000	1	1600	0.3	Pulse	Flash LED Driver; OVP; UVP	WDFN 3x2-14	✓
RT9302	2.8	5.5	-	-	3	Current Source	-	1	20	0.4	Pulse; PWM	100% Duty Cycle; Enable Input	TSOT-23-8	✓
RT8575	4.2	24	60	2.8	4	Boost	150~500	18	150	0.15	PWM	Adj. Freq.; Adj. String Current; OCP; Adj. OVP	WDFN 5x5-16	✓
RT8510	4.2	24	43	2	4	Boost	1000	48	40	0.25	PWM	Adj. Freq.; OCP; OVP	WQFN 3x3-16	✓
RT8549L	4.2	24	60	2.8	4	Boost + Current Source	400	15	180	0.18	Analog; PWM	Adj. Freq.; Soft-Start; OCP; OVP	WDFN 5x5-16	✓
RT8568A	4.2	24	43	1.6	6	Boost	500~2000	12	40	0.25	PWM	Adj. Freq.; OCP; OVP	WQFN 4x4-20	✓
RT8569	4.2	24	43	1.6	6	Boost	500; 1000; 2000	12	40	0.2	PWM	Adj. Freq.; OCP; OVP	WQFN 4x4-20	✓
RT8577A	5.5	40	45	1.6	4	Boost	200~2100	-	120	-	PWM	AEC-Q100; Adj. Freq.; OCP; OVP	WQFN 5x5-20	✓
RT8463	6	50	50	2	1	Boost; Buck; Buck-Boost	470	-	210	0.3	Analog; PWM; PWM to Analog	Adj. Soft-Start; Enable Input; OCP; OVP	TSSOP-14 (PP); WDFN 3x3-12	✓
RT8561A	6	24	40	2.5	8	Boost	1000	10	30	0.3	Analog; Digital	Adj. Soft-Start; Enable Input; OCP; OVP	WQFN 4x4-24	✓
RT8560	7	40	60	1.2	4	Boost	1000	15	30	-	Analog; Digital	Soft-Start; OCP; OVP	WQFN 4x4-20	✓
RT8566	9	28	45	2.5	8	Boost	100~1000	-	120	-	PWM	Adj. Freq.; Soft-Start; OCP; OVP	TSSOP-28 (PP)	✓
RT8577	9	28	-	-	4	Boost	100~1000	13	200	-	PWM	Adj. Freq.; OCP; OVP	WQFN 5x5-20	✓
RT9361A	2.8	5	5; 4.5	-	3	Charge Pump	1000	1	150	-	-	Enable Input; OCP; SCP	(T)SOT-23-6; WDFN 2x2-6	✓
RT9365	2.8	5	3.5	-	5	Charge Pump	250	1	20	-	Pulse	Enable Input; OVP	WQFN 3x3-16	✓
RT9397B	2.7	4.5	±4.5~±6	-	-	Charge Pump	250	-	50	-	-	LCD Bias	WQFN 3x3-20	✓
RT9394	2.8	5	5	-	3	Charge Pump	1000	1	110	-	Analog	OCP; SCP	WDFN 2x2-6S	✓



## AMOLED Display Drivers

Fully integrated AMOLED drivers with small footprint are ideal for wearable AMOLED panels with symmetrical or asymmetrical drive voltage.

Part Number	Vin		Vout		Iout		AVDD		Interface	Features	Package(s)	Buy from Disty
	min (V)	max (V)	pos (V)	neg (V)	pos (A)	neg (A)	supply (V)	current (A)				
RT4722C	2.9	4.5	4.6	-1.4~ -5.4	0.3	0.3	5.8~ 7.9	0.055	S-Wire	Boost for AVDD & Vpositive; Inverter for Vnegative	WQFN 3x3-16	
RT4723	2.5	4.6	4.6	-0.6~ -2.4	0.03	0.055	-	-	S-Wire	Boost for Vpositive; -0.33/-0.5x Charge Pump for Vnegative	WL-CSP 1.39x2.07-15 (BSC)	√
RT4730	2.9	5.2	2.8~ 4	-0.6~ -4	0.05	0.05	3.3	0.15	S-Wire	Buck-boost for AVDD & Vpositive; 1x Charge Pump for Vnegative	WL-CSP 2.34x2.34-16 (BSC)	√
RT4706	2.5	5.0	4.6~ 5	-0.8~ -6	0.7	0.7	5.5~ 7.9	0.15	S-Wire	Boost for AVDD & Vpositive; Inverter for Vnegative	WL-CSP 2.469x2.469-36B (BSC)	
RT4703	2.9	4.8	4.6~ 5	-1.4~ -5.4	0.45	0.455	6.8~ 7.8	0.15	S-Wire	Boost for AVDD & Vpositive; Inverter for Vnegative	WL-CSP 1.76x2.06-20 (BSC)	



# Power Management Multi-Channel ICs

Richtek's PMICs are developed for various applications including automotive PoC camera, industrial SoC power, hand-held application, Intel V<sub>CORE</sub> platforms and SSD, TV SoC and general power management.

## PC

Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT5028A	12-Regulator PMIC with MTP Non-Volatile Memory for Industrial and Automotive Applications	3.3~5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	AEC-Q100; MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN 7x7-56	
RT5028F	12-Regulator PMIC with MTP Non-Volatile Memory for MT2712C Car Infotainment Chipset	3.15~5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN 7x7-56	√
RTQ5115-QA	12-Regulator PMIC with MTP Non-Volatile Memory for MT2712 Car Infotainment Chipset	3.15~5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	AEC-Q100; MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN 7x7-56	√
RT5067A	9-Regulator PMIC for INTEL BSW PLUS Platform	6~20 & 4.5 ~ 5.5	3x Buck Controller; 1x 4A, 2x 3A LV Buck; 2x 1A LDO; 1x 1A VTT LDO; 1x 0.6A, 2x 0.3A Switch	I <sup>2</sup> C	Low Iq for Connected Standby; 1% References; SoIX State for WIN8 Connected Standby	WQFN 6x6-52	
RT5074A	7-Regulator PMIC for INTEL APL Platform	5~23 & 4.5 ~ 5.5	3x Buck Controller; 1x 3A, 2x 1.5A LV Buck; 1x 0.5A VTT LDO; 1x 0.5A Switch	I <sup>2</sup> C	Integrated Power Sequence for APL; SoIX State for WIN8 Connected Standby; LPDDR3/DDR3L & LPDDR4 Support	WQFN 6x6-52	
RT5077A	7-Regulator PMIC for INTEL GLK Platform	5~23 & 4.5 ~ 5.5	2x Buck Controller; 1x 5A, 1x 4.5A, 1x 4A, 1x 2.5A LV Buck; 1x 1A VTT LDO; 1x 1A Switch	I <sup>2</sup> C	Integrated Power Sequence for APL; 1% References; SoIX State for WIN8 Connected Standby	WQFN 6x6-52	
RT5141A	PMIC for Intel ICL/TGL Platform	3~5.5 & 4.5~23	1x VID Buck Controller; 1x Buck Controller; 1x Buck Converter; 1x LDO; 1x Terminator LDO	-	Built-in Soft-Start and Auto-Discharge; Built-in Sequencing; DDR4/ LPDDR4/ LPDDR4x Support	WQFN 4x4-32	



## Portable Devices

Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT2070	4-Regulator PMIC for Power over Coax Automotive Digital Camera Module	4.5~15	1x 2A HV Buck; 2x 1A LV Buck; 1x 0.5A LDO; 1x 0.5A Power Switch	I <sup>2</sup> C	AEC-Q100; Power Sequence Programming	WQFN4x4-24	
RTQ2077S-QT	DC-DC Converters + LDO PMIC for Industrial/ Automotive Application	4.5~15	1x 0.4A HV Buck; 1x 0.2A LDO	-	AEC-Q100; Enable Input; Internal Compensation; OCP; OVP; Power Good; SCP	WQFN3x3-16	✓
RT9953	4+1 Channel PMIC for Digital Still Cameras	2.7 ~5.5	2x 1.5A Buck; 2x 3A Boost; 1x 0.5A LDO	-	100% Duty Cycle; Enable Input; High PSRR; Internal Comp.; Selectable Buck/Boost	WQFN4x4-24	✓
RT9971	7 Channel PMIC for Digital Still Cameras	2.7 ~5.5	3x 1.5A Buck; 2x 3A Boost; 1x LED Driver; 1x Negative Output	-	100% Duty Cycle; Enable Input; High PSRR; Internal Comp.; Selectable Buck/Boost	WQFN5x5-40	✓
RT9971A	7 Channel PMIC for Digital Still Cameras	2.7 ~5.5	3x 1.5A Buck; 2x 3A Boost; 1x 1.5A Buck; 1x LED Driver; 1x Negative Output	-	100% Duty Cycle; Enable Input; High PSRR; Internal Comp.; Selectable Buck/Boost	WQFN5x5-40	✓
RT9986A	7 Channel PMIC for Digital Still Cameras	2.7 ~5.8	3x 1.6A Buck; 2x 3A Boost; 1x 0.8A LED Driver; 1x Negative Output	-	100% Duty Cycle; Enable Input; Internal Comp.; Selectable Buck/Boost	WQFN4x4-32	✓
RT9992	5+2 Channel PMIC for DV	2.7 ~5.5	2x 1.5A Buck; 2x 3A Boost; 2x 0.1A LDO; 1x LED Driver	-	100% Duty Cycle; Enable Input; Internal Comp.; Selectable Buck/Boost	WQFN4x4-32	✓
RT5035C	10-Regulator PMIC with LED Driver and RTC for Li-ion Battery Powered Applications	2.6 ~ 5.5	1x 3.5A Boost; 1x 3A Buck-Boost; 1x 3A, 3x 1.5A LV Buck; 1x 0.8A LED Boost; 1x 0.3A, 1x 0.2A, 1x 0.05A LDO; 1x VNEG Charge-Pump	I <sup>2</sup> C	Dimmable LED Driver; Keep Alive Low Iq LDO; Highly Suitable for Digital Camera Applications	WQFN5x5-40	✓
RT5112A	6-Regulator PMIC for Camera Module Application	2.5 ~ 5.5	2x 1.2A LV Buck; 4x 0.3A LDO	I <sup>2</sup> C	Low Iq; HCOT Buck Control; High PSRR LDO's; Interrupt Output	WL-CSP 2.2x2.3-25 (BSC)	
RT5112H	6-Regulator PMIC for Camera Module Application	2.5 ~ 5.5	1x 1.2A LV Buck; 1x 1A Boost; 4x 0.3A LDO	I <sup>2</sup> C	Low Iq; HCOT Buck Control; ACOT Boost Control; High PSRR LDO's; Interrupt Output	WL-CSP 2.2x2.3-25 (BSC)	
RT5133	8-Channel LDOs & 3 GPOs for Camera Module Application	2.8-5	1 x 0.3A LDO for IO(VIO); 1 x 0.3A LDO for VAF; 4 x 0.3A LDO for AVDD; 2 x 0.6A, 1A LDO for DVDD	I <sup>2</sup> C	Enable Input; High PSRR; Low Dropout; OCP	WL-CSP 1.84x1.84-25 (BSC)	
RT4801T	Dual Output LCD Bias for Smartphones and Tablets	2.5~5.5	1.3A Boost + LDO for VOP; Inverting Charge Pump for VON	I <sup>2</sup> C	VOP & VON from ±4V to ±6V in 100mV steps; Enable Input; Int. Comp; OCP; OVP; SCP	WL-CSP 1.31x2.07-15 (BSC)	✓
RT4831A	4-Channel LCD Backlight Driver with Integrated LCD Dual Bias Power	2.7~5	1.8A x Boost + 4-channel LED Current Source; 1A x Boost + LDO for VOP; Inverting Charge Pump for VON	I <sup>2</sup> C	150mA Output Current Capability; Adj. Current Limit; Adj. Freq.; VOP & VON ±4V to ±6.5V in 50mV steps	WL-CSP 1.84x2.68-24 (BSC)	✓



Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT9397BF	Charge Pump Controller for Dual Output LCD Bias	2.7~4.5	1x Step-up Charge Pump 1x Inverting Charge Pump	-	VOP & VON from $\pm 4V$ to $\pm 6V$ via Resistors; Adaptive x1.33/x1.5/x1.75/ x2 Charge; Pump Mode Transition for Positive; Voltage and x-1 for Negative Voltage	WQFN3x3-20	
RT5024	I <sup>2</sup> C Programmable Multi-Channel PMU with Battery Charger for CMOS DSC/DV	1.8~5.5	2x 1A Boost; 1x 1.3A, 1x 1.3A, 1x 0.6A Buck; 1x LED Driver; 3x 0.3A LDO	I <sup>2</sup> C	Auto Power Path Management (APPM); No external MOSFETs Required; Six Preset Power on/off Sequences	WQFN5x5-40	√
RT5133A	8-Channel LDOs & 3 GPOs for Camera Module Application	2.8~5	1 x 0.3A LDO for IO(VIO); 1 x 0.3A LDO for VAF; 4 x 0.3A LDO for AVDD; 2 x 0.6A, 1A LDO for DVDD	I <sup>2</sup> C	Enable Input; High PSRR; Low Dropout; OCP	WL-CSP 1.84x1.84-25 (BSC)	

## SSD

Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT5091C	3-Regulator PMIC for SSD	2.8 ~ 5.5	1x 4A, 2x 2A LV Buck; 1x 0.3A LDO	I <sup>2</sup> C	Inrush Control with External MOSFET Drive; Power Sequence; PS3.5 & PS4 Power State Control; Power Good	WQFN 4x4-32	
RT5091D	3-Regulator PMIC for SSD	2.8 ~ 5.5	1x 4A, 2x 2A LV Buck or 1x 2A LV Buck; 1x 4A Power Switch; 1x 0.3A LDO	I <sup>2</sup> C	One Buck with Bypass Mode; Power Sequence; PS3.5 & PS4 Power State Control; Power Good	WQFN 4x4-32	
RT5086D	Power Management Unit Total Power Solution for SSD	2.9~5.5	2x 1A, 1x 1.5A, 1x 2A, 2x 4A Buck	I <sup>2</sup> C	Low Power Mode for Ultra Low Iq; POR Threshold Selection & Open-Drain POR Indicator; Power Sequence Control During Startup; OVP; UVP; UVLO	WL-CSP 3.19x3.59-56 (BSC)	



## TV and Home Entertainment

Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT5090C	5-Regulator PMIC for TV System	8~27 & 4.5 ~ 5.5	1x Buck Controller; 1x 6A, 2x 3A LV Buck; 1x 0.6A LDO	I <sup>2</sup> C	12~24V Input Systems or 12~24V Input + 3.3V Systems; Power-up SOC Reset	WQFN5x5-40	√
RT7273	3-Channel Buck Converter	4.5 ~ 18	1x 3.5A, 2x 2.5A HV Buck	-	Current Mode; Adj. Freq.; Adj. Soft-Start; Adj. Power Sequence; Adj. Current Limit; Global Hiccup Mode	WQFN6x6-40	√
RT5090F	TV System Power Management Solution	8~27	1x Buck Controller; 1 x 3.5A, 1x 6A, 1x 3A Buck; 1 x 0.6A LDO	I <sup>2</sup> C	Supporting Mute, AC OFF Depop Sound and Quick Setting Storage while Input Power Remove; OVP; UVP	WQFN5x5-40	√
RT5800	4-Phase, 2-Channel or 3-Channel High Current Buck for MT2712 Car Infotainment Chipset	3~6	2+2 Phase: 10A + 10A; 2+1+1 Phase: 10A + 5A + 5A	I <sup>2</sup> C	AEC-Q100; Remote Sense; DVS with Programmable Slew-rate Control; Watch-dog Timer; PSM/Force PWM	WQFN 4.5x5-30 (FC)	
RT5047B	Single Output LNB Supply and Control Voltage Regulator	8~16	0.55A LNB Output	-	Low Noise LNB Output Voltage; ±3% High Accuracy for 0mA to 500mA; Push-Pull Output Stage; External 22kHz Tone Input; Meet DiSEqC™ 1.x Protocol	PSOP-8	√
RT5047BF	Single Output LNB Supply and Control Voltage Regulator	8~16	0.55A LNB Output	-	Low Noise LNB Output Voltage; ±3% High Accuracy for 0mA to 500mA; Push-Pull Output Stage; External 22kHz Tone Input; Meet DiSEqC™ 1.x Protocol	PSOP-8	√
RT8935	12-CH Level Shifter for GOA TFT-LCD Panel	2.6~5.5	12x Level Shifter Outputs	-	Power Good; UVP; OTP; -15 ~ 40V Output	WQFN4x4-32	√
RT4841	5A Synchronous Boost Converter with Output Isolation MOS for TFT LCDs	8.6~15.9	1x 5A Boost; Isolation Switch Controller	-	OCP; OVP; SCP; UVP	WQFN4x4-20	



# Automotive

Part Number	Description	Vin Range (V)	Regulator Blocks	Interface	Features	Package(s)	Buy from Disty
RT2070	4-Regulator PMIC for Automotive Digital Camera Module	4.5~15	1x 2A HV Buck; 2x 1A LV Buck; 1x 0.5A LDO; 1x 0.5A Power Switch	I <sup>2</sup> C	AEC-Q100; POC Step-Down & Secondary Regulators; High PSRR LDO for Analog Supply; Power Sequence Programming	WQFN 4x4-24	
RTQ2071A-QA	4-Regulator PMIC for Power over Coax Automotive Digital Camera Module	4~18.5	1x 2A HV Buck; 1x 1.5A LV Buck; 1x 0.75A LV Buck; 1x 0.3A LDO	-	AEC-Q100; FMEA Compliant; 10 Adj. Output Settings; 10 Flexible Power Sequence Settings; Power Good; Sequence Output; Sequence Control for External Power IC via SEQOUT	WETD-VQFN 3x3-16	
RTQ2071B-QA	4-Regulator PMIC for Power over Coax Automotive Digital Camera Module	4~18.5	1x 2A HV Buck; 1x 1.5A LV Buck; 1x 0.75A LV Buck; 1x 0.3A LDO	-	AEC-Q100; FMEA Compliant; 10 Adj. Output Settings; 10 Flexible Power Sequence Settings; Power Good; Power Status Indication via PG	WETD-VQFN 3x3-16	
RTQ2117C-QA	USB Type-C DFP with Charging Port Controller & Buck Converter for Car Chargers and USB Type-C Power Chargers	3~36	1x Charging Port Controller; 1x 3.5A HV Buck 1x USB2.0 Data Switch	-	AEC-Q100; Selectable Spread-Spectrum Frequency Modulation; Supports USB BC1.2 SDP, DCP, CDP & YD/T 1591-2009 Standard	WETD-VQFN 6x6-40	√
RTQ2077S-QT	4-Regulator PMIC for Automotive/Industrial Applications	4.5~15	1x 0.4A HV Buck; 1x 0.2A LDO	-	AEC-Q100; POC Step-Down; High PSRR LDO for Analog Supply	WQFN 3x3-16	√
RT5028A	12-Regulator PMIC with MTP Non-Volatile Memory for Industrial and Automotive Applications	3.3~5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	AEC-Q100; MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN 7x7-56	
RTQ5115-QA	12-Regulator PMIC with MTP Non-Volatile Memory for MT2712 Car Infotainment Chipset	3.15~5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	AEC-Q100; MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN 7x7-56	√
RTQ2134-QA	4-Phase, 2-Channel or 3-Channel High Current Buck for MT2712 Car Infotainment Chipset	3~6	2+2 Phase: 10A + 10A; 2+1+1 Phase: 10A + 5A + 5A	I <sup>2</sup> C	AEC-Q100; ACOT; Remote sense; DVS with Programmable Slew-rate Control; Watch-dog Timer; PSM/ Force PWM	WQFN 4.5x5-30 (FC)	√
RTQ6513-QT	10-Bit Programmable Gamma Reference for TFT-LCD Panel	2.9 ~ 18	16x Gamma Correction; 1x VCOM Operational Amplifier; 1x Rail to Rail HAVDD Buffer	I <sup>2</sup> C	AEC-Q100; OCP; OVP; SCP	WQFN 5x5-32	
RTQ6749-QT-A2	TFT LCD Integrated Power Module for Automotive Infotainment Applications	2.5~5.5	1x 0.2A, 1x 0.06A Boost for PAVDD and VGH; 1x 0.2A Buck-Boost for NAVDD; 1x 0.06A VGL Charge Pump; 1x VCOM; 1x RESET Voltage Detector	I <sup>2</sup> C	AEC-Q100; Outputs Power-off Discharge Function; Programmable Voltage Detector	WDFN 5x5-32	√
RTQ6752-QT	TFT LCD Integrated Power Module for Automotive Infotainment Applications	2.5~5.5	2x 0.2A Boost for PAVDD; 1x 0.2A NAVDD Buck-Boost; 1x RESET voltage detector	I <sup>2</sup> C	AEC-Q100; Outputs Power-off Discharge Function; Programmable Voltage Detector	WET-WQFN 5x5-20	
RTQ2076-QT	CIS/CCM PMIC for Ultra Compact Camera and High Image Quality System	4~18.5	1x 2A HV Buck; 1x 1.5A, 1x 0.75A LV Buck; 1x 0.3A LDO	-	AEC-Q100; FMEA Compliant; 10 Flexible Power Sequence Settings via SEQ Pin	WETD-VQFN 3x3-16	



# AC/DC

## PD-TA

SSR flyback controller compatible with adaptive output adapter

Part Number	Max Output Voltage (V)	Switching Freq (kHz)	VDD Range (V)	HV Start-up	Low Power Standby	Protection	Features	Package(s)	Buy from Disty
RT7786GE	20V	85	10~32	Yes	<30mW	All Auto-Recovery	CCM/Valley Switching Multi-Mode; Smart Jitter	SOP-8	
RT7791GE	20V	85	10~40	No	<50mW	All Auto-Recovery	CCM/Valley Switching Multi-Mode; Smart Jitter	SOP-8	
RT7791PLB	20V	65	10~40	No	<50mW	Latch: VIN/VDD/Vo; OVP; OTP; Auto-Recovery: VDD/Vo; UVP; OCP	CCM/Valley Switching Multi-Mode; Smart Jitter	SOP-8	
RT7752GE	20V	83	10~40	No	<50mW	All Auto-Recovery	CCM/Valley Switching Multi-Mode; Smart Jitter	SOT-23-6	
RT7752GEP	20V	83	10~40	No	<50mW	All Auto-Recovery	QR/Valley Switching Multi-Mode; Smart Jitter	SOT-23-6	
RT7753GEN	20V	84	9~42	No	<50mW	All Auto-Recovery	CCM/Valley Switching Multi-Mode; Smart Jitter	SOT-23-6	
RT7753GCV	12V	84	9~42	No	<50mW	All Auto-Recovery	CCM/QR & Green Modes; Smart Jitter	SOT-23-6	
RT7755AE	20V	82.5	10~60	No	<50mW	All Latch	CCM/Valley Switching & Green Modes; Smart Jitter	SOT-23-6	
RT7755LES	20V	65	10~60	No	<50mW	Latch: VDD/Vo; OVP; OTP; Auto-Recovery: Vo; UVP; OCP	CCM/Valley Switching & Green Modes; Smart Jitter	SOT-23-6	

Synchronous rectifier controller compatible with adaptive output adapter

Part Number	Max VD Voltage (V)	Output Voltage (V)	Max Freq (KHz)	HV LDO	VG min. On (ns)	Package(s)	Buy from Disty
RT7220AMD	120	3~22	100	120V / 60mA	1500	SOT-23-6	
RT7220AHD	120	3~22	150	120V / 60mA	890	SOT-23-6	
RT7220BMD	70	3.3~13	85	70V / 30mA	1000	SOT-23-6	



## Multi-Mode Flyback Controllers

Easy-to-use flyback controllers with sophisticated power save modes for ultra-low standby power.

Part Number	AC Input Range	Feedback Regulation Mode	Switching Freq (kHz)	VDD Range (V)	HV Start-up	Brown-in/out	Low Power Standby	Features	Package(s)	Buy from Disty
RT7738G	Full Range	SSR	65	12-25	-	Y	<75mW	Smart Jitter; High Noise Immunity	SOT-23-6	
RT7740GA	Full Range	SSR	65	10-25	-	Y	<75mW	Smart Valley Jitter; High Noise Immunity; OCP with 63msec Delay	SOT-23-6	
RT7740GHD	Full Range	SSR	100	10-25	-	Y	<75mW	Smart Valley Jitter; High Noise Immunity; Hiccup OVP	SOT-23-6	
RT7740GAD	Full Range	SSR	65	10-25	-	Y	<75mW	Smart Valley Jitter; High Noise Immunity; Hiccup OVP	SOT-23-6	
RT7740MA	Full Range	SSR	65	10-25	-	Y	<75mW	Smart Valley Jitter; High Noise Immunity	SOT-23-6	
RT7752GEP	Full Range	SSR	83	10-40	-	Y	<50mW	QR/Valley Switching Multi-mode; Smart Jitter	SOT-23-6	
RT7753GEN	Full Range	SSR	84	9-42	-	Y	<50mW	CCM/Valley Switching Multi-mode; Smart Jitter	SOT-23-6	
RT7753GCS	Full Range	SSR	84	9-42	-	Y	<50mW	CCM/Valley Switching Multi-mode; Smart Jitter	SOT-23-6	√
RT7755AE	Full Range	SSR	82.5	10-60	-	Y	<50mW	CCM/Valley Switching & Green Modes; Smart Jitter	SOT-23-6	
RT7755LES	Full Range	SSR	65	10-60	-	Y	<50mW	CCM/Valley Switching & Green Modes; Smart Jitter	SOT-23-6	

# Audio

## Class-D Audio Power Amplifiers

The high efficiency BTL configuration delivers high power without the need of heatsink. The audio amplifiers have either analog or digital input system with elaborate EQ and frequency DRC control.

Part Number	Description	Output Channels	Vin		Output Power	Efficiency (%)	Signal Input	Features	Package(s)	Buy from Disty
			min (V)	max (V)						
RT9120	2x20W, Inductor-Less, Closed-Loop Class-D Digital Audio Amplifier with DRC Control	2	4.5	26.4	20W(2x)	92	I <sup>2</sup> S	Filterless; Supports I2S, Left-justified, Right-justified; 1-Band DRC; Anti-Pop	VQFN5x5-32	
RT9120S	2x30W, Inductor-Less, Closed-Loop Class-D Digital Audio Amplifier with DRC Control	2	4.5	26.4	30W(2x)	94	I <sup>2</sup> S	Filterless; Supports I2S, Left-justified, Right-justified, TDM formats; 1-Band DRC; Anti-Pop	VQFN5x5-32	
RT9114B	2x20W Digital Audio Amplifier System with EQ and DRC Control	2	8	26.4	20W (2x)	100	I <sup>2</sup> S	Filterless; >24 Biquads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28	√
RT9114C	2x20W Digital Audio System with EQ and Frequency DRC Control	2	8	26.4	20W (2x)	100	I <sup>2</sup> S	Filterless; >24 Biquads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28	
RT9119	2x20W Digital Audio System with EQ and Frequency DRC Control	2	8	26.4	20W (2x)	100	I <sup>2</sup> S	Filterless; >36 Biquads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28	√
RT9118	2x10W Class-D Amplifier with Headphone Amplifier	2	8	17	10W (2x)	100	Analog	Filterless; Power Limit Setting; Gain Setting; 4Ω and 8Ω	WQFN4x5-28	
RT9121	30-W Stereo, Inductor-Less Digital Audio, Closed-Loop System with 192-KHz Extended Audio Processing	2	4.5	26.4	30W (2x)	94	I <sup>2</sup> S	Filterless; Hifi-3 DSP Process, 160kB SRAM; Build in programmable DSP	VQFN 6x6 -48 (V-Type)	
RT9101	2.65W PWM Class-D Power Amplifier	1	2.5	5.5	2.65W	95	I <sup>2</sup> S	Filterless; Anti-Pop	WDFN3x3-8	
RT9101C	2.65W PWM Class-D Power Amplifier	1	2.5	5.5	2.65W	95	I <sup>2</sup> S	Filterless; Anti-Pop	WL-CSP 1.45x1.45-9B (BSC)	
RT5510	BTL Class-G Amplifier with V/I Sense	1	2.7	5.5	4.8W & 6.5W	110	I <sup>2</sup> S	Left-justified, Right-justified, TDM and DSP A/B Format	WL-CSP 2.25x2.60 -30B (BSC)	
RT5509	Speaker Amplifier with Speaker Protection	1	2.7	5.5	4.3W	100	I <sup>2</sup> S	Left-justified, Right-justified	WL-CSP 3.04x2.99-48 (BSC)	√
RT5512B	Audio Amplifier with IV Sense	1	2.7	5.5	7W & 1.7W	117	I <sup>2</sup> S	Left-justified, Right-justified, and TDM Format	WL-CSP2.57x2.57 -36B (BSC)	



## Audio Switches

Part Number	Description	Vcc		Features	Package(s)	Buy from Disty
		min (V)	max (V)			
RT8980H	USB Type-C Analog Audio and USB Switch	2.7	5.5	USB Type-C Port to Pass USB2.0 Data Signal (DP, DN), Sideband Use Signal, Analog Audio R L Signal, and Analog Microphone Signal.	WL-CSP2.21x2.25-25 (BSC)	√



# Gate Drivers

## Single Phase Synchronous Rectified Buck MOSFET Drivers

MOSFET gate drivers highly suitable for a wide range of PC  $V_{CORE}$  and Notebook power applications.

Part Number	Number of Channels	Vcc	V-Switch	UGATE		LGATE	
		range (V)	max (V)	Source Resistance typ (Ohm)	Sink Resistance typ (Ohm)	Source Resistance typ (Ohm)	Sink Resistance typ (Ohm)
RT9614A	1	4.5 ~ 13.2	30	1.7	1.4	1.6	1.1
RT9624A	1	4.5 ~ 13.2	30	1.7	1.4	1.6	1.1
RT9624B	1	4.5 ~ 13.2	30	1.7	1.4	1.6	1.1

Part Number	Enable Pin	Built-In Bootstrap Diode	Features	Package(s)	Buy from Disty
RT9614A	Y	Y	Tri-State input; Adaptive Shoot-through Protection; Reduced Dead-time	WDFN3x3-8	√
RT9624A	Y	Y	Tri-State Input; Adaptive Shoot-through Protection	WDFN3x3-8	√
RT9624B	-	Y	Tri-State Input; Adaptive Shoot-through Protection	WDFN3x3-8	√



# Operational Amplifiers

## High Speed Operational Amplifiers

Specifically designed for TFT LCD Gamma and Vcom buffer, with high slew-rate, high current and rail to rail swing.

Part Number	Vs		Number of Outputs	Voffset	Iout	Ipeak	Slew Rate	-3dB Band Width
	min (V)	max (V)		typ (mV)	typ (mA)	typ (mA)	(V/us)	(MHz)
RT9148	6	20	1	2	50	350	35	16
RT9146	6	20	1	2	80	1000	35	16
RT9133A	4.5	15	1	2	35	120	12	12
RT9134	4.5	15	4	2	35	120	12	12
RT9136	4.5	16.5	4	2	35	120	12	12
RT9147	6	20	2	2	80	1000	35	16
RTQ9148-QT	6	20	1	2	50	350	35	-

Part Number	AVOL	CMRR	PSRR	Features	Package(s)	Buy from Disty
	typ (dB)	typ (dB)	typ (dB)			
RT9148	118	95	96	Rail to Rail Swing; High Speed; High Peak Current	TSOT-23-5	
RT9146	118	95	96	Rail to Rail Swing; High Speed; High Peak Current	WDFN3x3-8	√
RT9133A	95	80	70	Rail to Rail Swing	SOT-23-5; WDFN2x2-6	√
RT9134	95	80	70	Rail to Rail Swing	VQFN4x4-16; TSSOP-14	√
RT9136	95	80	70	Rail to Rail Swing	MSOP-10	√
RT9147	118	95	96	Rail to Rail Swing; High Speed; High Peak Current	WDFN3x3-8; WDFN3x3-8S; WQFN4x4-16	√
RTQ9148-QT	-	-	-	Rail to Rail Swing; High Speed; High Peak Current; <a href="#">AEC-Q100</a>	WDFN3x3-6	



# Supervisors & Reset ICs

## Monitoring and Protection

The overvoltage protection devices monitor the input power supply and system conditions to protect smart phones and handheld devices.

Part Number	Description	Vin		Vin_ovp	Delay Time	Iocp	Ron	Features	Package(s)	Buy from Disty
		range (V)	max (V)	typ (V)	max (us)	typ (A)	typ (mOhm)			
RT9746H	VBUS OVP with a PTVS Diode	3 ~ 6.7	28	6.8	0.25	-	35	Int. Fixer or Ext. Adj. Input OVP	WL-CSP1.92x1.27-12 (BSC)	√
RT9746	VBUS OVP with a PTVS Diode	3 ~ 6.7	28	6.8	0.25	4.5	35	Int. Fixer or Ext. Adj. Input OVP; OCP	WL-CSP1.92x1.27-12 (BSC)	√

Part Number	Description	Vs		Voffset (mV)	CMRR (dB)	Features	Package(s)	Buy from Disty
		min (V)	max (V)					
RT6052	High-Side Measurement Current Shunt Monitor with Comparator	2.9	18	0.5	100	Common-Mode Range: 2V ~80V; Internal Open-Drain Comparator; Latching Capability on Comparator; Commercial Grade	MSOP-8	
RTQ6052	High-Side Measurement Current Shunt Monitor with Comparator	2.9	18	0.5	100	3.5% Maximum Error Over Temperature; Industrial Grade	MSOP-8	
RT6056	High-Side/Low-Side Measurement, Bi-Directional Current & Power Monitor with 16-Bit ADC Op Amp/Alert	2.7	5.5	0.0025	140	Monitor Bus Voltage: 0V ~ 36V; Max 0.12% Gain Error; Low Offset Voltage: Max 10μV; Current, Bus Voltage and System Power Reporting; Programmable Warning Threshold; OC, OV and Over-Power Alert; -40°C to 125°C; I <sup>2</sup> C & SMBus Interface; Commercial Grade	MSOP-10	
RTQ6056	High-Side/Low-Side Measurement, Bi-Directional Current & Power Monitor with 16-Bit ADC Op Amp/Alert	2.7	5.5	0.0025	140	-40°C to 125°C; I <sup>2</sup> C & SMBus Interface; Industrial Grade	MSOP-10	



Part Number	Description	Vin		VTH		Accuracy	Reset Time-out Period	Reset Delay Time	Features	Package(s)	Buy from Disty
		range (V)	max (V)	min (V)	max (V)	typ (±%)	typ (ms)	typ (ms)			
RT9801A	User Programmable Micro-Power Voltage Detector	0.9	6	2.5	5	3	200	0.02	N-Channel, Open-Drain Output	SOT-23-6	√
RT9801B	User Programmable Micro-Power Voltage Detector	0.9	6	1.5	4	3	200	0.02	N-Channel, Open-Drain Output	SOT-23-6	√
RT9807	Micro-Power Voltage Detector with Manual Reset	0.9	5.5	1.2	3.3	1.5	Adj.	27.4	N-Channel, Open-Drain Output	SOT-23-5	√
RT9816D	Micro-Power Voltage Detector with Manual Reset	0.9	6	1.2	5	1.5	450	0.02	N-Channel, Open-Drain Output	SC-82	√
RT9817C	Micro-Power Voltage Detector with Manual Reset	0.9	6	1.2	5	1.5	220	0.02	CMOS Push-Pull Output	SOT-143; SC-82	√
RT9817D	Micro-Power Voltage Detector with Manual Reset	0.9	6	1.2	5	1.5	450	0.02	CMOS Push-Pull Output	SOT-143; SC-82	√
RT9818A	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	0	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89	√
RT9818B	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	55	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89	√
RT9818C	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	220	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89	√
RT9818D	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	450	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89	√
RT9818E	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	0	0.02	N-Channel, Open-Drain Output; Reset Active High	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89	√
RT9818G	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	220	0.02	N-Channel, Open-Drain Output; Reset Active High	SOT-23-3; SOT-25; SC-70-3; SC-82; SOT-89	√
RT9819B	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	55	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82	√
RT9819C	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	220	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82	√
RT9819D	Micro-Power Voltage Detectors	0.9	6	1.2	5	1.5	450	0.02	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82	√
RT9824C	Smart Multi-Voltage Detector	2.97	5.94	1	4.32	2	60	0.02	Open Drain Output Active Low	TSOT-23-8	√
RT9829	Dual Push-Button Reset with Push-Button Controlled Output Delay	1.65	5.5	1.1	5.5	-	-	12500; 7500	Dual Reset Outputs; Active Low: Open-Drain /Active High, Push-Pull	WDFN-2x2-8 (COL)	√



# Switches

Richtek provides diverse switch portfolio including power switches, load switches, power muxes and analog switches. Power switches are used to enable or disable a certain supply rail, often used as protection for USB ports. These devices have a slew-rate controlled switch-on action to eliminate inrush currents. They also include protection functions such as OVP, OTP and reverse current protection.

## Power Switches

Part Number	Number of Outputs	Vin		Current Limit	Ron	Iq	FLAG Indicator	Adj. Iocp	Safety	Features	Package(s)	Buy from Disty
		min (V)	max (V)	typ (A)	typ (mOhm)	typ (mA)						
RT9703	1	2	5.5	up to 3.5	80	0.03	Y	Y	-	Built-in NMOSFET; Enable Active High Input; OCP; SCP; OTP	SOP-8	√
RT9728B	1	2.5	5.5	0.075~1.8	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active High Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6	√
RT9728A	1	2.5	5.5	0.075~1.3	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active Low Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6	√
RT9728C	1	2.5	5.5	0.075~1.3	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active High Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6	√
RT2528A	1	2.5	5.5	0.5~2.5	74	0.12	Y	Y	-	AEC-Q100; Built-in PMOSFET; OCP; SCP; OTP	PSOP-8	
RT9731A	2	2.5	5.5	0.56~2.8	44	0.13	Y	Y	Nemko; UL	High Side MOSFETs; Common Enable Input; OCP; SCP; OTP	WDFN3x3-10	√
RTQ9728W	1	2.5	6	0.1~2.5	74	0.12	Y	Y	-	Built-in PMOSFET; Enable Active Low Input; OCP	WDFN2x2-6S; SOT-23-6	√
RT9724	1	2.7	5.5	2	100	0.05	-	-	-	Load Switch; Built-in NMOSFET; Enable; Slew Rate Control	SOT-23-5; WDFN2x2-8	√
RT9742Q	1	2.7	6	0.7	70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5	√
RT9742G	1	2.7	6	1.1	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5	√
RT9742E	1	2.7	6	1.65	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5	√
RT9742C	1	2.7	6	2.2	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5	√
RT9742A	1	2.7	6	3.3	55	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5 (FC)	√
RT9742B	1	2.7	6	3.3	55	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5 (FC)	√
RT9742D	1	2.7	6	2.2	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC) / TSOT-23-5	√
RT9742F	1	2.7	6	1.65	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC) / TSOT-23-5	√



Part Number	Number of Outputs	Vin		Current Limit	Ron	Iq	FLAG Indicator	Adj. Iocp	Safety	Features	Package(s)	Buy from Disty
		min (V)	max (V)	typ (A)	typ (mOhm)	typ (mA)						
RT9742H	1	2.7	6	1.1	55;70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5(FC) / TSOT-23-5	√
RT9742S	1	2.7	6	0.7	70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	SOT-23-3	√
RT9742U	1	2.7	6	1.65	70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5	√
RT9742V	1	2.7	6	2.2	70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5	√
RTQ9740A	2	0.8	5.5	6	22	0.055; 0.075	-	-	-	Built-in NMOSFETs; 6A Current per Channel; Enable Input; Adj. Soft-Start; Low Dropout	WDFN3x2-14T	
RT9740A	2	0.8	5.5	6	18	0.055; 0.075	-	-	-	Built-in NMOSFETs; 6A Current per Channel; Enable Input; Adj. Soft-Start; Low Dropout	WDFN3x2-14T	√



## USB-C Controller with Power Switches

Part Number	Number of Outputs	Vin		Current Limit	Ron	Iq	Discharge Function	EN Function	Safety	Features	Package(s)	Buy from Disty
		min (V)	max (V)	typ (A)	typ (mOhm)	typ (mA)						
RT9752A	1	4.5	5.5	1.7, 3.4	34	0.24	Y	Active H	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery; Programmable Current Limit	WQFN3x4-20T (FC)	√
RT9752AN	1	4.5	5.5	1.7, 3.4	34	0.24	-	Active H	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery; Programmable Current Limit	WQFN3x4-20T (FC)	
RT9752B	1	4.5	5.5	1.7, 3.4	34	0.24	Y	Active L	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery; Programmable Current Limit	WQFN3x4-20T (FC)	
RT9752BN	1	4.5	5.5	1.7, 3.4	34	0.24	-	Active L	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery; Programmable Current Limit	WQFN3x4-20T (FC)	

## USB Accessory Detector Switch

Part Number	Number of Outputs	Vin		Ron	Iq	Features	Package(s)	Buy from Disty
		min (V)	max (V)	typ (mOhm)	typ (mA)			
RT8979	8	4	20	50	5	4:1 Micro USB Port Accessory Detector & Switch (USB1, USB2, UART & MHL); Factory Support; 28V Maximum Rating for DC Adapter; Battery Charger Detection 1.2	WL-CSP 2.07x2.07-25 (BSC)	√



# USB Type-C & Power Delivery Solutions

As a member of the USB Implementers Forum (USB-IF), Richtek has been developing innovative USB Type-C and PD compliant products to meet the latest standard for a wide range of applications, from USB-PD power adapters, mobile Chargers, Car Chargers, Type-C cable e-Mark Ics to Type-C Dual Role Power PD port controllers which use the latest USB3.0 PD PPS protocol to support Direct Charging systems.

## USB Type-C Charging Port Controllers and Integrated Buck Converters

Part number	Buck Converter			USB Charging Port Controller								Package(s)	Buy from Disty
	Vin (V)	Iout (A)	Freq (MHz)	Supported cable type	SDP	CDP	DCP	CC1/CC2	VCONN	DFP	Features		
RTQ2115A-QA	3~36	3	0.3~2.2	Type-A to Micro-B Type-A to Lightning	Y	Y	Y	-	-	-	AEC-Q100	WET-WQFN5x5-32	√
RTQ2115C-QA	3~36	3.5	0.3~2.2	Type-C to Type-C Type-C to Micro-B Type-C to Lightning	Y	Y	Y	Y	Y	-	AEC-Q100	WET-WQFN6x6-40	
RTQ2116A-QA	3~36	3	0.3~2.2	Type-A to Micro-B Type-A to Lightning	-	-	Y	-	-	-	AEC-Q100	WET-WQFN5x5-32	
RTQ2116C-QA	3~36	3.5	0.3~2.2	Type-C to Type-C Type-C to Micro-B Type-C to Lightning	-	-	Y	Y	Y	-	AEC-Q100	WET-WQFN6x6-40	
RTQ2117A-QA	3~36	3	0.3~2.2	Type-A to Micro-B Type-A to Lightning	Y	Y	Y	-	-	-	AEC-Q100	WETD-VQFN5x5-32	√
RTQ2117C-QA	3~36	3.5	0.3~2.2	Type-C to Type-C Type-C to Micro-B Type-C to Lightning	Y	Y	Y	Y	Y	Y	AEC-Q100	WETD-VQFN6x6-40	√
RTQ2118A-QA	3~36	3	0.3~2.2	Type-A to Micro-B Type-A to Lightning	-	-	Y	-	-	-	AEC-Q100	WETD-VQFN5x5-32	
RTQ2118C-QA	3~36	3.5	0.3~2.2	Type-C to Type-C Type-C to Micro-B Type-C to Lightning	-	-	Y	Y	Y	Y	AEC-Q100	WETD-VQFN6x6-40	



## USB Type-C & PD Controllers

Part Number	Description	Policy Management	Alternate Mode	USB Protocols	Power Role	Internal Power Path	Dead Battery Support	Package(s)	Buy from Disty
RT1711H	Programmable USB Type-C PD Controller	TCPC	Y	PD2.0	DRP	Y	Y	WL-CSP1.38x1.34-9 (BSC)	
RT1711P	USB PD Port and Power Controller	TCPC	Y	PD2.0; PD3.0	DRP	Y	Y	WQFN3.5x3.5-24	√
RT1715	Programmable USB Type-C PD Controller	TCPC	Y	PD2.0; PD3.0	DRP	Y	Y	WL-CSP1.38x1.34-9 (BSC)	√
RT1716	Programmable USB Type-C PD Controller	TCPC	Y	PD2.0; PD3.0	DRP	Y	Y	WL-CSP1.38x1.34-8 (BSC)	√
RT1718S	Type-C Port Controller with IEC-ESD Protection on SBU/CC/DP/DM, USB2.0 Switch, Charging Port Controller and Power-Path Control	TCPC	Y	PD2.0; PD3.0	DRP	-	Y	WQFN4x4-32	
RT1719	Sink Only USB Type-C PD Controller	-	-	PD2.0; PD3.0	DRP	-	Y	WQFN-20L 3.5x3.5 (W-Type)	
RT7202	USB Type-C PD Controller for SMPS	Integrated	-	PD2.0; PD3.0	Provider	-	-	SOP-8; SOP-10; SOP-14	√
RT7202KLA	Programmable Multi-Protocol Controller for 20V Output with Power Sharing	Integrated	-	PD2.0; PD3.0 PPS	Provider	Y	Y	WQFN4x4-24	
RT7207KB	USB Type-C PD Controller with Synchronous Rectification	Integrated	-	PD2.0; PD3.0	Provider	-	-	WQFN4x4-24	√
RT7206KDA	Programmable Protocol Controller with Internal Feedback Compensation and Built-in Blocking N-MOSFETs	Integrated	-	Type-C	Provider	-	-	WQFN3x3-16(FC)	



## USB Type-C PD and PWM Controllers with AnyPower™ and PD Safe® Features

Part Number	Built-in PWM Controller	Vin (V)	Policy Management	Alternate Mode	USB Protocols	PowerRole	Features	Package(s)	Buy from Disty
RT7880	Buck-Boost	4 ~ 36	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe®	WQFN5x5-40	
RTQ7880-QT	Buck-Boost	4 ~ 36	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe® ; <a href="#">AEC-Q100</a>	WET-WQFN 6x6-48	
RTQ7880A-QT	Buck-Boost	4 ~ 36	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe® <a href="#">AEC-Q100</a>	WQFN6x6-48	
RT7880T	Buck-Boost	4 ~ 36	TCP	Y	PD2.0; PD3.0	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe®	WQFN5x5-40	
RT7880F	Buck-Boost	4 ~ 36	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe®	WQFN5x5-40	
RTQ7881A-QT	Buck	4~36	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe® ; <a href="#">AEC-Q100</a>	WQFN6x6-48	
RTQ7882-QT	Buck-Boost	4.5-27	Integrated	Y	PD2.0; PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™ ; PD Safe® ; <a href="#">AEC-Q100</a>	WET-WQFN 6x6-48	
RT7885V	Buck-Boost	4 ~ 36	Integrated	-	PD2.0; PD3.0; PPS	DRP	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C	WQFN7x7-60	
RT6190	Buck-Boost	4.5~36	Integrated	-	PD2.0; PD3.0; PPS	DRP	Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™	WQFN5x5-40	



## USB-C Over Voltage Protection

Protecting the high voltage shorted to VBUS.

Part Number	Description	VBUS Sourcing	Iq(typ) (uA)	Power Role	Features	Package(s)	Buy from Disty
RT1738A	Type-C CC and SBU Short to VBUS Over-Voltage and IEC ESD Protection Switch	3.3V~21V	40	Consumer Dual Role	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 60ns Ultra-Fast OVP Response Time of CC/SBU	WQFN3x3-20	√
RT1738C	Type-C CC and SBU Short to VBUS Over-Voltage and IEC ESD Protection Switch	3.3V~21V	40	Consumer Dual Role	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 60/80ns Ultra-Fast OVP Response Time of CC/SBU	WL-CSP1.62x1.62-16 (BSC)	

## e-Marker Solutions

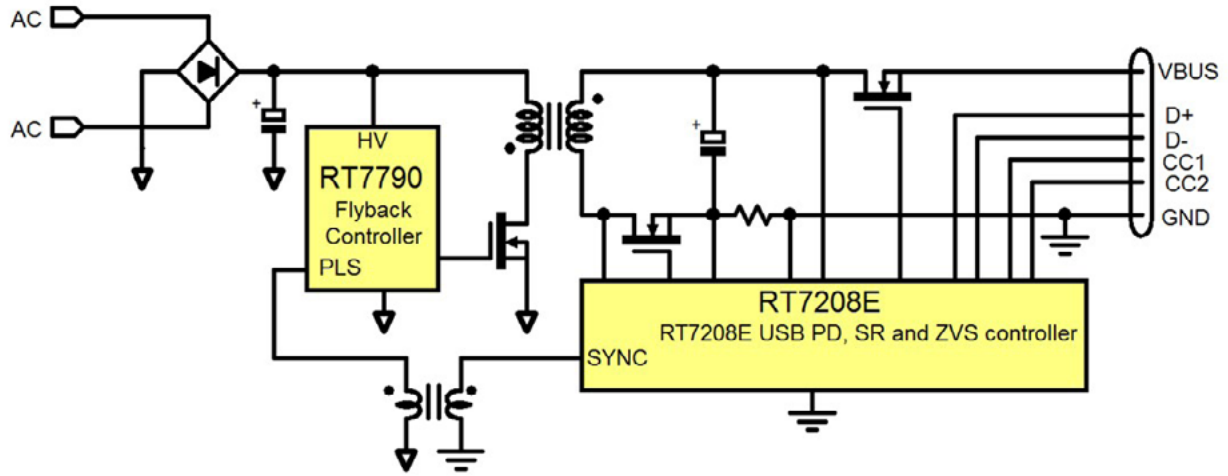
Cables that support Superspeed USB3.1 data transfer or cables that can carry currents higher than 3A must be electronically marked, to inform the Host about cable characteristics such as current capability, the presence of re-driver for signal conditioning, etc. The presence of an e-marked cable is detected by the CC logic which then connects VCONN power to the cable electronics.

Part Number	Description	Vin		Features	Package(s)	Buy from Disty
		min (V)	max (V)			
RT1710S	Cable ID for USB Type-C Cables	4	5.5	SOP' Communication; Embedded MTP, RA Resistor & ISO Diode	WDFN2x2-8	
RT1731	Cable ID for USB Type-C Cables	3	5.5	SOP' & SOP" Communication; PD 3.0 Compliant; 22V Rated VCON & CCIN; Embedded MTP, RA Resistor & ISO Diode	WDFN2x2-8; WL-CSP0.96x1.64-8 (BSC)	√
RT1731A	Cable ID for USB Type-C Cables	3	5.5	Support USB4 Type-C Passive Cable; SOP' & SOP" Communication; PD 3.0 Compliant; 22V Rated VCON & CCIN; Embedded MTP, RA Resistor & ISO Diode	WDFN2x2-8; WL-CSP0.96x1.64-8 (BSC)	



# USB PD Travel Adapter Reference Designs

Please contact your nearest sales office for more information.



USB-C PD Travel Adapter Specification	Part Number	Description	Features
Full-range Input; 20W; 5V/3A & 9V/2.22A Output	RT7790GBQ	Flyback PWM Controller; ZVS Pulse; 8V ~ 37V VDD; Adaptive Power Output	ZVS (Zero Voltage Switching); SR (Synchronous Rectifier Control); Bi-directional Pulse Transformer Control;
	RT7208EB	USB PD, SR and ZVS Controller; PD2.0/3.0; MCU w/OTP; CV/CC Control	No Opto-coupler Needed; 92% Efficiency; Ultra-high Power Density
Full-range Input; 65W; 5V, 9V, 15V, 20V /3A Output	RT7790GEQ	Flyback PWM Controller; ZVS Pulse; 8V ~ 64V VDD; Adaptive Power Output	ZVS (Zero Voltage Switching); SR (Synchronous Rectifier Control); Bi-directional Pulse Transformer Control;
	RT7208EB	USB PD, SR and ZVS Controller; PD2.0/3.0; MCU w/OTP; CV/CC Control	No Opto-coupler Needed; 90% Efficiency; Ultra-high Power Density





# BLDC Motor Drivers

Richtek offers a wide range of motor driver solutions covering the requirements of brushless DC motors for home appliance, PMSM/BLDC motors, water pumps, cooling fans, etc. Our portfolio includes motor controllers, motor drivers, system integrated power modules. With the complete product portfolio and advanced sensor-less sine-wave FOC control algorithm, Richtek aims to provide our customers flexible, easy-implement, and exceptionally reliable motor driver solutions. We also provide firmware and hardware technical support from product development through to launch.

## BLDC Motor Drivers

Part Number	Control Method	Category	Drivers	Power Device	BST Diode/ Charge Pump	LDO	Buck Converter	ADC Filters	R-Shunt	Package(s)	Buy from Disty
RT7101	Sensorless FOC	Controller	-	-	-	Y	-	Y	1,3	QFN5x5-32	
RT7082B2M	Sensorless FOC	Driver	40V	-	Y	Y	-	Y	1,3	QFN6x6-48	
RT7083	Sensorless FOC	Driver	60V	-	Y	Y	60V/50mA	Y	1,3	QFN6x6-48	
RT7081A	Sensorless FOC	Driver	600V	-	Y	Y	-	Y	1,3	QFN7x7-37	
RT7054A1M	Sensorless FOC	siPM®	600V	600V/1.7A FRMOS	Y	Y	-	Y	3	QFN10x17-34	
RT7054B1M	Sensorless FOC	siPM®	600V	600V/3A FRMOS	Y	Y	-	Y	3	QFN10x17-34	
RT7055	Sensorless FOC	siPM®	600V	600V/2A LIGBT	Y	Y	-	Y	3	QFN13x13-38	
RT7056A	Sensorless FOC	siPM®	600V	600V/1.7A FRMOS	Y	Y	-	Y	3	SOP-23	
RT7056B	Sensorless FOC	siPM®	600V	600V/5A FRMOS	Y	Y	-	Y	3	SOP-23	

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