

**Bill of Materials**

VIN = 12V, VOUT = 1.2V, IOUT = 20A, fsw = 800kHz						
Reference	Count	Part Number	Value	Description	Package	Manufacturer
U1	1	RTQ2820AGQWF	--	Step-Down Converter	WQFN-21TL 3x4 (FC)	RICHTEK
L1	1	VLBU1007090T-R33L	0.33μH	Inductor, Isat = 39A, 180μΩ	--	TDK
C1, C2, C3	3	GRM31CR71E106KA12L	10μF	Capacitor, Ceramic, 25V, X7R	1206	MURATA
C4, C5	2	GRM155C81E105KE11D	1μF	Capacitor, Ceramic, 25V, X6S	0402	MURATA
C6	1	GRM188R60J105KA01D	1μF	Capacitor, Ceramic, 6.3V, X5R	0603	MURATA
C7	1	GRM188R71H471KA01D	470pF	Capacitor, Ceramic, 50V, X7R	0603	MURATA
C8, C10, C18, C19	4	GRM188R71H104KA93D	0.1μF	Capacitor, Ceramic, 50V, X7R	0603	MURATA
C9	1	GRM188R71H223KA01D	22nF	Capacitor, Ceramic, 50V, X7R	0603	MURATA
C11, C12, C13, C14, C15, C16	6	GRM31CR60J476ME19	47μF	Capacitor, Ceramic, 6.3V, X5R	1206	MURATA
EC1	1	250ARHA221M08A2	220μF	Capacitor, Solid, 25V, 105°C	--	APAQ
R1, R2	2	WR06X1002FTL	10k	Resistor, Chip, 1/10W, 1%	0603	WALSIN
R3, R4, R7	3	WR04X000 PTL	0	Resistor, Chip, 1/10W, 1%	0402	WALSIN
R5	1	WR06X4991FTL	4.99k	Resistor, Chip, 1/10W, 1%	0603	WALSIN
R6	1	WR06X000 PTL	0	Resistor, Chip, 1/10W, 1%	0603	WALSIN
R8, R9, R10	3	WR06X1003FTL	100k	Resistor, Chip, 1/10W, 1%	0603	WALSIN
R11	1	WR06X2433FTL	243k	Resistor, Chip, 1/10W, 1%	0603	WALSIN
R12	1	RTT031213FTP	121k	Resistor, Chip, 1/10W, 1%	0603	RALEC
R13	1	RTT033012FTP	30.1k	Resistor, Chip, 1/10W, 1%	0603	RALEC
R14	1	CR0603F60K4P05Z	60.4k	Resistor, Chip, 1/10W, 1%	0603	EVER OHMS

## ***More Information***

For more information, please find the related datasheet or application notes from Richtek website

<http://www.richtek.com>.

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