

Step Down Converter with Cable Drop Compensation

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
C1, C3	2	10uF	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	0603	GRM188R60J106ME84	MuRata
C2, C6	2	22uF	CAP, CERM, 22uF, 10V, +/-20%, X5R, 0603	0603	CL10A226MP8NUNE	Samsung
C4, C8	2	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0603	0603	GRM188R61C104KA01 D	MuRata
C5, C9	2	2.2uF	CAP, CERM, 2.2uF, 10V, +/-10%, X5R, 0603	0603	C0603C225K8PACTU	Kemet
C7	1	3300pF	CAP, CERM, 3300pF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E332KA01 D	MuRata
J1, J2, J3, J4	4		Header, TH, 100mil, 6x1, Gold plated, 230 mil above insulator	6x1 Header	TSW-106-07-G-S	Samtec
L1	1	2.2uH	Inductor, Shielded, Composite, 2.2uH, 5.5A, 0.04 ohm, SMD	4x2.1x4mm	XAL4020-222MEB	Coilcraft
R1, R3	2	1.00Meg	RES, 1.00Meg ohm, 1%, 0.1W, 0603	0603	CRCW06031M00FKEA	Vishay-Dale
R2, R5	2	100k	RES, 100k ohm, 0.5%, 0.1W, 0603	0603	RT0603DRE07100KL	Yageo America
R4	1	0.01	RES, 0.01 ohm, 0.5%, 0.5W, 1206	1206	LVK12R010DER	Ohmite
U1	1		Buck Step Down Regulator with 3 to 17 V Input and 0.9 to 6 V Output, -40 to 85 degC, 16-Pin QFN (RGT), Green (RoHS & no Sb/Br)	RGT0016C	TPS62130RGTR	Texas Instruments
U2	1		Voltage Output, High or Low Side Measurement, Bi-Directional Zero-Drift Series Current-Shunt Monitor, DCK0006A	DCK0006A	INA213AIDCK	Texas Instruments

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