

Bill of Materials

TI DESIGNS TIDA-00702 REV B
60W, 24V, High Efficiency Industrial Power Supply with Precision Voltage, Current and Power Limit

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	Note
1	PCB	Printed Circuit Board	Any	TIDA-00702	Fitted
1	BR1	RECT BRIDGE GPP 6A 600V GBU	Micro Commercial Components	GBU6J	Fitted
2	C1, C2	CAP ALUM 82UF 20% 450V RADIAL	Nichicon	UCY2W820MHD6	Fitted
2	C3, C4	CAP, Film, 0.22 μ F, 630 V, +/- 20%, TH	TDK	B32922C3224M	Fitted
2	C5, C6	CAP CER 1000PF 400VAC Y5V RADIAL	Kemet	C907U102MYVDBA7317	Not Fitted
3	C7, C8, C12	CAP CER 2200PF 300VAC 20% RADIAL	TDK Corporation	CS802U2GA222MYNKA	Fitted
1	C9	CAP FILM 10000PF 10% 630VDC RAD	EPCOS (TDK)	B32529C8103K	Not Fitted
1	C10	CAP FILM 10000PF 10% 630VDC RAD	EPCOS (TDK)	B32529C8103K	Fitted
3	C11, C16, C21	CAP, CERM, 0.1 μ F, 50 V, +/- 10%, X7R, 0603	TDK	C1608X7R1H104K	Fitted
1	C13	CAP, CERM, 5.6 pF, 50 V, +/- 5%, COG/NPO, 0603	AVX	06035A5R6CAT2A	Fitted
1	C14	CAP, CERM, 0.47 μ F, 50 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71H474KA88L	Fitted
1	C15	CAP, CERM, 0.047 μ F, 50 V, +/- 10%, X7R, 0603	TDK	C1608X7R1H473K	Fitted
1	C17	CAP, CERM, 1 μ F, 50 V, +/- 10%, X5R, 0603	MuRata	GRM188R61H105KAALD	Fitted
1	C18	CAP, CERM, 0.22 μ F, 16 V, +/- 10%, X7R, 0603	TDK	C1608X7R1C224K	Fitted
1	C19	CAP, CERM, 0.1 μ F, 16 V, +/- 10%, X5R, 0603	MuRata	GRM188R61C104KA01D	Fitted
1	C20	CAP ALUM 10UF 20% 50V RADIAL	Nichicon	UVR1H100MDD6TP	Fitted
1	C22	CAP, CERM, 4.7 pF, 50 V, +/- 5%, COG/NPO, 0603	AVX	06035A4R7CAT2A	Fitted
1	C23	CAP, CERM, 1000 pF, 50 V, +/- 5%, COG/NPO, 0603	TDK	C1608C0G1H102J	Not Fitted
1	C24	CAP, CERM, 1000 pF, 50 V, +/- 5%, COG/NPO, 0603	TDK	C1608C0G1H102J	Fitted
1	C25	CAP, CERM, 10 pF, 50 V, +/- 5%, COG/NPO, 0603	AVX	06035A100JAT2A	Not Fitted
1	C26	CAP, CERM, 2.2 pF, 50 V, +/- 11%, COG/NPO, 0603	AVX	06035A2R2CAT2A	Fitted
1	C27	CAP, CERM, 47 pF, 50 V, +/- 5%, COG/NPO, 0603	AVX	06035A470JAT2A	Fitted
1	C28	CAP, CERM, 0.01 μ F, 250 V, +/- 10%, X7R, 0805	TDK	C2012X7R2E103K	Not Fitted
2	C29, C30	CAP ALUM 820UF 20% 35V RADIAL	Panasonic	EEU-FR1V821L	Fitted
1	C31	CAP, AL, 680 μ F, 35 V, +/- 20%, TH	Panasonic	EEU-FR1V681	Fitted
3	C32, C34, C37	CAP, CERM, 1 μ F, 50 V, +/- 10%, X7R, 1206	TDK	C3216X7R1H105K	Fitted
1	C33	CAP, CERM, 0.1 μ F, 50 V, +/- 5%, X7R, 1206	Kemet	C1206C104J5RACTU	Fitted
2	C35, C36	CAP CER 4700PF 440VAC Y5U RADIAL	Vishay-Bccomponents	VY2472M49Y5US63V7	Fitted
1	D1	Diode, Fast Rectifier, 1000 V, 1.5 A, SMA	Vishay-Semiconductor	BYG21M-E3/TR	Not Fitted
1	D2	TVS DIODE 128VWM 207VC AXIAL	Littelfuse	1.5KE150A	Fitted
1	D3	Diode, Fast Rectifier, 1000 V, 1.5 A, SMA	Vishay-Semiconductor	BYG21M-E3/TR	Fitted
1	D4	Diode, Switching, 200 V, 0.4 A, SOT-23	Diodes Inc.	BAV23S-7-F	Fitted
1	D5	Diode, Zener, 4.7 V, 300 mW, SOD-523	Diodes Inc.	BZT52C4V7T-7	Fitted
1	D6	LED SS HI EFF GREEN DIFF 3MM	Everlight	HLMP1503	Fitted
1	D7	Diode, Zener, 24V, 500mW, SOD-123	Diodes Inc.	MMSZ5252B-7-F	Fitted
1	F1	Fuse, 2.5 A, 250 V, TH	Littelfuse	37212500001	Fitted
4	H1, H2, H3, H4	MACHINE SCREW PAN PHILLIPS 4-40	B&F Fastener Supply	PMSSS 440 0025 PH	Fitted
4	H5, H6, H7, H8	HEX NUT 1/4" STN STEEL 4-40	B&F Fastener Supply	HNSS440	Fitted
1	HS1	HEATSINK TO-220 19.05X13.21MM	Assmann WSW Components	V7237C	Fitted
1	HS2	HEATSINK TWISTED FIN TO-220 Vertical	Aavid Thermalloy	593002B00000G	Fitted
1	J1	TERM BLOCK 3POS 5.08MM, TH	Phoenix Contact	1715734	Fitted
1	J2	Terminal Block, 5.08mm, 4x1, TH	Phoenix Contact	1715747	Fitted

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	Note
1	L1	Coupled inductor, 7mH, 2 A, 0.045 ohm,+/-32%	Würth Elektronik	750343092	Fitted
1	L2	Coupled inductor, 20 mH, 1.5A, 0.270 ohm, +/- 30%, TH	Würth Elektronik	744823220	Fitted
1	L3	Coupled inductor, 100uH, 5 A, 0.007 ohm	Würth Elektronik	750343094	Fitted
3	M1, M2, M3	MOUNTING KIT TO-220	Aavid Thermalloy	4880G	Fitted
1	Q1	MOSFET N-CH 650V 11A TO220F	Alpha & Omega Semiconductor Inc.	AOTF11S65L	Fitted
1	Q2	MOSFET N-CH 200V 26A TO-220FP	International Rectifier	IRFI4227PBF	Fitted
1	Q3	MOSFET, N-CH, 40 V, 15 A, SON 5x6mm	Texas Instruments	CSD18504Q5A	Fitted
1	Q4	Transistor, NPN, 40 V, 0.6 A, SOT-323	ON Semiconductor	MMBT4401WT1G	Not Fitted
1	Q5	Transistor, PNP, 40 V, 0.6 A, SOT-323	ON Semiconductor	MMBT4403WT1G	Not Fitted
1	Q6	Transistor, PNP, 40 V, 0.6 A, SOT-323	Fairchild Semiconductor	MMBT4403WT1G	Fitted
1	R1	RES, 0.25, 1%, 1 W, 2010	Stackpole Electronics Inc	CSRN2010FKR250	Fitted
1	R2	RES, 12.1, 1%, 0.75 W, 2010	Vishay-Dale	CRCW201012R1FKEF	Fitted
1	R3	RES, 100, 1%, 0.25 W, 1206	Vishay-Dale	CRCW1206100RFKEA	Fitted
1	R4	RES, 1.27 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K27FKEA	Fitted
1	R5	RES, 16.9 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060316K9FKEA	Fitted
1	R6	RES, 4.99 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06034K99FKEA	Not Fitted
4	R7, R25, R33, R36	RES, 10.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0FKEA	Fitted
1	R8	RES, 47.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060347K5FKEA	Fitted
1	R9	RES, 100 k, 1%, 0.25 W, 1206	Vishay-Dale	CRCW1206100KFKEA	Fitted
1	R10	RES, 470 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-07470KL	Not Fitted
1	R11	RES, 1.21 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K21FKEA	Fitted
1	R12	RES, 332 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603332KFKEA	Fitted
1	R13	RES, 100 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603100KFKEA	Not Fitted
1	R14	TRIMMER 100K OHM 0.5W TH	TT Electronics/BI	25PR100KLF	Fitted
3	R15, R16, R21	RES, 100 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603100KFKEA	Fitted
1	R17	RES, 20.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060320K0FKEA	Fitted
1	R18	RES, 1.50, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031R50FKEA	Fitted
1	R19	RES, 100, 1%, 0.25 W, 1206	Vishay-Dale	CRCW1206100RFKEA	Not Fitted
1	R20	RES, 47.5, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060347R5FKEA	Fitted
3	R22, R23, R24	RES, 750 k, 1%, 0.25 W, 1206	Vishay-Dale	CRCW1206750KFKEA	Fitted
2	R26, R38	RES, 750 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603750KFKEA	Fitted
1	R27	RES, 44.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060344K2FKEA	Fitted
1	R28	RES, 5.11, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06035R11FKEA	Fitted
1	R29	RES, 1.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00FKEA	Fitted
1	R30	RES, 47.5, 1%, 0.125 W, 0805	Vishay-Dale	CRCW080547R5FKEA	Fitted
1	R31	RES, 71.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060371K5FKEA	Fitted
1	R32	RES, 1.50 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K50FKEA	Fitted
1	R34	RES, 20.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060320K5FKEA	Fitted
1	R35	RES, 13.7 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060313K7FKEA	Fitted
1	R37	RES, 402, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603402RFKEA	Fitted
1	R39	RES, 0, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06030000Z0EA	Fitted
1	RCL1	ICL 4.7 OHM 20% 4.6A 11.51MM	EPCOS (TDK)	B572365479M	Fitted
1	RV1	Varistor 275V RMS 10MM Radial, TH	EPCOS Inc	S10K275E2	Fitted
1	T1	Transformer, 230uH,TH	Würth Elektronik	750343068,Rev00	Fitted
2	TP1, TP3	Test Point, Miniature, Red, TH	Keystone	5000	Fitted
3	TP2, TP4, TP5	Test Point, Miniature, Black, TH	Keystone	5001	Fitted
1	U1	Constant-Voltage, Constant-Current Flyback Controller with Opto-Coupler Feedback	Texas Instruments	UCC28740DR	Fitted
2	U2, U4	Precision VREF Shunt Adjustable	Texas Instruments	TL431BQDBZ	Fitted
1	U3	Sync. Rectifier Controller	Texas Instruments	UCC24636DBV	Fitted
1	U5	High Side OR-ING FET Controller	Texas Instruments	LM5050-2	Fitted
1	U6	Optocoupler, 5 kV, 50-600% CTR, TH-4	Lite-On	LTV-817	Fitted
1	U7	Low-Power, Low-Supply Temperature Switch	Texas Instruments	TMP302CIDCK	Fitted
1	XF1	FUSE HOLDER RADIAL 250V 6.3A PCB	Littelfuse	56000001009	Fitted

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