

Bill of Materials

TI DESIGNS TIDA-00442
Board Name : TIDA-00442-E2
Shunt based Ground Fault Protection for Inverters Powered from 220Vac supply

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	!PCB1	Printed Circuit Board	Any	TIDA-00442_E2		
3	C1, C8, C15	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0603	MuRata	GRM1885C1H101JA01D	0603	Fitted
2	C2, C21	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206_190	Samsung Electro-Mechanics	CL31A106KBHNNNE	1206_190	Fitted
10	C3, C4, C6, C9, C10, C11, C12, C13, C14, C18	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H104KA93D	0603	Fitted
1	C5	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71H105KA12L	0805	Fitted
1	C7	CAP, CERM, 0.01 µF, 10 V, +/- 10%, X7R, 0603	AVX	0603ZC103KAT2A	0603	Fitted
3	C16, C17, C19	CAP, CERM, 820 pF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H821KA01D	0603	Fitted
1	C20	CAP, Film, 0.033 µF, 630 V, +/- 10%, TH	Panasonic	ECQ-E6333KF	12x12.9x6mm	Fitted
1	C24	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	AVX	08055C105KAT2A	0805	Fitted
1	D1	Diode, Ultrafast, 600 V, 1 A, SMA	STMicroelectronics	STTH1R06A	SMA	Fitted
4	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
4	J1, J2, J4, J5	Standard Banana Jack, Uninsulated	Pomona Electronics	3267	Pomona_3267	Fitted
4	J3, J6, J7, J8	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	Terminal Block, 2x1, 2.54mm, TH	Fitted
1	L1	SMD-Radial Leaded Wire Wound Inductor WE-TI HV, L=680 µH	Würth Elektronik eiSos GmbH			Fitted
1	Q1	MOSFET, P-CH, -450 V, 75 mA, SOT-223	Diodes Inc.	ZVP0545GTA	SOT-223	Fitted
1	Q2	Transistor, PNP, 500 V, 0.15 A, SOT-23	NXP Semiconductor	PBHV9050T,215	SOT-23	Fitted
2	R1, R18	RES, 0.005, 1%, 3 W, WSL3637	Vishay-Dale	WSL36375L000FEA	WSL3637	Fitted
3	R2, R11, R23	RES, 16.0 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0716KL	0603	Fitted
1	R3	RES, 4.99 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06034K99FKEA	0603	Fitted
1	R4	RES, 24.3 k, 0.1%, 0.1 W, 0603	Yageo America	RT0603BRD0724K3L	0603	Fitted
1	R5	RES, 1.47 M, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031M47FKEA	0603	Fitted
7	R6, R19, R27, R28, R33, R34	RES, 0, 5%, 0.1 W, 0603	Yageo America	RC0603JR-070RL	0603	Fitted
3	R7, R9, R16	RES, 16.0 k, 0.1%, 0.1 W, 0603	Susumu Co Ltd	RG1608P-163-B-T5	0603	Fitted
1	R8	RES, 200 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603200KFKEA	0603	Fitted
1	R10	RES, 402 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603402KFKEA	0603	Fitted
2	R12, R14	RES, 1.00 k, 0.1%, 0.1 W, 0603	Susumu Co Ltd	RG1608P-102-B-T5	0603	Fitted
4	R13, R17, R21, R22	RES, 16.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060316K2FKEA	0603	Fitted
1	R15	RES, 15.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060315K0FKEA	0603	Fitted

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2	R24, R25	RES, 38.3, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060338R3FKEA	0603	Fitted
1	R26	RES, 51 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060351K0JNEA	0603	Fitted
2	R29, R30	RES, 22, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060322R0JNEA	0603	Fitted
1	R31	RES, 5.11 M, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06035M11FKEA	0603	Fitted
1	R32	RES, 10.0 k, 0.1%, 0.1 W, 0603	Susumu Co Ltd	RG1608P-103-B-T5	0603	Fitted
4	TP1, TP2, TP3, TP5	Test Point, Miniature, Red, TH	Keystone	5000	Red Miniature Testpoint	Fitted
1	TP4	Test Point, Miniature, Black, TH	Keystone	5001	Black Miniature Testpoint	Fitted
1	U1	High-Side, Bidirectional Current Shunt Monitor, DGK0008A	Texas Instruments	INA170EA/2K5	DGK0008A	Fitted
1	U2	Precision Micropower Shunt Voltage Reference, 3-pin SOT-23	Texas Instruments	LM4040DIM3X-2.5	MF03A	Fitted
1	U3	Precision, Low Noise, Low Quiescent Current Operational Amplifier, 2 to 5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	Texas Instruments	OPA2376AID	D0008A	Fitted
1	U5	LinCMOS Dual Differential Comparators, D0008A	Texas Instruments	TLC372IDR	D0008A	Fitted
1	U6	Low-Drift, Low-Power, Dual-Output, VREF and VREF / 2 Voltage References, DDC0005A	Texas Instruments	REF2033AIDDCR	DDC0005A	Fitted
1	U7	700-V Lowest Quiescent Current Off-Line Switcher, D0007A	Texas Instruments	UCC28880DR	D0007A	Fitted

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