

Grid-Tie Inverter Signal Conditioning BOM

Item	Ref	Qty	Manufacturer	Part Number	Description	Distributor	Stock Number	Value	Modifier
1	C31	1	Kemet	C317C153KSR5TA	Capacitor, Ceramic, 0.015uF, 50V, 10%, X7R, Radial	Digi-Key	399-4217-ND	0.015uF	50V
2	C82	1	Kemet	C322C473K1R5TA	Capacitor, Ceramic, 0.047uF, 100V, 10%, X7R, Radial	Digi-Key	399-4370-ND	0.047uF	100V
3	C32 C62-63 C68-69 C71 C74 C76-81	13	Kemet	C322C104KSR5TA	Capacitor, Ceramic, 0.1uF, 50V, 10%, X7R, Radial	Digi-Key	399-4329-ND	0.1uF	50V
4	C33-34 C66-67 C73	5	Kemet	C330C105KSR5TA	Capacitor, Ceramic, 1.0uF, 50V, 10%, X7R, Radial	Digi-Key	399-4389-ND	1.0uF	50V
5	C38 C50	2	Panasonic - ECG	ECI-2VB1H122K	Capacitor, Ceramic, 1.2nF, 50V, ±10%, X7R, 0805	Digi-Key	PCC1228NCT-ND	1.2nF	50V
6	C2 C7 C11 C15 C21 C27 C70	7	Kemet	C317C101K2R5TA	Capacitor, Ceramic, 100pF, 200V, 10%, X7R, Radial	Digi-Key	399-4200-ND	100pF	200V
7	C41 C47 C53	3	Murata Electronics North America	GRM216R71H103KA01D	Capacitor, Ceramic, 10nF, 50V, ±10%, X7R, 0805	Digi-Key	490-1664-1-ND	10nF	50V
8	C51	1	Yageo	CC0805KRX7R9BB222	Capacitor, Ceramic, 2.2nF, 50V, ±10%, X7R, 0805	Digi-Key	311-1129-1-ND	2.2nF	50V
9	C37 C43 C49	3	Panasonic - ECG	ECI-2VB1H223K	Capacitor, Ceramic, 22nF, 50V, ±10%, X7R, 0805	Digi-Key	PCC2238GCT-ND	22nF	50V
10	C56	1	Yageo	CC0805KRX7R9BB271	Capacitor, Ceramic, 270pF, 50V, ±10%, X7R, 0805	Digi-Key	311-1191-1-ND	270pF	50V
11	C39	1	Yageo	CC0805KRX7R9BB331	Capacitor, Ceramic, 330pF, 50V, ±10%, X7R, 0805	Digi-Key	311-1192-1-ND	330pF	50V
12	C40 C46 C52	3	Taiyo Yuden	TMK212BJ474KD-T	Capacitor, Ceramic, 470nF, 25V, ±10%, X5R, 0805	Digi-Key	587-1290-1-ND	470nF	25V
13	C45	1	Yageo	CC0805KRX7R9BB681	Capacitor, Ceramic, 680pF, 50V, ±10%, X7R, 0805	Digi-Key	311-1126-1-ND	680pF	50V
14	C44	1	Yageo	CC0805KRX7R9BB821	Capacitor, Ceramic, 820pF, 50V, ±10%, X7R, 0805	Digi-Key	311-1194-1-ND	820pF	50V
15	C42 C48 C54	3	Murata Electronics	GRM32ER72A225KA35L	Capacitor, Ceramic, 2.2uF, 100V, ±10%, X7R, 1210	Digi-Key	490-3385-1-ND	2.2uF	100V
16	C75	1	Nichicon	UPW1E1100MDD	Capacitor, Electrolytic, 10uF, 25V, 20%, Radial	Digi-Key	493-1809-ND	10uF	25V
17	C1 C3 C5-6 C9-10 C13-14 C17-20 C23-26 C29-30	18	Nichicon	UPW1E221MPD	Capacitor, Electrolytic, 220uF, 25V, 20%, Radial	Digi-Key	493-1823-ND	220uF	25V
18	C55 C57-58	3	Panasonic - ECG	EEE-FK1V220R	Capacitor, Electrolytic, 22uF, 35V, 20%, SMD	Digi-Key	PCE3838CT-ND	22uF	35V
19	C36	1	Nichicon	UPW1H331MPD	Capacitor, Electrolytic, 330uF, 50V, 20%, Radial	Digi-Key	493-1908-ND	330uF	50V
20	C4 C8 C12 C16 C22 C28 C35 C65 C72	9	EPCOS Inc	B32521C225J	Capacitor, Metallized Polyester Film, 2.2uF, 63V, 5%, Radial	Digi-Key	495-1125-ND	2.2uF	63V
21	C64	1	Panasonic - ECG	ECQ-E6104KZ	Capacitor, Metallized Polyester, 0.1uF, ±10%, 630V, Radial	Digi-Key	E6104-ND	0.1uF	630V
22	C61	1	AVX Corporation	TAP226K035SCS	Capacitor, Tantalum, 22uF, ±10%, 35V, Radial	Digi-Key	478-1878-ND	22uF	35V
23	C59-60	2	AVX Corporation	TAP476K025SCS	Capacitor, Tantalum, 47uF, ±10%, 25V, Radial	Digi-Key	478-1913-ND	47uF	25V
24	J1-3	3	Molex Connector Corporation	38720-6210	Connector, Barrier Strip, 10 Position, 0.375", Through Hole	Digi-Key	WM5748-ND	10 Pos	15A, 300V
25	D4-5 D16-17	4	Diodes Inc.	1N4148-T	Diode, Switching, 75V, 300mA, DO35	Digi-Key	1N4148DICT-ND	75V	300mA
26	Z2-3	2	Rohm Semiconductor	RF071M2STR	Diode, Fast Recovery, 200V, 1A, SOD-123	Digi-Key	RF071M2SCT-ND	200V	1A
27	Z1	1	ON Semiconductor	SS26T3G	Diode, Schottky, Power, 2A, 60V, SMB	Digi-Key	SS26T3GOSCT-ND	2A	60V
28	BOM1	1	Littelfuse / Wickmann	81600000005	Fuse, Cap, 6.3x32mm	Digi-Key	WK6230-ND	6.3x33mm	
29	BOM2	1	Littelfuse / Wickmann	19411600001	Fuse, Fast, 1.60A, 5x20mm	Digi-Key	WK2053-ND	1.60A	
30	F1	1	Littelfuse / Wickmann	81000000005	Fuseholder Body, 6.3x32mm, PC Mount	Digi-Key	WK6228-ND	Fuse Holder	Fuse Size 5mm/6.3mm
31	U1-6	6	PowerEx	M57161L-01	Gate Driver with Isolated Power Supply	Digi-Key	M57161L-01-ND		
32	U17	1	Fairchild Semiconductor	DM74ALS540AN	IC, Buffer, Driver, Tri-State, Octal, DIP20	Digi-Key	DM74ALS540AN-ND	74ALS540	15mA, 24mA
33	U7	1	Allegro Microsystems Inc	ACS713ELCTR-20A-T	IC, Current Sense, Hall Effect, Isolated, 20A, SOIC8	Digi-Key	620-1192-1-ND	20A	185mV/A
34	U9	1	Texas Instruments	DCP011515DBP	IC, DC-DC Converter, Isolated, ±15V, 33mA, DIP14	Digi-Key	DCP011515DBP-ND	±15V, 33mA	13.5 ~ 16.5V Input
35	U8	1	Texas Instruments	ISO124P	IC, Op-Amp, Isolated, DIP16	Digi-Key	ISO124P-ND	50kHz	2V/us
36	U18	1	Texas Instruments	OPA2227P	IC, OpAmp, Dual, General Purpose, DIP8	Digi-Key	OPA2227P-ND	8MHz	2.3V/us
37	U19	1	Texas Instruments	UC3526AN	IC, PWM, Regulating, DIP18	Digi-Key	296-11220-5-ND	450kHz	35V
38	U10-12	3	National Semiconductor	LM25575MH/NOPB	IC, Regulator, Buck, 42V in, Adj Out, 1.5A, TSSOP16	Digi-Key	LM25575MH-ND	1.5A	42V in
39	U16	1	National Semiconductor	LM311N/NOPB	IC, Voltage Comparator, DIP8	Digi-Key	LM311NNS-ND	DIP8	
40	U13	1	Texas Instruments	LT1054CP	IC, Voltage Converter, Switched Capacitor, 100mA, DIP8	Digi-Key	296-9591-5-ND	100mA	3.5 ~ 15V
41	L1	1	Sumida	CDRH104RNP-330NC	Inductor, Power, 33uH, ±30%, 2.3A, SMD	Digi-Key	308-1433-1-ND	33uH	2.3A
42	L2	1	Sumida	CDRH127NP-680MC	Inductor, Power, 68uH, ±20%, 2.1A, SMD	Digi-Key	308-1475-1-ND	68uH	2.1A
43	L3	1	JW Miller A Bourns Company	PM2110-221K-RC	Inductor, Torroid, 220uH, ±10%, 3.5A, SMD	Digi-Key	M8770-ND	220uH	3.5A
44	Q1-2	2	Vishay IR	IRFD120PBF	MOSFET, Power, N-Channel, 100V, 1.3A, 270mOhms, DIP4	Digi-Key	IRFD120PBF-ND	100V	1.3A
45	Z4	1	Panasonic - ECG	ERZ-V05D471	MOV, Surge Absorber, 300VAC, 15J, Through Hole	Digi-Key	P7186-ND	300VAC	600A
46	R34-35 R41	3	Vishay/Sfernice	T73YP103KT20	Potentiometer, Ceramic, 10K, 0.5W, Through-Hole	Digi-Key	T73YP-10K-ND	10K	0.5W
47	R36	1	Vishay/Sfernice	T73YP503KT20	Potentiometer, Ceramic, 50K, 0.5W, Through-Hole	Digi-Key	T73YP-50K-ND	50K	0.5W
48	D2-3	2	Diodes Inc.	1N4007-T	Rectifier, 1000V, 1A, DO41	Digi-Key	1N4007DICT-ND	1000V	1A
49	D1	1	Diodes Inc	PB66	Rectifier, Bridge, 600V, 6A, PB-6	Digi-Key	PB66DI-ND	6A	600V
50	U15	1	ST Microelectronics	L79L05ACZ-TR	Regulator, Linear, Negative, 5V, 100mA, TO92	Digi-Key	497-1220-1-ND	-5V	100mA
51	U14	1	ST Microelectronics	L78L05ACZTR	Regulator, Linear, Positive, 5V, 100mA, TO92	Digi-Key	497-1184-1-ND	5V	100mA
52	R10 R14 R18	3	Panasonic - ECG	ERJ-6ENF1001V	Resistor, Chip, 1.00K, 0.125W, ±1%, 0805	Digi-Key	P1.00KCCT-ND	1K00	0.125W
53	R13	1	Panasonic - ECG	ERJ-6ENF1132V	Resistor, Chip, 11.3K, 0.125W, ±1%, 0805	Digi-Key	P11.3KCCT-ND	11K3	0.125W
54	R17	1	Panasonic - ECG	ERJ-6ENF1872V	Resistor, Chip, 18.7K, 0.125W, ±1%, 0805	Digi-Key	P18.7KCCT-ND	18K7	0.125W
55	R11	1	Panasonic - ECG	ERJ-6ENF2432V	Resistor, Chip, 24.3K, 0.125W, ±1%, 0805	Digi-Key	P24.3KCCT-ND	24K3	0.125W
56	R9	1	Panasonic - ECG	ERJ-6ENF3091V	Resistor, Chip, 3.09K, 0.125W, ±1%, 0805	Digi-Key	P3.09KCCT-ND	3K09	0.125W
57	R21	1	Panasonic - ECG	ERJ-6ENF3742V	Resistor, Chip, 37.4K, 0.125W, ±1%, 0805	Digi-Key	P37.4KCCT-ND	37K4	0.125W
58	R15	1	Panasonic - ECG	ERJ-6ENF3832V	Resistor, Chip, 38.3K, 0.125W, ±1%, 0805	Digi-Key	P38.3KCCT-ND	38K3	0.125W
59	R19	1	Panasonic - ECG	ERJ-6ENF4022V	Resistor, Chip, 40.2K, 0.125W, ±1%, 0805	Digi-Key	P40.2KCCT-ND	40K2	0.125W
60	R20	1	Panasonic - ECG	ERJ-6ENF4302V	Resistor, Chip, 43.0K, 0.125W, ±1%, 0805	Digi-Key	P43.0KCCT-ND	43K0	0.125W
61	R22	1	Panasonic - ECG	ERJ-6ENF7152V	Resistor, Chip, 71.5K, 0.125W, ±1%, 0805	Digi-Key	P71.5KCCT-ND	71K5	0.125W
62	R12	1	Panasonic - ECG	ERJ-6ENF8661V	Resistor, Chip, 8.66K, 0.125W, ±1%, 0805	Digi-Key	P8.66KCCT-ND	8K66	0.125W
63	R16	1	Panasonic - ECG	ERJ-6ENF9311V	Resistor, Chip, 9.31K, 0.125W, ±1%, 0805	Digi-Key	P9.31KCCT-ND	9K31	0.125W
64	R29	1	Yageo Corporation	MFR-25FBF-100K	Resistor, Metal Film, 100K, 0.25W, 1%, Through-Hole	Digi-Key	100KXBK-ND	100K	0.25W
65	R32 R39	2	Yageo Corporation	MFR-25FBF-100R	Resistor, Metal Film, 100R, 0.25W, 1%, Through-Hole	Digi-Key	100KXBK-ND	100R	0.25W
66	R24-25 R37 R40	4	Yageo Corporation	MFR-25FBF-10K0	Resistor, Metal Film, 10K0, 0.25W, 1%, Through-Hole	Digi-Key	10.0KXBK-ND	10K0	0.25W
67	R26-28 R31	4	Yageo Corporation	MFR-25FBF-1K00	Resistor, Metal Film, 1K00, 0.25W, 1%, Through-Hole	Digi-Key	1.00KXBK-ND	1K00	0.25W
68	R8	1	Vishay/BC Components	SFR16S0004991FR500	Resistor, Metal Film, 4.99K, ±1%, 0.5W, Through-Hole	Digi-Key	PPC4.99KXCT-ND	4K99	0.5W
69	R7	1	Vishay/BC Components	SFR16S0004993FR500	Resistor, Metal Film, 499K, ±1%, 0.5W, Through-Hole	Digi-Key	PPC499KXCT-ND	499K	0.5W
70	R23	1	Panasonic - ECG	ERO-S2PHF4701	Resistor, Metal Film, 4K70, 0.25W, 1%, Through-Hole	Digi-Key	P4.70KCACT-ND	4K70	0.25W
71	R30	1	Yageo	MFR-25FBF-511R	Resistor, Metal Film, 511R, 0.25W, ±1%, Through-Hole	Digi-Key	511KXK-ND	511R	0.25W
72	R1-6	6	Vishay/BC Components	PRO1000105609JRS00	Resistor, Metal Film, 56R, 1W, 5%, Through-Hole	Digi-Key	PPC56W-1CT-ND	56R	1W
73	R42-43	2	Yageo Corporation	MFR-25FBF-681R	Resistor, Metal Film, 681R, 0.25W, 1%, Through-Hole	Digi-Key	681KXK-ND	681R	0.25W
74	R33	1	Yageo	MFR-25FBF-1M00	Resistor, Metal Film, 1.00M, 0.25W, 1%, Through-Hole	Digi-Key	1.00MXBK-ND	1M00	0.25W
75	R38	1	Yageo Corporation	MFR-25FBF-86K6	Resistor, Metal Film, 86K6, 0.25W, 1%, Through-Hole	Digi-Key	86.6KXBK-ND	86K6	0.25W
76	T1	1	Acme Electric/Amveco/Actown	62085	Transformer, Power, 115/230V, 22VAC @2.28A	Digi-Key	TE62085-ND	22 VAC @ 2.28A	50VA