TEXAS INSTRUMENTS

Bill of Materials

TI DESIGNS

TIDA-00590

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
1	1	!PCB		Printed Circuit Board	Any	PWR655			-
2	3	C1, C16, C32	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	TDK	C1608X7R1E105K080AB		0603	
3	2	C3, C18	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	TDK	C2012X5R1E106K125AB		0805	
4	2	C7, C21	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X5R, 0603	MuRata	GRM188R61C475KAAJ		0603	
5	2	C8, C22	0.047uF	CAP, CERM, 0.047uF, 25V, +/-10%, X7R, 0402	MuRata	GRM155R71E473KA88D		0402	
6	4	C9, C10, C23, C24	10uF	CAP, CERM, 10uF, 10V, +/-10%, X5R, 0805	MurRata	GRM21BR61A106KE19L		0603	
7	2	C13, C28	10uF	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M		0603	
8	1	C33	0.01uF	CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402	TDK	C1005X7R1E103K		0402	
9	1	C34	2.2uF	CAP, CERM, 2.2uF, 10V, +/-10%, X5R, 0402	TDK	C1005X5R1A225K050BC		0402	
10	1	C35	1000pF	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R,	MuRata	GRM216R71E102KA01D		0805	
11	4	D7, D8, D9, D10	Green	LED, Green, SMD	Lite-On	LTST-C190GKT		1.6x0.8x0.8mm	
12	4	H1, H2, H3, H4		Bumpon, Hemisphere, 0.44 X 0.20, Clear	3M	SJ-5303 (CLEAR)		Transparent	
13	5	J1, J2, J3, J4, J9	2x1	Conn Term Block, 2POS, 3.81mm, TH	Phoenix Contact	1727010		2POS Terminal	
14	2	J5, J6		Connector, Receptacle, Micro-USB Type B, R/A, Bottom Mount SMT	Molex	0473460001		7.5x2.45x5mm	
15	1	J7		Header (friction lock), 100mil, 4x1, R/A, TH	Molex	22-05-3041		4x1 R/A Header	
16	1	J8		Header, 100mil, 4x1, R/A, TH	Molex	22-05-3041		4x1 R/A Header	
17	4	J13, J14, J15, J16		Header, 100mil, 2x1, Tin, TH	Sullins Connector Soluti	PEC02SAAN		Header, 2 PIN, 100mil, Tin	
18	3	JP1, JP2, JP3		Header, 100mil, 3x1, Tin plated, TH	Sullins Connector Soluti	PEC03SAAN		Header, 3 PIN, 100mil, Tin	
19	9	JP4, JP5, JP6, JP7, JP8, JP9, JP10, JP11, JP12		Header, 100mil, 2x1, Tin plated, TH	Sullins Connector Soluti	PEC02SAAN		Header, 2 PIN, 100mil, Tin	
20	2	L1, L2	1uH	Inductor, Shielded Drum Core, Powdered Iron, 1uH, 7A, 0.0181 ohm, SMD	Vishay-Dale	IHLP2020BZER1R0M11		5.49x2x5.18mm	
21	1	LBL1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Brady	THT-14-423-10		PCB Label 0.650"H x 0.200"W	-
22	3	R2, R43, R44	0	RES, 0, 5%, 1 W, 2512	Vishay-Dale	CRCW25120000Z0EG		2512	
23	1	R4	0	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED		0402	
24	4	R5, R15, R24, R40	0	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED		0402	
25	12	R6, R7, R12, R13, R16, R17,	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K0FKED		0402	
26	2	R8, R21	130	RES, 130 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402130RFKED		0402	
27	2	R9, R22	768	RES, 768 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402768RFKED		0402	
28	2	R10, R23	10k	Trimmer, 10k ohm, 0.25W, TH	Bourns	3266W-1-103LF		4.5x8x6.7mm	
29	1	R25	4.7k	RES, 4.7k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04024K70JNED		0402	
30	1	R32	100k	RES, 100k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402100KFKED		0402	
31	1	R33	5.23k	RES, 5.23k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04025K23FKED		0402	

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
32	1	R34	30.1k	RES, 30.1k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040230K1FKED		0402	
33	4	R36, R37, R38, R39	2.21k	RES, 2.21k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04022K21FKED		0402	
34	2	R46, R47	15k	RES, 15 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040215K0JNED		0402	
35	1	S1		Switch, Normally open, 2.3N force, 200k operations, SMD	C and K Components	KSR221GLFS		KSR	
36	1	S2		DIP Switch, SPST, 2Pos, Slide, SMT	Copal Electronics	CVS-02TB		SW, 4.7x1.45x3mm	
37	11	SH-JP1, SH-JP2, SH-JP3, SH-JP4, SH-JP5, SH-JP9, SH-JP10, SH-JP13, SH-JP14, SH-JP15, SH-JP16	1x2	Shunt, 100mil, Gold plated, Black	3M	969102-0000-DA		Shunt	SNT-100-BK-G
38	3	TP1, TP6, TP10	SMT	Test Point, Compact, SMT	Keystone	5016		Testpoint_Keystone_Compact	
39	22	TP2, TP3, TP4, TP5, TP7, TP8, TP9, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP29	SMT	Test Point, Miniature, SMT	Keystone	5015		Testpoint_Keystone_Miniature	
40	1	U1		I2C Controlled 5A Single Cell Charger with NVDC Power Path Management and MaxChargeTM High Voltage Adapter Support, RTW0024H	Texas Instruments	BQ25890RTWR		RTW0024H	BQ25890RTWT
41	1	U2		I2C Controlled 5A Single Cell Charger with NVDC Power Path Management and MaxChargeTM High Voltage Adapter Support, RTW0024H	Texas Instruments	BQ25892RTWR		RTW0024H	BQ25892RTWT
42	1	U3		ESD Protected,High-Speed USB 2.0 (480-Mbps) 1:2 Multiplexer / Demultiplexer Switch, 1:2 Mux / Demux, 6 ohm RON, 2.5 to 3.3V, -40 to 85 degC, 10-Pin UQFN (RSE), Green (RoHS & no Sb/Br)	Texas Instruments	TS3USB221ARSER		RSE0010A	Equivalent
43	1	U4		Micropower 150 mA Low-Noise Ultra Low-Dropout Regulator in SOT-23 Package, DBV0005A	Texas Instruments	LP2985AIM5-3.3/NOPB		DBV0005A	
44	0	C2, C12, C15, C17, C27, C30	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H102JA01D		0603	
45	0	C4	1000pF	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0805	MuRata	GRM216R71E102KA01D		0805	
46	0	C5, C6, C19, C20	22uF	CAP, CERM, 22 µF, 25 V, +/- 20%, X5R, 0805	MuRata	GRM21BR61E226ME44		0805	
47	0	C11, C14, C25, C26, C29, C31	10uF	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M		0603	
48	0	D1, D4	40V	Diode, Schottky, 40V, 0.38A, SOD-523	Diodes Inc.	ZLLS350TA		SOD-523	
49	0	D2, D3, D6	30V	Diode, Schottky, 30 V, 1 A, SOD-123	Diodes Inc.	B130LAW-7-F		SOD-123	
50	0	FID1, FID2, FID3		Fiducial mark. There is nothing to buy or mount.	N/A	N/A		Fiducial	
51	0	R1	0	RES, 0, 5%, 1 W, 2512	Vishay-Dale	CRCW25120000Z0EG		2512	
52	0	R3, R11	0	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED		0402	
53	0	R14, R20, R31, R41	0	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED		0402	
54	0	R26, R27, R45	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K0FKED		0402	
55	0	R28, R48	15k	RES, 15 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040215K0JNED		0402	
56	0	SH-JP6, SH-JP7, SH-JP8, SH-JP11, SH-JP12	1x2	Shunt, 100mil, Gold plated, Black	3M	969102-0000-DA		Shunt	SNT-100-BK-G

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