

Bill of Materials

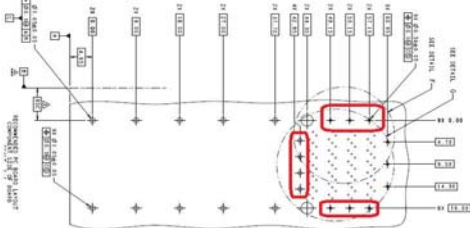
TI DESIGNS

TIDA-00427

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Digi-Key Part Number	Note
1	1			Printed circuit board	Any	TIDA-00427			
2	13	C1, C2, C3, C4, C15, C16, C17, C18, C29, C33, C35, C36, C43	0.1 uF	CAP CER 0.1UF 16V 10% X7R 0402	Murata Electronics North America	GRM155R71C104K880	C_0402	490-3261-1-ND	
3	6	C39, C44, C47, C50, C51, C54	1 uF	CAP CERAMIC 1UF 10V Y5V 0603	Yageo	CC06032R2Y5V68B105	C_0603	311-1357-1-ND	
4	4	C55, C56, C14, C28	1 uF	CAP CER 1UF 6.3V 10% X7R 0402	Yageo	CC0402KRX7R5B8105	C_0402	311-1702-2-ND	
5	1	C30	2.2 nF	Capacitor, Ceramic, 25V, X7R, 20%	Kemet	CO603C222M3RACTU	C_0603	399-9041-1-ND	
6	2	C31, C32	30 pF	CAP CER 30PF 50V 5% NPO 0603	Murata Electronics North America	GRM1885C1H300JA01D	C_0603	490-1414-1-ND	
7	1	C34	0.47 uF	CAP CER 0.47UF 16V 10% X7R 0603	Taiyo Yuden	EMK107B7474KA-T	C_0603	587-1250-1-ND	
8	2	C37, C42	220 pF	CAP CER 0.1UF 50V 5% X7R 0603	Kemet	CO603C104J5RACTU	C_0603	399-7844-1-ND	
9	1	C38	22 uF	CAP ALUM 22UF 10VDC 20% CODE-B	Panasonic	EEE-1AA220WR	Code B	PCE3869TR-ND	
10	1	C40	0.01 uF	CAP CER 0.01UF 16V 10% X7R 0603	Panasonic	ECI-1VB1C103K	C_0603	PCC1750CT-ND	
11	1	C41	2.2 uF	CAP CER 2.2UF 10V 10% X7R 0805	Kemet	CO805C225K8RACTU	C_0805	399-3522-1-ND	
12	1	C45	47 uF	CAP TANT 47UF 10V 10% J210	AVX Corp	TAJH476K010RNU	C_1210	478-1693-1-ND	
13	4	C46, C49, C52, C53	10 uF	CAP TANTALUM 10UF 10V 20% SMD	AVX Corp	TAJ106M010RNU	C_0805-TANT	478-3281-1-ND	
14	1	C48	22 uF	CAP TANT 22UF 16V 20% J212	Kemet	B4519GH3226M309	C_sizec	478-4695-1-ND	
15	3	D1, D3, D4	RED-LED	LED MINI TOPLED RED 630NM SMD	OSRAM Opto Semiconductors Inc	LS M67K-J2L1-1-2	led_footprint	475-2691-1-ND	
16	1	D2	1SMB5922BT5	Diode, Zener, 7.5V, 50-mA, 3W	On Semi	15MB5922BT3G	SMB	15MB5922BT3GOSTR-ND	
17	1	F81	BK160H5600-T	Bead, Ferrite, SMT, 60Ohms, 800mA	Taiyo Yuden	BK160H5600-T	FB0603	587-1873-2-ND	
18	6	J1, J3, J22, J23, J24, J25	HEADER 2X2				HEADER_2X2		Regular 2.54mm
19	2	J2, J15	HEADER 7X2				HEADER_7X2		Regular Do not populate
20	1	J4	HEADER 1x4				HEADER_1x4		Regular 2.54mm
21	1	J5	HEADER 1x2				HEADER_1x2		Regular 2.54mm
22	1	J6	USB Conn. 1734035-2	CONN MINI USB RCPT RA TYPE B SMD	TE Connectivity	1734035-2	HEADER_1x2	A317227TR-ND	
23	2	J7, J12	HEADER 5x2/5M 1				HEADER 5x2		Regular 2.54mm
24	1	J8	HEADER, 2-PIN	CONN HEADER VERT. 100 2POS 15AU	TE Connectivity	87224-2	HEADER 1x2		Regular 2.54mm
25	1	J9	Binding Post, Keystone	POST BINDING ECON NYLON-INS RED	Keystone Electronics	7007	cn-bananaik-275-interface	7007K-ND	
26	2	J10, J11	Binding Post, Keystone	POST BINDING ECON NYLON-INS RED	Keystone Electronics	7006	cn-bananaik	7006K-ND	
27	2	J13, J14	HEADER 10x2/5M				HEADER 10x2_SM		Regular 2.54mm
28	5	J16, J17, J19, J20, J21	HEADER 3				HEADER 1x3		Regular 2.54mm
29	1	J18	4808-3004-CP	SOCKET IC OPEN FRAME 8POS. 3"	3M	4808-3004-CP	DI_P8	3M5473-ND	
30	1	Q1	BSS138	N Channel Logic level Enhancement Mode Field Effect Transistor	FairChild	BSS138	SOT-23	BSS138TR-ND	
31	16	R7, R8, R11, R19, R23, R24, R27, R47, R48, R49, R50, R51, R52, R53, R54, R55	1k	RES 1.0K OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ102X	R_0402	P1.0KJTR-ND	
32	3	R12, R15, R22	2.0K	RES 2.0K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ202V	R_0603	P2.0KGCT-ND	
33	2	R25, R31	33k	RES 33K OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ333X	R_0402	P33KJCT-ND	
34	1	R26	200	RES 200 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ201V	R_0603	P200GCT-ND	
35	3	R28, R29, R34	33	RES 33 OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ330X	R_0402	P33JCT-ND	
36	1	R30	1.5K	RES 1.5K OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ152X	R_0402	P1.5KJCT-ND	
37	1	R32	1.2M	RES 1.2M OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ125X	R_0402	P1.2MJCT-ND	
38	9	R33, R39, R40, R41, R42, R43, R44, R45, R46	4.7K	RES 4.7K OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ472X	R_0402	P4.7KJCT-ND	
39	2	R35, R36	10K	RES SMD 10K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ103X	R_0402	P10KJTR-ND	
40	1	R37	750	RES 750 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ751V	R_0603	P750GCT-ND	
41	1	R38	360	RES 360 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ361V	R_0603	P360GCT-ND	
42	1	S1	EVQPSD02K	6.1 mm 4.0 mm Side-operational SMD	Panasonic	EVQ_PS0202K	EVQPSD02K	P80889TR-ND	
43	2	U1, U2	DS290BRR810	Low Power, 28Gbps 8-Channel Linear Repeater	Texas Instruments	DS290BRR810	BGA	N/A	
44	1	U3	MSP430F5529 PN 80	MCU	Texas Instruments	MSP430F5529IPN	PNR0	296-27306-1-ND	
45	1	U4	TPD4E004DRY	4 Channel ESD Protection Array	Texas Instruments	TPD4E004DRY	SON-6	296-23618-1-ND	
46	1	U5	TPS73533DRB	500mA LDO	Texas Instruments	TPS73533DRB	SON-8	296-24854-1-ND	
47	1	U6	OSCILLATOR 25 MHz, 2.5V	OSCILLATOR 25.000 MHZ 2.5V SMD	TXC CORPORATION	7C-25.000MCB-T	txc_2v5_osc	887-1442-1-ND	
48	1	U7	TPS75725	Single Output LDO, 3.0A, Fixed(2.5V), Fast Transient Response, Low Quiescent Current	Texas Instruments	TPS75725KTTT	TO-263	296-15923-1-ND	
49	2	U8, U9	Cage Assembly with Integrated Connector	ZOSFP+STACKED RECEPTACLE ASSEMBLY 2X1	Molex Connectivity	171208-0002	Molex QSFP28_cage	N/A	See note1
50	1	Y1	24.0 MHz	CRYSTAL 24.000MHZ 20PF SMD	ECS Inc.	ECS-240-20-5PX-TR	HC49_US	XC1255CT-ND	
51	11		2.54mm Jumper	SHUNT, ECON, PHBR 5AU, BLACK	TE Connectivity AMP Connectors	382811-8		A26228-ND	Please check 2.2 of the user's guide to install the Jumpers

Note 1

The footprint of the PCB design for the connector is designed per the drawing of Molex 171208-0002. It is OK to use 2198373-1 QSFP28 connector from TE Connectivity, but the red circled pins of the connector need to be cut before installing the connector.



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