Texas Instruments

Bill of Materials

TI DESIGNS

TIDA-01550

Item	Qty	Reference	Value	Part Description	Digikey Part Number	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	2	C37, C40	10 pF	CAP CER 10PF 50V C0G/NPO 0603	311-1058-1-ND	YAGEO	CC0603JRNPO9BN100	0603	
2	1	C1	10000PF	CAP CER 10000PF 50V 10% X7R 0603	445-1311-1-ND	TDK	C1608X7R1H103K080AA	0603	
3	10	C56, C57, C60, C61, C62, C63, C64, C65, C66, C67	0.1UF	CAP CER 0.1UF 25V 10% X7R 0603	445-1316-1-ND	TDK	C1608X7R1E104K080AA	0603	
4	8	R20, R21, R22, R37, R45, R56, R57, R58	100	RES 100 OHM 1/10W 5% 0603 SMD	RMCF0603JT100RCT-ND	STACKPOLE	RMCF0603JT100R	0603	
5	5	R5, R6, R7, R17,R49	100K OHM	RES 100K OHM 1/8W 5% 0805 SMD	RMCF0805JT100KCT-ND	STACKPOLE	RMCF0805JT100K	0805	
6	7	C5, C16, C22, C29, C31, C32, C81	0.1 UF	CAP CER 0.1UF 50V Y5V 0603	311-1343-1-ND	YAGEO	CC0603ZRY5V9BB104	0603	
7	1	R19	10 OHM	RES 10 OHM 1/8W 5% 0805 SMD	RMCF0805JT10R0CT-ND	STACKPOLE	RMCF0805JT10R0	0805	
8	3	C35, C44, C48	10 UF	CAP, CERM, 10 µF, 16 V, +/- 10%, X5R, 0805	587-1295-1-ND	TAIYO	EMK212BJ106KG-T	0805	
9	12	D2, D3, D4, D5, D10, D11, D12, D13, D26, D27, D28, D29	DIODE	DIODE SWITCHING 75V 0.15A SOD523	1N4148XTPMSCT-ND	MICRO COMM	1N4148X-TP	SOD523	
10	2	D6, D7	DIODE	DIODE GEN PURP 75V 150MA SOD323F	1N4148WSFSCT-ND	FAIRCHILD	1N4148WS	SOD323F	
11	1	C55	1UF	AP CER 1UF 25V 10% X7R 0603	445-5956-1-ND	TDK	C1608X7R1E105K080AB	0603	
12	3	C39, C42, C46	2200uF	CAP ALUM 2200UF 20% 10V RADIAL	P5128-ND	PANASONIC	ECA-1AM222	Through-hole	
13	4	C4, C15, C17, C30	4.7 Uf	CAP CER 4.7UF 10V 10% X5R 0603	311-1455-1-ND	YAGEO	CC0603KRX5R6BB475	0603	
14	3	R8, R9, R10	470	RES 470 OHM 5W 5% AXIAL	45J470E-ND	OHMITE	45J470E	Through-hole	
15	3	C41, C45, C47	470n	CAP FILM 0.47UF 5% 630VDC RADIAL	P14532-ND	PANASONIC	ECQ-E6474JF	Through-hole	
16	1	C54	47UF	CAP CER 47UF 25V 20% X5R 1206	445-8047-1-ND	TDK	C3216X5R1E476M160AC	1206	
17	3	ZD1, ZD2, ZD3	BZV55-B6V2,115	DIODE ZENER 6.2V 500MW SOD80C	568-6251-1-ND	NXP	BZV55-B6V2,115	SOD80C	
18	8	ACT, JP14, JP15, JP16 , REACT, AFE1_EN, AFE2_EN, AFE3_EN	2-PIN CONNECTOR	CONN HEADER VERT SGL 2POS GOLD	3M9447-ND	3M	961102-6404-AR	Through-hole	
19	9	AFEPWR1, AFEPWR2, AFEPWR3, AFE1_EXTRA, AFE2_EXTRA, AFE3_EXTRA, HOST_EXTRA, LOGIC1, LOGIC2	3-PIN CONNECTOR	CONN HEADER VERT SGL 3POS GOLD	3M9448-ND	3M	961103-6404-AR	Through-hole	
20	13	AFE1_COMM, AFE2_COMM, AFE3_COMM, HOST_COMM1, HOST_COMM2, HOST_COMM3, AFE1_JTAG, AFE2_JTAG, AFE3_JTAG, DGND, DVCC, ISO_PULSE, P7	4-PIN CONNECTOR	CONN HEADER VERT SGL 4POS GOLD	3M9449-ND	3M	961104-6404-AR	Through-hole	
21	3	BTN1, BTN2, RESET	SWITCH	SWITCH TACTILE SPST-NO 0.02A 15V	P8079SCT-ND	PANASONIC	EVQ-11L05R	Through-hole	
22	3	U$7, U$13, U$14	TERMINAL BLOCK	TERMINAL BLOCK 5.08MM VERT 2POS	ED1609-ND	ON-SHORE	ED120/2DS	Through-hole	
23	1	RS1	RS-232 CONNECTOR	CONN D-SUB RCPT R/A 9POS 30GOLD	A32119-ND	TE CONN	5747844-6	Through-hole	
24	3	D8, D9, D16	LLSD103B	DIODE SCHOTTKY 40V 350MA MINMELF	497-3274-1-ND	st	LLSD103B-7	MINMELF	
25	3	LED_PHASE_1, LED_PHASE_2, LED_PHASE_3	YELLOW LED	LED 3.1MM 585NM YELLOW TRANSP	511-1251-ND	ROHM	SLR-342YC3F	Through-hole	
26	2	LED_ACT, LED_REACT	GREEN LED	LED 3.1MM 563NM GREEN TRANSP	511-1247-ND	ROHM	SLR-342MC3F	Through-hole	
27	3	R2, R41, R63	VARISTOR	VARISTOR 275V RMS 20MM RADIAL	495-1417-ND	TDK	S20K275	20 MM Radial	
28	3	TVS1, TVS2, TVS3	DIODE	DIODE TVS 5.0V 400W BI 5% SMD	SMAJ5.0CABCT-ND	BOURNS	SMAJ5.0CA	SMD	
29	1	LCD1	LCD	160-segment LCD	Custom LCD	Custom	Custom	Custom	Custom LCD
30	1	U3	LDO	IC REG LDO 3.3V 0.15A SOT23-5	296-35483-1-ND	TI	TPS70933DBVR	SOT23-5	
31	1	U2	RS232	IC DVR/RCV RS232 MULTICH 16TSSOP	296-24863-1-ND	TI	TRS3232EQPWRQ1	16TSSOp	
32	3	U$6, U$7, and U$8	LDO	IC REG LINEAR 3.3V 150MA SOT23-5	296-27946-2-ND	TI	TLV70433DBVT	SOT23-5	
33	1	XT1	CRYSTAL	CRYSTAL 32.768 KHZ 6PF SMD	300-8341-1-ND	CITIZEN FINETECH	CMR200T32768DZBT	SMD	
34	6	C3, C10, C51, C75, C92, C95	1 u	CAP, CERM, 1 µF, 50 V, ±10%, X5R, 0603	490-12330-2-ND	Murata	GRT188R61H105KE13D	0603	
35	6	C8, C11, C52, C76, C93, C96	0.1u	CAP CER 0.1UF 25V X7R 0603	478-3713-2-ND	AVX Corporation	06033C104JAT2A	0603	
36	1	DNP	DNP	DNP	DNP	DNP	DNP	8SOIC	
37	1	U1	ISOLATION	DGTL ISO 3KV GEN PRP 8SOIC	ISO7721DR-ND	TI	ISO7721DR	8SOIC	
38	3	U$1, U$3, U$4	ISOLATION	DGTL ISO 5KV 3CH GEN PURP 16SOIC	296-44935-5-ND	TI	ISO7731DW	16SOIC	
39	6	C34, C43, C77, C80, C87, C90	15nF	CAP CER 150PF 50V C0G 0603	445-1283-1-ND	TDK	C1608C0G1H151J080AA	0603	
40	10	R33, R34, R36, R39, R40, R43, R55, R60, R62, R25	1k	RES SMD 1K OHM 1% 1/10W 0603	RMCF0603FG1K00TR-ND	Stackpole	RMCF0603FG1K00	0603	
41	3	C23, C33, C82	DNP	DNP	DNP	DNP	DNP	0603	DNP
42	3	R38, R46, R59	2.7k	RES SMD 2.7K OHM 5% 1/10W 0603	P2.7KGCT-ND	Panasonic	ERJ-3GEYJ272V	0603	
43	3	R26, R28, R51	20k	RES SMD 20K OHM 0.1% 1/10W 0603	P20KDBCT-ND	Pansasonic	ERA-3AEB203V	0603	
44	9	R29, R30, R31, R32, R35, R42, R52, R53, R54	330k	RES SMD 330K OHM 5% 1/10W 0603	P330KGCT-ND	Panasonic	ERJ-3GEYJ334V	0603	
45	3	C24, C49, C83	4.7u	CAP CER 4.7UF 10V Y5V 0603	311-1827-1-ND	YAGEO	CC0603ZRY5V6BB475	0603	
46	3	C25, C53, C84	470n	CAP CER 0.47UF 25V Y5V 0603	1276-2376-1-ND	Samsung	CL10F474ZA8NNNC	0603	
47	3	R27, R50, R61	47k	RES SMD 47K OHM 1% 1/10W 0603	P47.0KHCT-ND	Panasonic	ERJ-3EKF4702V	0603	
48	12	C26, C27, C36, C38, C58, C59, C78, C79, C85, C86, C88, C89	47pF	CAP CER 47PF 50V C0G 0603	445-1277-1-ND	TDK	C1608C0G1H470J080AA	0603	
49	3	U4, U10, U11	MSP430i2020	IC MCU 16BIT 32KB FLASH 28TSSOP	296-40426-1-ND	TI	MSP430I2041TPWR	TSOP-28	Note that this design could work with the MSP430i2020 or MSP430i2030 for lower cost. However, the MSP430i2041 was particularly used.

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50	22	R/L1, R/L2, R/L5, R/L6, R/L7, R/L9, R/L3, R/L4, R/L8, R/L10, R44, R47, R64, R65, R71, R72, R73, R74, R75, R76, R77, R78	0.0 OHM	RES 0.0 OHM 1/10W 0603 SMD	RMCF0603ZT0R00CT-ND	STACKPOLE	RMCF0603ZT0R00	0603	
51	9	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0603	
52	1	C18	100n	CAP CER 0.1UF 10V X5R 0402	445-4984-1-ND	TDK	C1005X5R1A104M050BA	0402	
53	1	C28	1n	CAP CER 1000PF 50V X7R 0402	445-1256-1-ND	TDK	C1005X7R1H102K050BA	10POS	
54	2	C6, C7	18pF	CAP CER 18PF 50V C0G 0402	445-1238-2-ND	TDK	C1005C0G1H180J050BA	0402	
55	1	R24	47k	RES 47.0K OHM 1/16W 1% 0402 SMD	311-47.0KLRCT-ND	Yageo	RC0402FR-0747KL	0402	
56	1	R23	91kOhm, 0.1%, 25ppm/C	RES 91K OHM 1/8W 0.1% 0805 SMD	P91KDACT-ND	Panasonic	ERA-6AEB913V	0805	
57	1	JTAG	JTAG	CONN HEADER 10POS DUAL VERT	SAM8909-ND	Samtec	FTSH-105-01-F-D-K		
58	1	MSP1	MSP432P4111	IC MCU 32BIT	N/A	TI	MSP432P4111IPZ	PZ	Samples of the 432 were obtained internally for this design
59	1	Q1	Q1	CRYSTAL 48.00 MHZ 10.0PF SMD	FA-238 48.0000MB-K3-ND	Epson	FA-238 48.0000MB-K3	SMD	
60	1	AFE1_ID0	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "0"
61	1	AFE1_ID1	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "0"
62	1	AFE2_ID0	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "1"
63	1	AFE2_ID1	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "0"
64	1	AFE3_ID0	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "0"
65	1	AFE3_ID1	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "1"
66	3	INB_SEL1, INB_SEL2, INB_SEL3	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "UTSI"
67	3	OUTC_SEL1, OUTC_SEL2, OUTC_SEL3	0.0 OHM	RES 0.0 OHM 1/8W 0805 SMD	RMCF0805ZT0R00CT-ND	STACKPOLE	RMCF0805ZT0R00	0805	Place resistor on center pad and pad that says "URSO"
68	9	AFE1_OPT1, AFE1_OPT2, AFE1_OPT3, AFE2_OPT1, AFE2_OPT2, AFE2_OPT3, AFE3_OPT1, AFE3_OPT2, AFE3_OPT3,	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0805	
69	6	C2, C9, C50, C74, C91, C94	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0603	
70	1	CLK_GEN	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	Clk	
71	6	C68, C69, C70, C71, C72, C73	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0805	
72	1	C14	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0805	
73	7	R1, R11, R12, R13, R14, R48, R66	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	0603	
74	1	U9	Do not populate	Do not populate	Do Not Populate	Do not populate	Do not populate	DCU	
75	1	R18	75k	RES SMD 75K OHM 5% 1/8W 0805	RMCF0805JT75K0CT-ND	STACKPOLE	RMCF0805JT75K0	0805	
76	1	L2	4.7uH	INDUCTOR 4.7UH 300MA 0806	490-4044-1-ND	Murata	LQH2MCN4R7M02L	LQM2MP_G0	

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
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