

₩ TEXAS INSTRUMENTS Bill of Materials

Number	Part Number Quantity	Part Type	Part Reference	Vendor	Vendor PN	Description	Value	PCB Footprint	Tolerance	Voltage	Distributor Part Number	Distribute	CrossRef
		CAP	C1 C4 C5	AVX	0603YC104KAT*A	Capacitor, 0.1UF, 16 V, 10 %, X7R, 0603	0.1UF	C0603	10%	16V	478-1239-2-ND	Digikey	Ciossitei
		CAP	C2 C3			Cap Ceramic SMT 0402	3n3F	C0402	0	10V			
		CAP	C6 C7	MURATA	GRM1555C1H150JZ01D	CAP CER 15PF 50V 5% C0G 0402	15pf	C0402	0	50V	490-1280-1-ND	Digikey	
		CAP	C8	PANASONIC	ECH-U1H332JX5	CAP .0033UF 50V PPS FILM 1206 5%	3n3F	C1206	0	50V	PCF1334CT-ND	Digikey	
	300-00013 1 300-00085 2	CAP	C9 C10 C11	Yageo	CC0805KRX7R9BB681	Cap Ceramic SMT 0402 CAP 680PF 50V CERAMIC X7R 0805	10nF 680pf	C0402 C0805	0	10V 50V	311-1126-1-ND	Digikey	
	300-00065 2	CAP	C14 C23 C24 C25	MURATA	GRM188R71C103KA01D	CAP CER 10000PF 16V 10% X7R 0603	10nF	C0603	0	16V	490-1525-2-ND	Digikey	
		CAP	C15 C54	Taivo Yuden	UMK107BJ105KA-T	Cap Ceramic SMT 0603	1uF	C0603	0	50V	587-2400-1-ND	Digikey	+
	300-00041 2	CAP	C16 C17	MURATA	GRM155F51E104ZA01D	CAP CER .1UF (100nf) 25V Y5V 0402	100nF	C0402	0	25V	490-3271-1-ND	Digikey	
		CAP	C18 C19	MURATA	GRM188R71E103KA01D		10nF	C0603	0	25V	490-1520-1-ND	Digikey	
		CAP	C20 C30	Taiyo Yuden	GMK316F106ZL-T		10UF	C1206	0	35V	587-1352-1-ND	Digikey	
	300-00042 1	CAP	C21	TDK	C5750Y5V1E476Z		47uf	C2220	0	25V	445-3486-2-ND	Digikey	
		CAP	C22 C26	Kemet Electronics Corporation PANASONIC	C0402C104K8PACTU ECJ-2FB0J106M	Cap Ceramic SMT 0402 Capacitor,10UF.6.3 V.20 %, X5R.	100nF 10UF	C0402 C0805	0 2	10V 6.3V	399-3027-2-ND	Digikey	+
		CAP	C27	AVX	06035C103KAT2A	Cap Ceramic SMT 0603	100F	C0805	0.2	50V	478-1227-1-ND	Digikey	+
		CAP	C28	AVA	00033C103KA12A	Cap Ceramic SMT 0003	33nf	C0402	0	30 V	476-1227-1-ND	Digikey	+
		CAP	C29			Cap Ceramic SMT 0402	22nf	C0402	0				1
		CAP	C31 C42	PANASONIC	ECJ-1VB0J106M	CAP CERAMIC 10UF 6.3V X5R 0603	10UF	C0603	20%	10V	rPCC2395CT-ND	Digikey	1
19	300-00012 4	CAP	C32 C35 C43 C44	Vishay	298D476X0010P2T	CAP TANT 47UF 10V 20% 0805	47UF	C0805P	0	10V	718-1608-1-ND	Digikey	
			C38 C39 C40 C41 C45 C46 C47 C48										
20	300-00044 14	CAP	C49 C50	MURATA	GRM155R61A104KA01D	CAP CER .1UF 10V 10% X5R 0402	0.1uf	C0402	0	10V	490-1318-1-ND	Digikey	
21	300-00057 3	CAP	C55 C61 C62			Cap Ceramic SMT 0402	DNI	DNI	0				Do Not Inst
22		CAP	C56	TDK	C1005X5R0G475K	CAP CER 4.7UF 4.0V X5R 10% 0402	DNI	DNI	0	4V	445-5949-1-ND	Digikey	Do Not Inst
		CAP	C57	Johanson Dielectrics Inc	250R07S330JV4T	CAP CER 33PF 25V S 0402 UHI Q	DNI	DNI	0	25V	712-1298-1-ND	Digikey	Do Not Inst
		CAP	C58	TDK	C1608X5R0J106M	CAP CER 10UF 6.3V X5R 20% 0603	DNI	DNI	0	6.3	445-4112-1-ND	Digikey	Do Not Inst
		FET_DIODE	D1 D2	PANASONIC	LNJ208R8ARA	LED, RED, 3.0 VR, 0.2 IF,SURF. MOUNT	LED RED 5MA SMT	LED0603H35	0				
26		CONN	J1	Sullins Connector Solutions	SBH31-NBPB-D17-SP-BK	CONN HDR 1.27MM 34POS GOLD SMD	SBH31-NBPB-D17-SP-BK	male	0		S9108-ND	Digikey	
		CONN	J2	SAMTEC	TSM-107-01-S-DV	CONN. 2X7 HEADER, SMT, DSP JTAG, Pin 6 removed	DSP JTAG Header	hdr 14p	0				
28	330-00009 1	MAGNETICS	L1	Panasonic - ECG	ELJ-EA331KF	INDUCTOR 330UH 10% 1210 SMD	330uH	IND1210	0		PCD1432CT	Digikey	
29	330-00010 1	MAGNETICS	L2	Taiyo Yuden	CB2518T471K	INDUCTOR POWER 470UH 1007	470uH	IND1007	0		587-2194-1-ND	Digikey	
30	330-00011 1	MAGNETICS	L3	Taiyo Yuden	LB3218T1R0M	INDUCTOR 1.0UH 1.075A 20% SMD	1uH	IND1207	0		587-2032-1-ND	Digikey	
	330-00021 1	MAGNETICS	L4	TDK	GLCR2012T2R2M-HC	INDUCTOR 2.2UH 350MA 20% 0805	DNI	DNI	0	350mA	445-3625-1-ND	Digikey	Do Not Inst
32	190-00002 1	Heat_Sink	P1			DNI	DNI	DNI	0			<u> </u>	Do Not Inst
33	310-00041 2	RES	R1 R2			Resistors 56R, 5% - SMD, 0402	56R	R0402	0.05				
		RES	R3 R4			Resistors,1K,5%, SMD,0402	1K	R0402	0			<u> </u>	
	310-00011 2	RES	R5 R6			Resistors, 680R, 5% - SMD, 0603	680R	R0603	0.05				
36	310-00042 2	RES	R7 R8			Resistors 5K49 5% - SMD, 0402	5K49	R0402	0			<u> </u>	
		RES	R9			Resistors 2K 5% - SMD, 0402	2K	R0402	0				
		RES	R10 R11			Resistors 57K6 5% - SMD, 0402	57K6	R0402	0				
	310-00045 3	RES	R12 R13 R14			Resistors 2K2 5% - SMD, 0402	2K2	R0402	0			<u> </u>	
40	310-00029 3	RES	R15 R28 R29			Resistors, 0R, 5% - SMD, 0402	0R	R0402	0			<u> </u>	
			R16 R17 R18 R19										
		RES	R20 R21 R22			Resistor 10K 5% - SMD,0402	10K	R0402	0			↓	
		RES	R23	Vishay	CRCW0402330RJNED	RES 330 OHM 1/16W 5% 0402 SMD	330R	R0402	0		541-330JCT-ND	Digikey	
		RES	R24 R25	4		Resistor 150R 5% - SMD,0402	150R	R0402	0			<u> </u>	
		RES	R33 R34	1		Resistors, DNP - SMD, 0402 (do not populate)	DNP	R0402	0			↓	
		RES	R30 R31			Resistors DNP - SMD, 0603 (Do NOT populate)	DNP	R0603	0			↓	1
		RES	R32			Resistor 33K 5% - SMD,0402	33K	R0402	0			↓	<u> </u>
		RES	R35	Panasonic	ERJ-2RKF3573X	RES 357K OHM 1/10W 1% 0402 SMD	DNI	DNI	0		P357KLCT-ND	Digikey	Do Not In:
		RES	R36	Panasonic	ERJ-2RKF1653X	RES 165K OHM 1/10W 1% 0402 SMD	DNI	DNI	0		P165KLCT-ND	Digikey	Do Not In:
		RES	R41 R42	Panasonic - ECG	ERJ-2GE0R00X	RES 0.0 OHM 1/10W 0402 SMD	0	R0402	0		P0.0JCT-ND	Digikey	
		RES	R43	Panasonic	ERJ-2GEJ103X	RES 10K OHM 1/10W 5% 0402 SMD	DNP	R0402	0				
		SWITCH	SW1	CTS	218-2LPST	SWITCH DIP HALF PITCH 2POS	2POS_DIPSW	SMT218LP_2POS	0		CT2182LPST-ND	Digikey	
			TP1 TP3 TP4 TP5	TI	5015	PC TEST POINT MINIATURE SMT	TP_CLIP_5015	TP_5015	0				
		FET_DIODE	U10 U9	Diodes Inc	B350A-13-F	DIODE SCHOTTKY 3A 50V SMA	B350A-13-F	DO-214AB	0		B350A-FDICT-ND	Digikey	
		FET_DIODE	U11	On Semi	1SMB5931BT3	DIODE ZENER 3W 18V SMB	18V	DO-214AA	0		1SMB5931BT3GOSCT-ND	Digikey	
	102-00037 1	IC	U12	TI	TPS62240	2.25 MHz 300 mA Step Down Converter	DNI	DNI	0			↓	Do Not In
		IC	U1	TI	F2806x	F28069, 80-Pin PFP LQFP	F2806x_80Pin	PFP (80)	0			↓	<u> </u>
		IC	U2	Atmel	AT24C1024B-TH-T	IC EEPROM 1MBIT 1MHZ 8TSSOP	DNI	DNI	0		DNP	↓	Do Not In
		IC	U3	TI	SN74LVC2G07DBV	IC, Dual Buffer/Driver With Open-Drain Outputs, SOT23-6	SN74LVC2G07DBVR	DBV6	0		296-13494-2	Digikey	1
		POWER	U4	TI	TPS3828-33DBV	Reset Supervisor, SOT23-5	TPS3828	DBV5	0		296-2638-1	Digikey	
		IC	U6	TI	AFE031	AFE031 TI PLC Integrated AFE, 48 pin QFN RGZ	AFE031	RGZ	0				
61	100-00027 2	FET_DIODE	U7 U8	Diodes Inc	DNI	Do Not Install	DNI	DO-214AB	0				
							· · · · · · · · · · · · · · · · · · ·	4-SMD (0.197" L x					
	105-00009 1	OSC_XTAL		Abracon Corporation	ABM3B-20.000MHZ-10-1-U-T	CRYSTAL 20.0000MHZ 10PF SMD	20Mhz OSC 20ppm	0.126" W)			300-8214-1-ND	Digikey	

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design. TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, Is GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information may require a license from a third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have *not* been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.