

Bill of Materials

TI DESIGNS

TIDA-00360

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
1	21	C46 C53 C54 C55 C56 C75 C81 C185 C192	.01uF	.01uF	MURATA	GRM155R71H103KA88D		0402	
2	6	C5 C9 C18 C23 C26 C48	100pF	100pF	KEMET	C0402C101J5GACTU		0402	
3	0	C6	DNI	DNI	DNI	DNI		0402	DNI
4	16	C10 C11 C13 C21 C31 C34 C39 C42 C47 C50 C83 C98 C105 C120 C212 C309	10pF	10pF	MURATA	GRM1555C1H100GA01		0402	
5	2	C28 C35	10uF	10uF	TDK CORP	C1608X5R1A106M		0603	
6	2	C29 C36	22uF	22uF	SAMSUNG	CL10A226MP8NUNE		0603	
7	2	C37 C43	2.2uF	2.2uF	KEMET	C0603C225K8PACTU		0603	
8	1	C40	0.056uF	0.056uF	MURATA	GRM155R61A563KA01D		0402	
9	1	C41	1800pF	1800pF	MURATA	GRM155R71H182KA01D		0402	
10	56	C52 C76 C77 C78 C79 C80 C82 C86 C102 C106 C107 C108 C109 C110 C123 C124 C125 C128 C130 C137 C142 C144 C159 C165 C178 C180 C184 C186 C191 C198 C199 C200 C201 C202 C204 C211 C213 C214 C216 C217 C218 C222 C224 C237 C239 C240 C241 C242 C243 C244 C246 C258 C263 C265 C267 C302	.1uF	.1uF	MURATA	GRM155R71C104KA88D		0402	
11	4	C57 C65 C66 C74	4.7pF	4.7pF	MURATA	GRM1555C1H4R7WA01		0402	
12	8	C58 C59 C63 C64 C67 C68 C72 C73	2.7pF	2.7pF	MURATA	GRM1555C1H2R7BA01		0402	
13	2	C60 C69	2.4pF	2.4pF	MURATA	GRM1555C1H2R4BA01		0402	
14	2	C61 C70	7.5pF	7.5pF	MURATA	GRM1555C1H7R5BA01		0402	
15	0	C62 C71	2pF	2pF	JOHANSON TECH	500R07S2R0BV4T_DNI		0402	DNI
16	3	C84 C88 C208	10uF	10uF	TDK CORP	C1608X5R1A106K080AC		0603	
17	8	C85 C99 C141 C156 C170 C175 C176 C182	.1uF	.1uF	TDK CORP	C0603X5R0J104K030BC		0201	
18	1	C87	10uF	10uF	KEMET	C0805C106M8PACTU		0805	
19	0	C89 C92 C95 C104 C111 C114 C117 C126 C131 C134 C158 C161 C179 R15	A/R	A/R	DNI	DNI		0402	DNI
20	8	C90 C91 C96 C97 C112 C113 C118 C119	5pF	5pF	MURATA	GRM1555C1H5R0BA01		0402	
21	2	C93 C115	15pF	15pF	MURATA	GRM1555C1H150FA01		0402	
22	1	C100	3300pF	3300pF	MURATA	GRM155R71H332KA01D		0402	
23	0	C101	3300pF	3300pF	MURATA	RM155R71H332KA01D_DNI		0402	DNI
24	23	C148 C149 C150 C151 C152 C153 C154	.01uF	.01uF	TDK CORP	C0603X5R1A103K030BA		0201	
25	7	C132 C135 C155 C162 C168 C171 C173	.1uF	.1uF	MURATA	GRM155R71C104KA88D		0402	
26	3	C138 C146 C167	10uF	10uF	KEMET	T491A106K010AT		TANT_A	
27	3	C140 C145 C166	1uF	1uF	TDK CORP	C1220X5R1A105M085		0508	
28	2	C183 C190	1uF	1uF	MURATA	GRM155R61A105KE15D		0402	
29	1	C187	.68uF	.68uF	SAMSUNG	CL05X684JQ5NNNC		0402	
30	1	C188	3900pF	3900pF	MURATA	GRM155R71H392KA01D		0402	
31	1	C189	47pF	47pF	MURATA	GRM1555C1H470JA01D		0402	
32	0	C193 C194 C195 C196 C197	.01uF	.01uF	MURATA	RM155R71H103KA88D_DNI		0402	DNI
33	1	C205	100pF	100pF	AVX CORP	06031A101GAT2A		0603	
34	1	C207	2200pF	2200pF	AVX	04023C222KAT2A		0402	
35	3	C219 C227 C231	10uF	10uF	MURATA	GRM31CR61E106KA12L		1206	
36	4	C220 C228 C261 C271	4.7uF	4.7uF	AVX	TAJB475K010RNJ		TANT_B	
37	3	C221 C226 C229	.01uF	.01uF	TDK CORP	C1608C0G1E103J080AA		0603	
38	2	C223 C225	4.7uF	4.7uF	KEMET	C0603C475K8PACTU		0603	
39	2	C230 C232	100uF	100uF	KEMET	C1206C107M9PACTU		1206	
40	0	C233 C234	22pF	22pF	AVX	04025A220KAT2A_DNI		0402	DNI
41	2	C235 C236	27pF	27pF	MURATA	GRM1555C1H270GA01D		0402	

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
42	2	C247 C254	.1uF	.1uF	AVX	0603YC104KAT2A		0603	
43	1	C249	47uF	47uF	AVX	TPSB476K010R0500		TANT_B	OR EQUIVALENT
44	1	C250	10uF	10uF	MURATA	GRM188R60J106ME47D		0603	
45	2	C251 C253	10uF	10uF	Taiyo Yuden	TMK325BJ106MN-T		1210	
46	6	C252 C303 C304 C305 C306 C307	22uF	22uF	SAMSUNG	CL21A226KQNNNE		0805	
47	2	C255 C256	3300pF	3300pF	KEMET	C0603C332K3RACTU		0603	
48	2	C257 C266	10uF	10uF	MURATA	GRM21BR61E106KA73L		0805	
49	4	C259 C262 C268 C272	1uF	1uF	TDK CORP	C1608X7R1E105K080AB		0603	
50	2	C260 C269	47uF	47uF	MURATA	GRM31CR61A476ME15L		1206	
51	9	C293 C297	10uF	10uF	KEMET	T494A106K016AT		TANT_A	
52	4	C275 C283 C284 C292	1uF	1uF	AVX CORP	0805YC105KAT2A		0805	
53	6	C276 C278 C282 C290 C298 C299	.1uF	.1uF	AVX CORP	0805YC104KAT2A		0805	
54	3	C277 C288 C296	2200pF	2200pF	AVX CORP	08051C222JAT2A		0805	
55	3	C280 C286 C294	.01uF	.01uF	AVX CORP	08055C103JAT2A		0805	
56	3	C281 C287 C295	10uF	10uF	Yaiyo Yuden	EMK212BJ106KG-T		0805	
57	0	C291	.1uF	.1uF	AVX CORP	0805YC104KAT2A_DNI		0805	DNI
58	6	D1 D2 D4 D6 D9 D10	LED GREEN	LED GREEN	LITE ON	LTST-C170KGKT		LED_0805	
59	3	D3 D8 D11	LED AMBER	LED AMBER	LITE ON	LTST-C150AKT		LED_1206	
60	1	D7	LED BLUE	LED BLUE	LITE ON	LTST-C170TBKT		LED_0805	
61	0	F1	2AMP 63V FAST SMD	2AMP 63V FAST SMD	TE CONNECTIVITY	1206SFF200F/63-2_DNI		1206	DNI
62	4	FB8 FB10 FB12 FB14	1K OHM @ 100MHz	1K OHM @ 100MHz	MURATA	BLM15AG102SN1		IND_0402	
63	13	FB22 FB23 FB24 FB25 FB26 FB27	120 OHM @ 100MHz	120 OHM @ 100MHz	MURATA	BLM31PG121SN1L		1206	
64	0	FIN PP1	PROBE POINT	PROBE POINT	N/A	N/A		PROBE_POINT_30PAD	
65	6	FLT1 FLT2 FLT3 FLT4 FLT5 FLT6	NFM41PC204F1H3	NFM41PC204F1H3	MURATA	NFM41PC204F1H3B		1806_BEAD_NFM41P	
66	2	J1 J5	SMA, THVT, RECP	SMA, THVT, RECP	Johnson Components	142-0701-201		SMA_THVT_312x312	
67	2	J2 J3	SMA END LAUNCH	SMA END LAUNCH	Johnson Components	142-0701-851		SMA_SMEL_DUAL_PSF-S01_250x215	
68	1	J4	MVT, HS, FIELD ARRAY, 400POS	MVT, HS, FIELD ARRAY, 400PO	SAMTEC	EAM-40-02.0-S-10-2-A-K-TR		CON_SMVT_40x10_SEAM_MTG	
69	1	J6	USB_MINI_AB	USB_MINI_AB	WURTH ELEKTRONIK	651305142821		CON_SMRT_USBMINI_AB_WURTH	
70	1	J7	CONN JACK PWR	CONN JACK PWR	SWITCHCRAFT	RAPC722X		CON_RAPC722_JACK_THVT_3	
71	3	JP1 JP2 JP3	HDR, THVT, 3POS, .100	HDR, THVT, 3POS, .100	SAMTEC	HTSW-103-07-G-S		HDR_THVT_1x3_100_M	SHUNT 2-3
72	4	L1 L2 L3 L4	270nH	270nH	COILCRAFT	0603CS-R27XGL		IND_0603	
73	8	L5 L6 L10 L11 L12 L13 L17 L18	120nH	120nH	COILCRAFT	0603CS-R12XGEU		IND_0603	
74	4	L7 L9 L14 L16	150nH	150nH	COILCRAFT	0603CS-R15XGEU		IND_0603	
75	2	L8 L15	43nH	43nH	COILCRAFT	0603CS-43NXGEU		IND_0603	
76	4	L19 L20 L21 L22	1uH	1uH	COILCRAFT	0805LS-102XJLB		IND_0805	
77	12	L23 L24 L25 L27 L28 L29 L30 L31 L32 L34 L35 L36	62nH	62nH	MURATA	LQW18AN62NG00		IND_0603	
78	2	L26 L33	18nH	18nH	COILCRAFT	0603CS-18NXGL		IND_0603	
79	2	L37 L38	2.2uH	2.2uH	COILCRAFT	XAL4020-222ME		IND_SM_169x169_XFL4020	
80	4	MT1 MT2 MT3 MT4	TANDOFF, FEMALE, 4-40 X 1 1/16	TANDOFF, FEMALE, 4-40 X 1 1/16	RAF ELECTRONIC	1646-440-AL		MFG125_PLATED	STANDOFF
81	6	P1 P2 P3 P4 P5 P6	CONN, RF, THVT, JACK	CONN, RF, THVT, JACK	MOLEX	853050232		SMP_B120	
82	3	Q1 Q3 Q4	SSM3K37MFV	SSM3K37MFV	TOSHIBA	SSM3K37MFV.L3F		SOT-723	
83	1	Q2	CSD18532Q5B	CSD18532Q5B	Texas Instruments	CSD18532Q5B		SON_Q5B_8	TI SUPPLIED
84	27	R113 R114 R134 R135 R137 R138 R139	0	0	PANASONIC	ERJ-2GE0R00X		0402	
85	0	R2 R3	294	294	PANASONIC	ERJ-2RKF2940X_DNI		0402	DNI
86	8	R4 R85 R98 R165 R168 R169 R173 R174	1K	1K	PANASONIC	ERJ-2RKF1001X		0402	
87	19	R27 R28 R29 R30 R51 R58 R59 R94 R95	4.75K	4.75K	PANASONIC	ERJ-2RKF4751X		0402	
88	1	R6	2.61K	2.61K	PANASONIC	ERJ-2RKF2611X		0402	
89	2	R7 R127	510	510	PANASONIC	ERJ-2RKF5100X		0402	
90	4	R13 R14 R25 R26	39	39	PANASONIC	ERJ-2RKF39R0X		0402	
91	1	R22	24K	24K	PANASONIC	ERJ-2RKF2402X		0402	
92	7	R23 R35 R36 R45 R102 R103 R104	10K	10K	PANASONIC	ERJ-2RKF1002X		0402	
93	0	R24 R42 R67 R136 R140	0	0	PANASONIC	ERJ-2GE0R00X_DNI		0402	DNI
94	5	R31 R32 R81 R82 R83	22	22	PANASONIC	ERJ-2RKF22R0X		0402	
95	3	R33 R34 R43	56	56	PANASONIC	ERJ-2RKF56R0X		0402	
96	5	R37 R109 R110 R111 R112	100	100	PANASONIC	ERJ-1GEF1000C		0201	
97	5	R38 R143 R146 R147 R152	1K	1K	PANASONIC	ERJ-6ENF1001V		0805	
98	1	R39	10K	10K	PANASONIC	ERJ-6ENF1002V		0805	
99	0	R40 R41	10K	10K	PANASONIC	ERJ-2RKF1002X_DNI		0402	DNI
100	0	R46 R47	200	200	PANASONIC	ERJ-1GEF2000C_DNI		0201	DNI

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
101	1	R49	620	620	PANASONIC	ERJ-2GEJ621X		0402	
102	1	R50	39K	39K	PANASONIC	ERJ-2GEJ393X		0402	
103	0	R52	4.75K	4.75K	PANASONIC	ERJ-2RKF4751X_DNI		0402	DNI
104	0	R55 R56	1K	1K	PANASONIC	ERJ-2RKF1001X_DNI		0402	DNI
105	2	R57 R77	240	240	PANASONIC	ERJ-1GEF2400C		0201	
106	8	R60 R61 R65 R66 R75 R76 R166 R167	240	240	PANASONIC	ERJ-2RKF2400X		0402	
107	1	R63	100	100	PANASONIC	ERJ-3EKF1000V		0603	
108	1	R64	61.9	61.9	PANASONIC	ERJ-2RKF61R9X		0402	
109	14	R68 R69 R70 R71 R80 R86 R87 R88 R96 R97 R100 R101 R105 R107	22.1	22.1	PANASONIC	ERJ-2RKF22R1X		0402	
110	2	R72 R74	750	750	DALE	CRCW0603750RFKEA		0603	
111	0	R89	0	0	PANASONIC	ERJ-6GEY0R00V_DNI		0805	DNI
112	4	R90 R91 R108 R178	10	10	TE CONNECTIVITY	1879208-1		0402	
113	1	R93	12K	12K	PANASONIC	ERJ-2RKF1202X		0402	
114	1	R106	270	270	PANASONIC	ERJ-2RKF2700X		0402	
115	1	R115	2.2K	2.2K	YAGEO	RC0402FR-072K2L		0402	
116	1	R116	390	390	PANASONIC	ERJ-2RKF3900X		0402	
117	4	R117 R118 R119 R120	5.1	5.1	PANASONIC	ERJ-1GEJ5R1C		0201	
118	2	R129 R130	100K	100K	PANASONIC	ERJ-3EKF1003V		0603	
119	2	R131 R175	180K	180K	PANASONIC	ERJ-3EKF1803V		0603	
120	1	R133	715K	715K	PANASONIC	ERJ-3EKF7153V		0603	
121	1	R142	200	200	PANASONIC	ERJ-6ENF2000V		0805	
122	1	R148	2K	2K	PANASONIC	ERJ-6ENF2001V		0805	
123	1	R153	806	806	PANASONIC	ERJ-6ENF8060V		0805	
124	1	R177	953K	953K	PANASONIC	ERJ-3EKF9533V		0603	
125	1	R181	0	0	PANASONIC	ERJ-3GEY0R00V		0603	
126	3	R189 R190 R191	51	51	PANASONIC	ERJ-2RKF51R0X		0402	
127	0	SJP1	SOLDER JUMPER, 0603	SOLDER JUMPER, 0603	DNI	DNI		JUMPER_SMD_3POS_0603	SHUNT 1-2
128	0	SJP2	SOLDER JUMPER, 0402	SOLDER JUMPER, 0402	DNI	DNI		SJP2_JUMPER_0402	SHUNT 1-2
129	3	SW1 SW2 SW3	SWITCH, SMD, ULTRA MINI	SWITCH, SMD, ULTRA MINI	C&K COMPONENTS	TDA04H0SB1R		SW_SM_4POS_244X244_50_TDA	
130	2	T1 T2	MABA-007159	MABA-007159	MA-COM	MABA-007159-000000		XFMR_5_150X150_50_MABA	
131	10	TP16	RED	RED	KEYSTONE	5000		TP_THVT_100_RND	
132	2	TP2 TP7	BLU	BLU	KEYSTONE	5117		TP_THVT_100_RND	
133	8	TP8 TP10 TP11 TP12 TP17 TP19 TP20 TP21	BLK	BLK	KEYSTONE	5011		TP_THVT_100_RND_GND	
134	1	U1	TRF37B32	TRF37B32	Texas Instruments	TRF37B32IRTVR		QFN_32_197x197_0P50MM_RTV	
135	1	U2	LMH6521	LMH6521	Texas Instruments	LMH6521SQ/NOPB		QFN_32_197x197_0P50MM_RTV	
136	1	U3	ADC16DX370 or LM97937	ADC16DX370 or LM97937	Texas Instruments	ADC16DX370RME25		QFN_56_319x319_0P5MM	
137	1	U4	LMK04828	LMK04828	Texas Instruments	LMK04828BISQ/NOPB		QFN_64_360X360_0P50MM_PWRPAD	
138	3	U5 U13 U14	LP3878-ADJ	LP3878-ADJ	Texas Instruments	LP3878SD-ADJ/NOPB		WSON_8_4MMx4MM_0P8	
139	1	U6	TLV70218DBV	TLV70218DBV	Texas Instruments	TLV70218DBVR		SOT_5_118x67_57	
140	1	U7	SN74AVC41774	SN74AVC41774	Texas Instruments	SN74AVC41774PWR		TSSOP_16_201x177_26	
141	1	U8	TLV70233DBV	TLV70233DBV	Texas Instruments	TLV70233DBVR		SOT_5_118x67_57	
142	1	U9	FT2232HL	FT2232HL	FTDI	FT2232HL-TRAY		LQFP_64_402x402_20	
143	1	U10	93LC46B-I/MS	93LC46B-I/MS	Microchip	93LC46B-I/MS		MSOP_8_118X118_26	
144	1	U11	TPS2400	TPS2400	Texas Instruments	TPS2400DBVT		SOT_23_5	
145	2	U15 U17	TPS7A4700	TPS7A4700	Texas Instruments	TPS7A4700RGWT		QFN_20_199x199_0p65mm	
146	2	U16 U18	TPS62130A	TPS62130A	Texas Instruments	TPS62130ARGTT		QFN_16_124x124_PWRPAD	
147	1	U19	LMX2581	LMX2581	Texas Instruments	LMX2581SQ/NOPB		QFN_32_197x197_0P50MM_RTV	
148	1	Y1	VCXO, SMT, 61.44MHz	VCXO, SMT, 61.44MHz	CRYSTEK	CCHD-950-25-61.440		VCXO_4_SM_560x360	
149	1	Y2	12MHz w/ 10pF	12MHz w/ 10pF	Abracon	12MHz w/ 10pF		XTAL_4_SM_130X102	
150	1		BARE BOARD, TSW16DX370	BARE BOARD, TSW16DX370	VIASYSTEMS	TSW16DX370 REV B			
151	4	FOR THE STANDOFFS	SCREW PANHEAD 4-40 x 3/4"	SCREW PANHEAD 4-40 x 3/4"	BUILDING FASTENERS	PMS55 440 0075 PH			OR EQUIVALENT
152	1		SHUNT-JUMPER-0402	SHUNT-JUMPER-0402	PANASONIC	ERJ-2GE0R00X			SHUNT FOR JUMPER
153	1		SHUNT-JUMPER-0603	SHUNT-JUMPER-0603	PANASONIC	ERJ-3GEY0R00V			SHUNT FOR JUMPER
154	3		SHUNT-HEADER	SHUNT-HEADER	TE CONNECTIVITY	382811-8			SHUNT FOR HEADER

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
------	-----	-----------	-------	------------------	--------------	--------------------------	----------------	---------------	------

NOTES:
AND LEAD FREE.
BOARD ASSEMBLY.
3. INSTALL ITEM 152:
 SJP2 PINS 1-2
INSTALL ITEM 153:
 SJP1 PIN 1-2
4. INSTALL ITEM 154:
 JP1 - JP3 PINS 1-2
5. INSTALL BLUE WIRE CONNECTION
 pin 1 (net VCCB_3P3)

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 under the patents or other intellectual property of the 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.