

Comment	Description	Designator	Footprint	LibRef	Quantity
Printed Circuit Board	Printed Circuit Board	!PCB		PCB	1
GRM155R71C104KA88D	CAP, CERM, 0.1uF, 16V, +	C2, C4, C19, C21, C23, C24	0402L	GRM155R71C104KA88D	8
GRM21BR71C475KA73L	CAP, CERM, 4.7uF, 16V, +	C3, C5, C24, C31	0805	GRM21BR71C475KA73L	4
C2012X5R1C226K125AC	CAP, CERM, 22uF, 16V, +	C9, C10, C14, C27, C28	0805	C2012X5R1C226K125AC	5
GRM155R71H103KA88D	CAP, CERM, 0.01uF, 50V, +	C12, C37	0402L	GRM155R71H103KA88D	2
GRM31CR71E106KA12L	CAP, CERM, 10uF, 25V, +	C13	1206L	GRM31CR71E106KA12L	1
GRM155R61A105KE15D	CAP, CERM, 1uF, 10V, +/-	C15, C35, C36	0402	GRM155R61A105KE15D	3
CGA2B3X7R1H473K050BB	CAP, CERM, 0.047uF, 50V, +	C16	0402L	Capacitor	1
C1005X7R1H104K050BB	CAP, CERM, 0.1uF, 50V, +	C17	0402L	C1005X7R1H104K050BB	1
C1005X7R1C103K	CAP, CERM, 0.01uF, 16V, +	C18, C20, C22, C25, C29	0402L	C1005X7R1C103K	5
C0402C100K4GACTU	CAP, CERM, 10pF, 16V, NF	C33, C34	0402L	Capacitor	2
59S10H-40ML5-Y	Straight Plug PCB	CN1	59S10H-40ML5-Y	59S10H-40ML5-Y	1
HLE-116-02-F-DV-PE-BE	Samtec .100" Tiger Beam S	CN2	HLE-116-02-F-DV-PE-BE	HLE-116-02-F-DV-PE-BE	1
MBRX140-TP	Diode, Schottky, 40V, 1A, S	D1, D2	SOD-123	Diode_Schottky	2
B120-13-F	Diode, Schottky, 20V, 1A, S	D3	SMA	B120-13-F	1
Fiducial	Fiducial mark. There is not	FID1, FID2, FID3, FID4, FID	Fiducial10-20	Fiducial	6
TSW-102-07-G-S	Header, TH, 100mil, 2x1, G	J1	TSW-102-07-G-S	TSW-102-07-G-S	1
1008PS-472KLB	Fixed Inductors Power Indu	L1	1008PS-472KLB	1008PS-472KLB	1
MSS7341T-104MLB	Fixed Inductors Power Indu	L2	MSS7341T-104MLB	MSS7341T-104MLB	1
MPZ2012S102A	1.5A Ferrite Bead, 1000ohm	L3	0805	Ferrite_Bead	1
BLM18SG121TN1D	3A Ferrite Bead, 120 ohm @	L4	0603	BLM18SG121TN1D	1
LQM2HPN3R3MG0L	Inductor, Shielded 3.3uH, 1	L5	IND_1008	Inductor	1
BK1608HW601-T	300mA Ferrite Bead, 600 oh	L7	0603	Ferrite_Bead	1
BK1608HW601-T	300mA Ferrite Bead, 600 oh	L8	0603L	Ferrite_Bead	1
RC0603FR-071KL	RES, 1.00k ohm, 1%, 0.1W	R2, R3	0603	RC0603FR-071KL	2
CRCW040210K0FKED	RES, 10.0k ohm, 1%, 0.063	R5, R8, R11, R13, R14	0402L	CRCW040210K0FKED	5
CRCW040252K3FKED	RES, 52.3k ohm, 1%, 0.063	R6	0402	CRCW040252K3FKED	1
CRCW040233R0JNED	RES, 33 ohm, 5%, 0.063W	R9	0402L	CRCW040233R0JNED	1
CRCW040249R9FKED	RES, 49.9 ohm, 1%, 0.063W	R10	0402L	CRCW040249R9FKED	1
CRCW04020000Z0ED	RES, 0 ohm, 5%, 0.063W, 0	R12, R17	0402L	CRCW04020000Z0ED	2
CRCW0402100KFKED	RES, 100k ohm, 1%, 0.063	R15	0402L	CRCW0402100KFKED	1
CRCW04024K75FKED	RES, 4.75k ohm, 1%, 0.063	R16	0402L	CRCW04024K75FKED	1
CRCW04022K20JNED	RES, 2.2k ohm, 5%, 0.063W	R18, R19, R20, R21	0402L	CRCW04022K20JNED	4
CRCW08050000Z0EA	RES, 0 ohm, 5%, 0.125W, 0	R22	0805	CRCW08050000Z0EA	1
219-2LPST	Switch, Slide, SPST 2 poles	SW1	SW_219-2LPST	219-2LPST	1
LM2734ZMK/NOPB	1A Load Step-Down DC-DC	U2	MK06A_N	LM2734ZMK/NOPB	1
LP3996SD-1833/NOPB	Dual Linear Regulator with	U3	SDA10A	LP3996SD-1833/NOPB	1
DS90UB913ATRTVTQ1	DS90UB913A-Q1/DS90UB9	U4	RTV0032A	DS90UB913ATRTVTQ1	1
ASE-48.000MHZ-LC-T	OSC XO 48.00MHZ CMOS	X1	ASE-48.000MHZ-LC-T	ASE-48.000MHZ-LC-T	1

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.