



TIDA-00286 REV E1 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	C1	1	680pF	GRM155R71H681KA01D	MuRata	CAP, CERM, 680pF, 50V, +/-10%, X7R, 0402	0402
2	C2	1	0.022uF	GRM155R71C223KA01D	MuRata	CAP, CERM, 0.022uF, 16V, +/-10%, X7R, 0402	0402
3	C3, C12	2	4.7uF	C1005X5R0J475M050BC	TDK	CAP, CERM, 4.7uF, 6.3V, +/-20%, X5R, 0402	0402
4	C4	1	2.2uF	GRM32ER72A225KA35L	MuRata	CAP, CERM, 2.2uF, 100V, +/-10%, X7R, 1210	1210
5	C6	1	0.1uF	12061C104JAT2A	AVX	CAP, CERM, 0.1uF, 100V, +/-5%, X7R, 1206	1206
6	C7	1	330pF	GRM155R72A331KA01D	MuRata	CAP, CERM, 330pF, 100V, +/-10%, X7R, 0402	0402
7	C9	1	0.47uF	GRM155R60J474KE19D	MuRata	CAP, CERM, 0.47uF, 6.3V, +/-10%, X5R, 0402	0402
8	C10, C11	2	0.1uF	C1005X5R0J104K	TDK	CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402	0402
9	D1	1	Yellow	LY L29K-J1K2-26-Z	OSRAM	LED, Yellow, SMD	LED, 1.3x0.65x0.8mm
10	D2	1	200V	RF071M2S	Rohm	Diode, Ultrafast, 200V, 1A, SOD-123	SOD-123
11	D3	1	Green	LG L29K-G2J1-24-Z	OSRAM	LED, Green, SMD	1.7x0.65x0.8mm
12	D4, D5, D6	3	30V	SMAJ30CA	Bourns	Diode, TVS, Bi, 30V, 400W, SMA	SMA
13	J1	1		09 0431 212 04	Binder-Connector	M12 Socket, 4Pos, TH	M12 Conn D12x14.3
14	J2	1		850-10-004-40-001000	Mill-Max	Header, 4x1, 50mil, R/A, SMT	Header, 50mil, R/A, SMT
15	R5, R6	2	820	CRCW0402820RJNED	Vishay-Dale	RES, 820 ohm, 5%, 0.063W, 0402	0402
16	R7	1	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47k ohm, 5%, 0.063W, 0402	0402
17	R8	1	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7k ohm, 5%, 0.063W, 0402	0402
18	S1	1		SKRKAEE010	Alps	Switch, Push Button, SMD	2.9x2x3.9mm SMD
19	U1	1		DRV5053RAQDBZ	Texas Instruments	Analog-Bipolar Hall Effect Sensor, -40 mV/mt-40 - 125°C, DBZ0003A	DBZ0003A
20	U2	1		SN65HVD101RGB	Texas Instruments	IO-LINK PHY for Device Nodes, RGB0020A	RGB0020A
21	U3	1		MSP430FR5738IRGE	Texas Instruments	24 MHz Mixed Signal Microcontroller, 1024 B SRAM and 17 GPIOs, -40 to 85 degC, RGE0024G	RGE0024G
22	C5	0	330pF	GRM155R72A331KA01D	MuRata	CAP, CERM, 330pF, 100V, +/-10%, X7R, 0402	0402
23	C8	0	2200pF	GRM155R70J222KA01D	MuRata	CAP, CERM, 2200pF, 6.3V, +/-10%, X7R, 0402	0402
24	R1	0	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0k ohm, 1%, 0.063W, 0402	0402
25	R2, R3, R4	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0 ohm, 5%, 0.063W, 0402	0402

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.