Bill of Materials

Table Bill of Materials

Designator	Quantity	Value	Description	Package Reference	Part Number	Manufacturer
!PCB1	1		Printed Circuit Board		HVL084	Any
C1	1	10uF	CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805	0805	GRM21BR61C106KE15L	MuRata
C2, C6, C12, C17, C19, C21, C24, C27	8	0.1uF	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603	C0603C104J3RAC	Kemet
C3	1	0.1uF	CAP, CERM, 0.1uF, 50V, +/-10%, C0G/NP0, 0402	0402	C1005X7R1H104K	TDK
C4	1	0.01uF	CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402	0402	C1005X7R1E103K	TDK
C5, C10, C10Gp, C14	4	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0402	0402	GRM155R71C104KA88D	MuRata
C9, C11Gp, C13, C20	4	0.01uF	CAP, CERM, 0.01uF, 10V, +/-10%, X7R, 0201	0201	GRM033R71A103KA01D	MuRata
C9Gp, C11, C15	3	10uF	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805	GRM21BR71A106KE51L	MuRata
CLDO	1	1uF	CAP, CERM, 1uF, 6.3V, +/-20%, X5R, 0402	0402	C1005X5R0J105M	TDK
D1	1	30V	Diode, Schottky, 30V, 1.5A, DO-220AA	DO-220AA	SS1P3L-M3/84A	Vishay-Semiconductor
H1, H2, H5, H6	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone
H3, H4, H7, H8	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply
J1, J2, J3, J4	4		Receptacle 100mil 10x1, Tin, TH	Receptacle, 10x1, 100mil, Tin	PPTC101LFBN-RC	Sullins Connector Solutions
JCLK_S1, JCLK_S2, JCLK_S3, JCLK_UC, JIO_S1, JIO_S2, JIO_S3, JIO_UC, JRST_S1, JRST_S2, JRST_S3, JRST_UC	12		Header, TH, 100mil, 1pos, Gold plated, 230 mil above insulator	Testpoint	TSW-101-07-G-S	Samtec, Inc.
JT1, JT2, JT3, JT4, JU_IOUCA, JU_IOUCB	6		Header, 100mil, 2x1, Tin plated, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions

Copyright © 2011, Texas Instruments Incorporated.

JU_A0, JU_PRES_NC, JU_PRES_NO, JU_SHDN	4	1x3	Header, TH, 100mil, 1x3, Gold plated, 230 mil above insulator	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions
JU_CLKIN1, JU_CLKIN2, JU_VDD, JU_VDDI	4		Header, TH, 100mil, 3x1, Gold plated, 230 mil above insulator	TSW-103-07-G-S	TSW-103-07-G-S	Samtec, Inc.
JVDD, JVDDI	2	2x1	Conn Term Block, 2POS, 3.81mm, TH	PhoenixConact_1727010	1727010	Phoenix Contact
J_S1, J_S2, J_S3	3		Connector, 6-Pos SIMLOCK,2.54mm, SMD	30.0x17.3x2.5 mm	C707 10M006 0492	Amphenol-Tuchel Electronics
J_UC	1		CONN SMARTCARD 8POS OUTDOOR PCB	62x6.5x40mm	52400-25ALF	FCI
L1	1	10uH	Inductor, Shielded Drum Core, Ferrite, 10uH, 1.4A, 0.05 ohm, SMD	WE-TPC-LH	744053100	Wurth Elektronik eiSos
R1, R2, R3, R4, R10, R12, R14, R15, R_A0, R_CLK_MSPG, R_I2C_SCL, R_I2C_SDA, R_SHDN	13	0	RES, 0 ohm, 5%, 0.05W, 0201	0201	ERJ-1GE0R00C	Panasonic
R5, R6, R8, RG1, RG2, RG3, RG4, RPRES	8	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale
R7, R9, R11, R13	4	5.1k	RES, 5.1k ohm, 5%, 0.063W, 0402	0402	CRCW04025K10JNED	Vishay-Dale
RT1, RT2	2	49.9	RES, 49.9 ohm, 1%, 0.063W, 0402	0402	CRCW040249R9FKED	Vishay-Dale
R_GND	1	0.003	RES, 0.003 ohm, 1%, 1W, 2512	2512	73M1R003F	CTS Resistor
S1, S2	2		Connector, SMB,Vertical RCP 0-4GHz, 50 ohm, TH	236x293x236 mil	131-3701-261	Emerson Network Power

Copyright © 2011, Texas Instruments Incorporated.

SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9, SH-J10, SH-J11, SH-J12, SH-J13, SH-J14, SH-J15	15	1x2	Shunt, 100mil, Gold plated, Black	Shunt	969102-0000-DA	3M
TP1VDD, TP1VDDI, TP2VDD, TP2VDDI, TP3VDDI, TP(Vdd_MSP), TPC4, TPC8, TPCLKIN1, TPCLKIN2, TPG1, TPG2, TPG3, TPG4, TPLX, TPPRES, TPRST, TPSCL, TPSDA, TPVCC(S1), TPVCC(S2), TPVCC(S3), TPVCC_UC, TPVUP	24	Green	Test Point, Multipurpose, Green, TH	Green Multipurpose Testpoint	5126	Keystone
TPGND1, TPGND2, TPGND3, TPGND4, TPGND5, TPGNDP1	6	Black	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint	5011	Keystone
U1	1		Smart Card Interface IC for 1 User Card + 3 SAMs, ZAH0048A	ZAH0048A	TCA5013ZAH	Texas Instruments

Copyright © 2011, Texas Instruments Incorporated.

C7, C8, C16, C18, C22, C23, C25, C26	0	1000pF	CAP, CERM, 1000pF, 50V, +/-20%, X7R, 0402	0402	C1005X7R1H102M	TDK
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A
R_CLK_MSPF	0	0	RES, 0 ohm, 5%, 0.05W, 0201	0201	ERJ-1GE0R00C	Panasonic

Copyright © 2011, Texas Instruments Incorporated.

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.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2014, Texas Instruments Incorporated