

Filename: Automotive_Dome_Light_E1.1_BOM (2).xls
 Variant: SAT0069_TIDA-00156
 Generated: 3/11/2014 12:08:59 PM
 SVN path: \$URL:
 SVN rev: \$Rev: \$

\$

Automotive Dome Light - LED Board

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPCB	1		Printed Circuit Board		SAT0069	Any		
C1	1	4.7uF	CAP CER 4.7UF 50V 10% X7R 1206	1206 (3216 Metric)	UMK316AB7475KL-T	Taiyo Yuden	-	-
C2, C15	2	0.1uF	CAP CER 0.1UF 50V 10% X7R 0402	0402 (1005 Metric)	C1005X7R1H104K050BB	TDK Corporation	-	-
C3, C5, C9, C10, C17, C20, C21	7	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0402	0402	GRM155R71C104KA88D	MuRata		
C4	1	47uF	CAP CER 47UF 10V 20% X7R 1210	1210 (3225 Metric)	LMK325B7476MM-TR	Taiyo Yuden	-	-
C6	1	12pF	CAP_CERM, 12pF, 25V, +/-5%, COG/NP0, 0402	0402	GRM1555C1E120JA01D	MuRata		
C7, C8	2	0.015uF	CAP_CERM, 0.015uF, 16V, +/-10%, X7R, 0402	0402	GRM155R71C153KA01D	MuRata		
C11	1	1.0uF	CAP CER 1UF 50V 10% X7R 0805	0805 (2012 Metric)	CL21B105KFNNNC	Samsung Electro-Mechanics A	-	-
C12	1	4.7uF	CAP CER 4.7UF 6.3V 10% X7R 0603	0603 (1608 Metric)	CL10B475KQ8NQNC	Samsung Electro-Mechanics A	-	-
C13	1	1uF	CAP_CERM, 1uF, 16V, +/-10%, X7R, 0603	0603	C1608X7R1C105K	TDK		
C14, C18	2	1000pF	CAP_CERM, 1000pF, 50V, +/-10%, X7R, 0402	0402	GRM155R71H102KA01D	MuRata		
C16	1	220pF	CAP_CERM, 220pF, 50V, +/-10%, X7R, 0402	0402	C1005X7R1H221K	TDK		
C19	1	10uF	CAP CER 10UF 6.3V 10% X7R 0805	0805 (2012 Metric)	JMK212B7106KG-T	Taiyo Yuden	-	-
D1, D2	2	60V	Diode, Schottky, 60V, 3A, SMA	SMA	B360A-13-F	Diodes Inc.		
D3	1	White	LED, White, SMD	3 x 1.7 x 3mm WHITE LED	LUW CVBP.CE	OSRAM		
D4	1	24V	Diode, TVS, Bi, 24V, 160W, SOD-323	SOD-323	PESD1LIN.115	NXP Semiconductor		
FID1, FID2, FID3, FID4, FID5, FID6	6		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
J1	1		Power Jack, mini, 2.5mm OD, R/A, TH	Jack, 14.5x11x9mm	RAPC712X	Switchcraft		
J2, J4	2		Receptacle, 100mil, 2x1, SMT	2x1 Receptacle	SSM-102-L-SV	Samtec		
J3	1		Header, 100mil, 2x1, Gold Post 230mil above insulator, SMT	2x1 Header	TSM-102-01-L-SV	Samtec		
J6	1		Receptacle, 50mil, 6x1, R/A, TH	Receptacle, 6x1, 50mil pitch, R/A	851-43-006-20-001000	Mill-Max		
L1	1	180uH	Inductor, Shielded Drum Core, Ferrite, 180uH, 0.98A, 0.58 ohm, SMD	MSS1038	MSS1038-184KLB	Coilcraft		
R1	1	49.9	RES, 49.9 ohm, 1%, 0.063W, 0402	0402	CRCW040249R9FKED	Vishay-Dale		
R2	1	69.8k	RES, 69.8k ohm, 1%, 0.063W, 0402	0402	CRCW040269K8FKED	Vishay-Dale		
R3, R4, R6, R12, R13, R14, R15, R17	8	10k	RES, 10k ohm, 5%, 0.063W, 0402	0402	CRCW040210K0JNED	Vishay-Dale		
R5	1	33.2k	RES, 33.2k ohm, 1%, 0.063W, 0402	0402	CRCW040233K2FKED	Vishay-Dale		
R7	1	301k	RES, 301k ohm, 1%, 0.063W, 0402	0402	CRCW0402301KFKED	Vishay-Dale		
R8	1	0.91	RES, 0.91 ohm, 1%, 0.25W, 0805	0805	CRM0805-FX-R910ELF	Bourns		
R9	1	6.34k	RES, 6.34k ohm, 1%, 0.063W, 0402	0402	CRCW04026K34FKED	Vishay-Dale		
R10	1	100k	RES, 100k ohm, 5%, 0.063W, 0402	0402	CRCW0402100KJNED	Vishay-Dale		
R11	1	47k	RES, 47k ohm, 5%, 0.063W, 0402	0402	CRCW040247K0JNED	Vishay-Dale		
R16, R18	2	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	RC0402JR-070RL	Yanaco America		
S1	1		Switch, Push Button, SMD	2.9x2x3.9mm SMD	SKRKAEE010	Alps		
TP1, TP2, TP3	3	Red	Test Point, Miniature, Red, TH	Red Miniature Testpoint	5000	Keystone		
TP4, TP5, TP6	3	Black	Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone		
TP7, TP8, TP9, TP10, TP11, TP12	6	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
U1	1		0.5-A 42-V STEP-DOWN SWIFT DC/DC CONVERTER WITH Eco-mode, DRC0010J	DRC0010J	TPS57040QDRCRQ1	Texas Instruments		None
U2	1		ADJUSTABLE LED DRIVER, DRJ0008A	DRJ0008A	TL4242TDRJRQ1	Texas Instruments		None
U3	1		Haptic Driver for ERM and LRA with Built-In Library and Smart Loop Architecture, YZF0009ADAD	YZF0009ADAD	DRV2605YZF	Texas Instruments		None
U4	1		High-Voltage Ultralow-Iq Low-Dropout Regulator, DGN0008D	DGN0008D	TPS7A6633QDGNRQ1	Texas Instruments		None
U5	1		LIN PHYSICAL INTERFACE, D0008A	D0008A	SN65HVD4100QDRQ1	Texas Instruments		None
U6	1		Mixed Signal Microcontroller, PW0020A	PW0020A	MSP430G2553IPW20	Texas Instruments		None
U7	1		Low Power Digital Temperature Sensor With SMBus/Two-Wire Serial Interface in SOT563, DRL0006A	DRL0006A	TMP102AIDRL	Texas Instruments		None
U8	1		Ambient Light Sensor, DNP0006A	DNP0006A	OPT3001DNP	Texas Instruments		None
Y1	1		Crystal, 32.768kHz, 12.5pF, SMD	2-SMD	NX3215SA-32.768K-STD-MUS-2	NDK		
J5	0		CustomMate for HW-02-11-L-S-400-SM		CustomMate_HW-02-11-L-S-400-SM			

Notes:
 Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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.