

TIDA-00296 BCM Driver Reference Design BOM

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
C1, C32	2	10uF	Printed Circuit Board CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805	SAT0103 GRM21BR71A106KE51L	MuRata		
C2, C10	2	0.1uF	CAP, CERM, 0.1uF, 6.3V, +/-10%, X7R, 0402	0402	GRM155R70J104KA01D	MuRata		
C3	1	0.1uF	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0402	0402	GRM155R71A104KA01D	MuRata		
C4	1	2200pF	CAP, CERM, 2200pF, 6.3V, +/-10%, X7R, 0402	0402	GRM155R70J222KA01D	MuRata		
C5, C6, C8, C9, C12, C14, C18	7	0.1uF	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603	06035C104KAT2A	AVX		
C7	1	0.01uF	CAP, CERM, 0.01uF, 100V, +/-5%, X7R, 0603	0603	06031C103JAT2A	AVX		
C11	1	10uF	CAP, AL, 10uF, 50V, +/-20%, 1.52 ohm, SMD	SMT Radial C	EEE-FK1H100UR	Panasonic		
C13	1	0.1uF	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	0603	0603YC104JAT2A	AVX		
C15	1	1uF	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0603	0603	UMK107AB7105KA-T	Taiyo Yuden		
C16, C29	2	0.1uF	CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402	0402	C1005X5R0J104K	TDK		
C17	1	100uF	CAP, AL, 100uF, 50V, +/-20%, 0.23 ohm, SMD	KE0	EMVH500ARA101MK60S	Nippon Chemi-Con		
C19, C20, C25, C26, C27	5	0.01uF	CAP, CERM, 0.01uF, 50V, +/-5%, X7R, 0805	0805	08055C103JAT2A	AVX		
C21, C22, C23, C24	4	100pF	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	06033C101KAT2A	AVX		
C28	1	2.2uF	CAP, CERM, 2.2uF, 50V, +/-10%, X7R, 1206	1206	GRM31CR71H225KA88L	MuRata		
C30	1	1uF	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	0805	08055C105KAT2A	AVX		
C31	1	1uF	CAP, CERM, 1uF, 6.3V, +/-10%, X7R, 0603	0603	GRM188R70J105KA01D	MuRata		
C33	1	1uF	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0603	0603	GRM188R71A105KA61D	MuRata		
C34	1	1000pF	CAP, CERM, 1000pF, 50V, +/-5%, X7R, 0805	0805	C0805C102J5RACTU	Kemet		
C35	1	0.1uF	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	0603	C0603C104K8RACTU	Kemet		
D1, D2, D3	3	White	LED, White, SMD	Power TOPLED	LW-E6SG	OSRAM		
D4	1	45V	Diode, Schottky, 45V, 30A, DPAK	DPAK	MBRB2545SCTT4G	ON Semiconductor		
D5	1	Green	LED, Green, SMD	LED, 1x 2x 6mm	SML-P12PTT86	Rohm		
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips head	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H5, H6, H7, H8	4		Standoff, Hex, 0.5" #4-40 Nylon	Standoff	1902C	Keystone		
J1, J12, J17	3		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions		
J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J13, J14, J15, J16, J18, J19, J20, J21, J22	19		Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology		
J23	1		TERMINAL BLOCK 5.08MM VERT 2POS, TH	TERM_BLK, 2pos, 5.08mm	ED120/2DS	On-Shore Technology		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H x 10,000 per roll	PCB Label 0.650"H x 0.200"W	THT-14-423-10	Brady		
Q1, Q2, Q3, Q4, Q5	5	60V	MOSFET, N-CH, 60V, 16A, SO-8	SO-8	SO4470EY-T1-GE3	Vishay-Siliconix		None
R1, R5	2	47k	RES, 47k ohm, 5%, 0.063W, 0402	0402	CRCW040247K0JNED	Vishay-Dale		
R2, R3, R4, R7, R8, R9, R17, R18, R24, R45, R46, R47, R48, R51, R52, R53	16	10k	RES, 10k ohm, 5%, 0.063W, 0402	0402	CRCW040210K0JNED	Vishay-Dale		
R6, R10	2	4.7k	RES, 4.7k ohm, 5%, 0.063W, 0402	0402	CRCW040247K0JNED	Vishay-Dale		
R11, R54, R55, R56	4	10k	RES, 10k ohm, 5%, 0.25W, 1206	1206	CRCW120610K0JNEA	Vishay-Dale		
R12	1	4.99k	RES, 4.99k ohm, 1%, 0.1W, 0603	0603	CRCW06034K99FKEA	Vishay-Dale		
R13, R28, R29, R30, R31, R32, R33, R35, R36, R37, R38, R39, R40	13	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R14	1	5.76k	RES, 5.76k ohm, 1%, 0.125W, 0805	0805	CRCW08055K76FKEA	Vishay-Dale		
R15	1	8.25k	RES, 8.25k ohm, 1%, 0.125W, 0805	0805	CRCW08058K25FKEA	Vishay-Dale		
R16, R20	2	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R19	1	0.75	RES, 0.75 ohm, 1%, 0.5W, 1206	1206	CSR1206FKR750	Stackpole Electronics Inc		
R21	1	1.00k	RES, 1.00k ohm, 1%, 0.125W, 0805	0805	CRCW08051K00FKEA	Vishay-Dale		
R22	1	1.13k	RES, 1.13k ohm, 1%, 0.1W, 0603	0603	CRCW06031K13FKEA	Vishay-Dale		
R23	1	15.4k	RES, 15.4k ohm, 1%, 0.1W, 0603	0603	CRCW060315K4FKEA	Vishay-Dale		
R25, R26, R27, R34, R41, R42, R43, R44	8	100	RES, 100 ohm, 1%, 0.063W, 0402	0402	CRCW0402100RFKED	Vishay-Dale		
R49	1	100k	RES, 100k ohm, 1%, 0.125W, 0805	0805	CRCW0805100KFKEA	Vishay-Dale		
R50	1	2.05k	RES, 2.05k ohm, 1%, 0.125W, 0805	0805	CRCW08052K05FKEA	Vishay-Dale		
R57	1	685	RES, 685 ohm, 1%, 0.063W, 0402	0402	CRCW0402685RFKED	Vishay-Dale		
S1	1		SWITCH TACTILE SPST-NO 0.05A 12V	3x1.6x2.5mm	B3U-1000P	Omron Electronic Components		
TP1, TP2, TP7, TP9, TP10, TP11, TP12	7	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
TP3, TP4, TP5, TP6	4	White	Test Point, Compact, White, TH	White Compact Testpoint	5007	Keystone		
U1	1		MSP-EXP430F5529 LaunchPad		MSP-EXP430F5529 LaunchPad	TI		
U2	1		40V 7-Channel Low Side Driver, PW0016A	PW0016A	TPL7407LPW	Texas Instruments		None
U3	1		Quad High Side Driver, DW0020A	DW0020A	PLMD1840DW	Texas Instruments		None
U4, U10, U11	3		4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR WITH AUTOMATIC DIRECTION SENSING AND +/-15-kV ESD PROTECTION, PW0014A	PW0014A	TXB0104QPWRQ1	Texas Instruments		None
U5	1		RAIL-TO-RAIL OUTPUT CMOS OPERATIONAL AMPLIFIERS, DCK0006A	DCK0006A	LMV341QDCKRQ1	Texas Instruments		None
U6	1		TPS1H100-Q1 Single Channel Smart High Side Driver, PWP0014C	PWP0014C	TPS1H100BQPWPRQ1	Texas Instruments		None
U8	1		Power MOSFET Driver with Lossless Protection, 8-pin Narrow SOIC	MO8A	LM9061M	National Semiconductor		
U9	1		4-CHANNEL SERIAL AND PARALLEL HIGH-SIDE PRE-FET DRIVER, DA0032A	DA0032A	TPIC44H01DA	Texas Instruments		None
U12	1		Three-Channel Linear LED Driver with Analog and PWM Dimming, PWP0016F	PWP0016F	TPS92630QPWPRQ1	Texas Instruments		None
U13	1		Low Voltage 16-Bit I2C and SMBus Low-Power I/O Expander with Interrupt Output, RESET, and Configuration Registers, PW0024A	PW0024A	TC9A53QPWRQ1	Texas Instruments		None
U14	1		High-Voltage Ultralow-Iq Low-Dropout Regulator, DGN0008D	DGN0008D	TPS7A6650QDGNRQ1	Texas Instruments		None
U15	1		Single Output Automotive LDO, 200 mA, Fixed 3.3 V Output, 2 to 5.5 V Input, with Low IQ, 5-pin SOT (DDC), -40 to 125 degC, Green (RoHS & no Sb/Br)	DCC0005A	TLV70033QDDCRQ1	Texas Instruments	Equivalent	None
U16	1		IC BUFF/DVR SGL 5V OD SOT23-5	SC-74A, SOT-753	SN74LVC1G07QDBVRO1	Texas Instruments		
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		

Notes:

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