Texas Instruments

Bill of Materials

TI DESIGNS

TIPD201: Isolated Current Shunt and Voltage Measurement for Automotive Battery Pack Monitoring

ITEM	Quantity	Manufacturer	PartNumber	Designator	Description	Value
1	8	Taiyo Yuden	UMK107AB7105KA-T	C1, C2, C3, C24, C28, C33, C39, C40	CAP, CERM, 1 uF, 50 V, +/-10%, X7R, 0603	1uF
2	11	Kemet	C0603C104K5RACTU	C4, C7, C9, C18, C21, C26, C30, C31, C37, C38, C42	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0.1uF
3	7	Samsung	CL21A106KAFN3NE	C5, C10, C11, C12, C13, C22, C27	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	10uF
4	1	MuRata	GRM2165C2A201JA01D	C6	CAP, CERM, 200 pF, 100 V, +/-5%, C0G/NP0, 0805	200pF
5	1	TDK	NI	C8	Not Installed	
6	4	AVX	06035A4R7CAT2A	C14, C15, C45, C46	CAP, CERM, 4.7 pF, 50 V, +/-5%, C0G/NP0, 0603	4.7pF
7	1	AVX	NI	C16	Not Installed	
8	2	TDK	C1005X7R1H104K	C17, C20	CAP, CERM, 0.1uF, 50V, +/-10%, C0G/NP0, 0402	0.1uF,NI
9	4	TDK	C1608X5R1E106M080AC	C19, C25, C29, C43	CAP, CERM, 10uF, 25 V, +/-20%, X5R, 0603	10uF
10	2	TDK	C2012X5R1V226M125AC	C23, C35	CAP, CERM, 22 uF, 35 V, +/-20%, X5R, 0805	22uF
11	1	TDK	C1608X7R1H103K	C32	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0.01uF
12	2	TDK	C2012X5R1H225K125AB	C34, C36	CAP, CERM, 2.2uF, 50V, +/-10%, X5R, 0805	2.2uF
13	2	AVX	08051A331JAT2A	C41, C44	CAP, CERM, 330 pF, 100 V, +/-5%, C0G/NP0, 0805	330pF
14	1	Susumu Co Ltd	RG2012P-1023-B-T5	R1	RES, 102k ohm, 0.1%, 0.125W, 0805	102k
15	1	Susumu Co Ltd	RG2012P-512-B-T5	R2	RES, 5.10k ohm, 0.1%, 0.125W, 0805	5.10k
16	1	Susumu Co Ltd	RG2012P-101-B-T5	R3	RES, 100 ohm, 0.1%, 0.125W, 0805	100
17	6	Vishay-Dale	CRCW060333R0FKEA	R4, R5, R6, R8, R35, R36	RES, 33.0 ohm, 1%, 0.1W, 0603	33

18	7	Vishay-Dale	CRCW040210K0FKED	R7, R9, R10, R11, R12, R13, R14	RES, 10.0k ohm, 1%, 0.063W, 0402	10.0k
19	14	Vishay-Dale	CRCW040249R9FKED	R15, R29, R30, R32, R38, R39, R40, R41, R42, R43, R45, R47, R48, R49	RES, 49.9 ohm, 1%, 0.063W, 0402	49.9
20	3	Vishay-Dale	CRCW12061M00FKEA	R16, R20, R24	RES, 1.00Meg ohm, 1%, 0.25W, 1206	1.00M
21	1	Panasonic	ERJ-6RQFR47V	R17	RES, 0.47 ohm, 1%, 0.125W, 0805	0.47
22	2	Yageo America	RT0603BRD071KL	R18, R52	RES, 1.00 k, 0.1%, 0.1 W, 0603	1.00k
23	1	Vishay-Dale	NI	R19	Not Installed	
24	1	Vishay-Dale	CRCW0402220KJNED	R21	RES, 220k ohm, 5%, 0.063W, 0402	220k
25	1	Ohmite	LVK20R020DER	R22	RES, 0.02 ohm, 0.5%, 0.75W, 2010	0.02
26	1	Vishay-Dale	CRCW120610K0FKEA	R23	RES, 10.0k ohm, 1%, 0.25W, 1206	10.0k
27	4	Vishay-Dale	CRCW06030000Z0EA	R25, R27, R31, R46	RES, 0, 5%, 0.1 W, 0603	0
28	1	Vishay-Dale	CRCW0402100KFKED	R26	RES, 100k ohm, 1%, 0.063W, 0402	100k
29	1	Panasonic	ERJ-6RSJR10V	R28	RES, 0.1 ohm, 5%, 0.125W, 0805	0.1
30	3	Yageo America	RC0402JR-070RL	R33, R37, R51	RES, 0 ohm, 5%, 0.063W, 0402	0, 0, 0, 0, 0
31	2	Yageo America	NI	R34, R53	Not Installed	
32	1	Susumu Co Ltd	RG1608P-433-B-T5	R44	RES, 43.0 k, 0.1%, 0.1 W, 0603	43.0k
33	1	Susumu Co Ltd	RG1608P-2151-B-T5	R50	RES, 2.15 k, 0.1%, 0.1 W, 0603	2.15k
34	1	Vishay-Dale	CRCW04020000Z0ED	R54	RES, 0, 5%, 0.063 W, 0402	0
35	2	ON Semiconductor	NI	D1, D2	Not Installed	
36	1	OSRAM	LG M67K-G1J2-24-Z	D3	LED, Green, SMD	Green
37	1	ON Semiconductor	MMSZ4686T1G	D4	Diode, Zener, 3.9V, 500mW, SOD-123	3.9V
38	1	ON Semiconductor	MMSZ4702T1G	D5	Diode, Zener, 15V, 500 mW, SOD-123	15V
39	1	ON Semiconductor	MMSZ4690T1G	D6	Diode, Zener, 5.6V, 500mW, SOD-123	5.6V
40	1	ON Semiconductor	BC847CLT1G	Q1	Transistor, NPN, 45V, 0.1A, SOT-23	0.7V

41	1	Samtec	QTH-030-01-F-D-A	J1	Connector, 60-pin Header, .5mm pitch	QTH-030-01-F-D-A
42	1	MuRata	LQH3NPN150NG0	L1	Inductor, Wirewound, Ferrite, 15 uH, 0.37A, 0.91 ohm, SMD	15 uH
43	1	On-Shore Technology	ED555/2DS	J2	Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	
44	1	CUI Inc.	PJ-102A	J3	Connector, DC Jack 2.1X5.5 mm, TH	
45	1	Molex	502570-0893	J4	SD Memory Card Connector	
46	17	Keystone	5000	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP12, TP14, TP18, TP19, TP20, TP21, TP22, TP23	Test Point, Miniature, Red, TH	Red
47	6	Keystone	5002	TP10, TP11, TP13, TP15, TP16, TP17	Test Point, Miniature, White, TH	White
48	2	Texas Instruments	ISO7240CFQDWRQ1	U1, U10	Automotive Quad, 4/0, 25 Mbps Digital Isolator, 3.3 V/5 V, -40 to +125 degC, 16-pin SOIC	
49	1	Texas Instruments	ADS7950QDBTRQ1	U2	Automotive 12-Bit, 1 MSPS, 4-Channel, Single-Ended, MicroPower, Serial Interface ADC	
50	2	Texas Instruments	OPA2320AQDGKRQ1	U3, U5	Automotive Precision, 20MHz, 0.9pA, Low-Noise, RRIO, CMOS Operational Amplifier	
51	1	Texas Instruments	ISO7242CQDWRQ1	U4	Automotive Quad Channels, 2/2, 25 Mbps Digital Isolator, -40 to +125 degC, 16-pin SOIC	
52	1	Texas Instruments	REF5025AQDRQ1	U6	Automotive Catalog, Low Noise, Very Low Drift, Precision Voltage Reference, -40 to125 degC, 8-pin SOIC	
53	1	Atmel	AT24C32D-XHM-T	U7	Automotive grade I2C Serial EEPROM 32-Kbit (4096 x 8), TSSOP-8	

54	1	Texas Instruments	DCR010505P	U8	Miniature, 1 W Isolated Regulated DC-DC Converter,10-pin DIP	
55	1	Texas Instruments	REG104GA-5	U9	Single Output Fast Transient Response LDO, 1 A, Fixed 5 V Output, 2.1 to 15 V Input, 6-pin SOT-223	

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