

Variant: Smart Fuse with Populated Components
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 TID #: TIDA-020065



TIDA-020065 REV E2 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB1	1		TIDA-020065	Any	Printed Circuit Board	
2	C1, C19	2	1µF	UMK212B7105KGHT	Taiyo Yuden	Multilayer Ceramic Capacitor 1 uF 50V X7R 10% SMD 0805 Automotive T/R	0805
3	C2	1	47uF	EEE-FK1J470P	Panasonic	CAP, AL, 47 uF, 63 V, +/- 20%, 0.65 ohm, AEC-Q200 Grade 2, SMD	SMT Radial F
4	C3	1	22uF	GCM21BD70J226ME36L	MuRata	CAP, CERM, 22 uF, 6.3 V, +/- 20%, X7T, AEC-Q200 Grade 1, 0805	0805
5	C4, C7	2	0.1uF	06035C104K424A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 0, 0603	0603
6	C5, C13	2	0.022uF	CGA4J2C0G1H223J125AA	TDK	CAP, CERM, 0.022 uF, 50 V, +/- 5%, COG/NPO, AEC-Q200 Grade 1, 0805	0805
7	C6, C10, C15, C18	4	0.1uF	06035C104KAZ2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
8	C9	1	0.047uF	CGA3E2X7R1H473K080AA	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
9	C11, C12	2	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0603	0603
10	C14	1	10uF	JMJ212CB7106KGHT	Taiyo Yuden	CAP, CERM, 10 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
11	C16	1	0.47uF	CGA3E3X7R1H474M080AE	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C17	1	0.01uF	C0603C103JGCEAUTO	Kemet	CAP, CERM, 0.01 uF, 25 V, +/- 5%, COG/NPO, AEC-Q200 Grade 1, 0603	0603
13	D1	1	33V	SMBJ33A-13-F	Diodes Inc.	Diode, TVS, Uni, 33 V, 53.3 Vc, SMB	SMB
14	D2	1	16V	SMBJ16A-13-F	Diodes Inc.	Diode, TVS, Uni, 16 V, 26 Vc, SMB	SMB
15	D3	1		PMEG6020ELRX	Nexperia	Diode Schottky 60V 2A Surface Mount CFP3	SOD123W
16	D5, D8	2	Red	HSMC-C191	Avago	LED, Red, SMD	1.6x0.8mm
17	D6, D9	2	Green	LTST-C191KGTK	Lite-On	LED, Green, SMD	LED_0603
18	D7	1	Blue	LTST-C193TBKT-5A	Lite-On	LED, Blue, SMD	1.6x0.8mm
19	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
20	H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
21	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5" L #4-40 Nylon	Standoff
22	J1, J2	2		6.91257E+11	Würth	2 Position Wire to Board Terminal Block Horizontal with Board 0.400" (10.16mm) Through Hole	HDR2
23	J3, J4, J5, J6, J8	5		TSW-103-07-T-S	Samtec	Header, 2.54 mm, 3x1, Tin, TH	Header, 2.54 mm, 3x1, TH
24	J7	1		PBC06SAAN	Sullins Connector Solutions	Header, 2.54mm, 6x1, Gold, TH	Header, 2.54mm, 6x1, TH
25	J9, J10	2		SL 11 112 02G	Fischer Elektronik	Header, 2.54mm, 2x1, Gold, TH	TH, 2-Leads, Body 2.5x5.08mm, Pitch 2.54mm
26	LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
27	Q1, Q2	2		BUK7J1R4-40HX	Nexperia	Trans MOSFET N-CH 40V 190A Automotive 5-Pin(4+Tab) LFPAK T/R	LFPAK56E
28	Q3	1		BUK9Y29-40E, 115	Nexperia	Trans MOSFET N-CH 40V 25A Automotive 5-Pin(4+Tab) LFPAK T/R	LFPAK56
29	R2	1	100	RMCP0603JT100R	Stackpole Electronics Inc	RES, 100, 5%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
30	R3, R5, R6, R17, R18, R19, R20, R21, R22, R23, R25	11	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
31	R4	1	0	ERJ-8GEY0R00V	Panasonic	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
32	R7, R12, R13	3	14.0k	CRCW060314K0FKEA	Vishay-Dale	RES, 14.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
33	R8	1	47.0k	RG1608P-473-B-T5	Susumu Co Ltd	RES, 47.0 k, 0.1%, 0.1 W, 0603	0603
34	R9	1	220	CRCW0603220RJNEA	Vishay-Dale	RES, 220, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
35	R10, R16	2	100k	ERJ-PB3B1003V	Panasonic	Res Thick Film 0603 100K Ohm 0.1% 0.2W(1/5W) ±50ppm/°C Pad SMD Automotive T/R	0603
36	R11	1	0.5	CSR1206FKR500	Stackpole Electronics Inc	RES, 0.5, 1%, 0.5 W, 1206	1206
37	R14	1		WSLF25121L000FEB	Vishay	1 mOhms ±1% 5W Chip Resistor 2512 (6432 Metric) Automotive AEC-Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	2512
38	R15	1	47k	CRCW060347K0JNEA	Vishay-Dale	RES, 47 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
39	R24	1	220	RG1608P-221-B-T5	Susumu Co Ltd	RES, 220, 0.1%, 0.1 W, 0603	0603
40	R26, R28, R29, R30	4	1k	RNCF0603TKW1K00	Stackpole Electronics	1 kOhms ±0.01% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thin Film	0603
41	R27	1	470	CRCW0603470RJNEA	Vishay-Dale	RES, 470, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
42	S1, S2, S3	3		147873-2	TE Connectivity	Switch, SPST, Off-On, 50 mA, 24V, SMD	6x3.5mm
43	TP1, TP2, TP3, TP8	4		5010	Keystone Electronics	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
44	TP4, TP5, TP6, TP7	4		5012	Keystone Electronics	Test Point, Multipurpose, White, TH	White Multipurpose Testpoint
45	TP9, TP10, TP11, TP12, TP16	5		5011	Keystone Electronics	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint
46	U1	1		TPS7B8133QDRVRQ1	Texas Instruments	Automotive 150-mA high-voltage ultra-low-IQ low-dropout (LDO) linear regulator, DRV0006A (WSON-6)	DRV0006A
47	U2	1		LM74704DDF	Texas Instruments	Ideal Diode Controller with FET Good Output, SOT23-8	SOT23-8
48	U3	1		TPS12130QDGXRQ1	Texas Instruments	45-V Low IQ Automotive High Side Switch Controller with Low Power Mode and Adjustable Load Wakeup Trigger	VSSOP19
49	U4	1		TPS22919DCKR	Texas Instruments	5.5-V, 1.5-A, 100-mohm Load Switch with Output Discharge, DCK0006A (SOT-SC70-6)	DCK0006A
50	U5	1		INA296B3IDDF	Texas Instruments	-4-V to 110-V, Bidirectional, 1-MHz, 5-V/µs, Ultra-Precise Current Sense Amplifier	SOT-23-THIN-8
51	U6	1		MSPM0L1306SRHB	Texas Instruments	MSPM0L130x Mixed-Signal Microcontrollers	VQFN32
52	C8	0	0.1uF	06035C104KAZ2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
53	D4	0		SMBJ36CA	Littelfuse	Diode TVS Single Bi-Dir 36V 600W 2-Pin SMB	DO-214AA
54	R1	0	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603

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