

BOM - 3138ALLCEVM-150

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Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPCB	1		Printed Circuit Board		SV601150	Any		
C1, C2, C4, C5, C6, C8, C11, C12, C21, C22, C23, C24, C25, C26, C32, C33, C35, C45, C52, C62	20	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0603	0603	C0603C104K4RACTU	Kemet		
C3, C28, C34, C44, C51	5	2.2uF	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X5R, 0603	0603	GRM188R61C225KE15D	MuRata		
C7, C46	2	1uF	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	0603	C1608X7R1C105K	TDK		
C9, C14, C18, C19, C60, C61	6	0.01uF	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0603	0603	GRM188R71C103KA01D	MuRata		
C13, C15	2	220pF	CAP, CERM, 220pF, 50V, +/-10%, X7R, 0603	0603	C0603C221K5RACTU	Kemet		
C16, C17, C20, C57	4	2200pF	CAP, CERM, 2200pF, 50V, +/-10%, X7R, 0603	0603	C0603C222K5RAC	Kemet		
C27, C29	2	220pF	CAP, CERM, 220 pF, 100 V, +/- 10%, X7R, 0603	0603	0603C221KAT2A	AVX		
C30	1	47uF	CAP, AL, 47uF, 450V, +/-20%, TH	RCAP, 20x25mm	LGU2W470MELY	Nichicon		
C31	1	1.5uF	CAP, Film, 1.5uF, 450V, +/-10%, TH	25.70x8.20x17.20mm	ECQ-E2W155KH	Panasonic		
C36, C37, C38, C40, C41, C42	6	0.015uF	CAP, Film, 0.015uF, 630V, +/-5%, TH	12.5x5.9x8.7mm	ECWF6153JL	Panasonic		
C39	1	2200pF	CAP, Film, 2200pF, 3000V, +/-20%, TH	18x7x12.5mm	B81123C1222M	EPCOS Inc		
C43, C58, C59	3	100pF	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	06033C101KAT2A	AVX		
C47	1	0.1uF	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	0603	0603YC104JAT2A	AVX		
C48	1	4.7uF	CAP, CERM, 4.7uF, 50V, +/-10%, X7R, 1210	1210	GRM32ER71H475KA88L	MuRata		
C50, C53, C54, C55, C68	5	47uF	CAP, CERM, 47uF, 16V, +/-20%, X5R, 1210	1210	GRM32ER61C476ME15L	MuRata		
C63, C64, C65, C66, C67	5	470uF	CAP, AL, 470 uF, 16 V, +/- 20%, 0.009 ohm, TH	THD, 2-Leads, 10 mm Dia, Height 13 mm, Pin Spacing 5 mm	PLF1C471MDO1	Nichicon		
D1, D3, D5	3	Green	LED, Green, SMD	1.6x0.8x0.8mm	LTST-C190GKT	Lite-On		
D2, D9, D10	3	30V	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23	BAT54S-E3-08	Vishay-Semiconductor		
D4, D6	2	Red	LED, Red, SMD	Red LED, 1.6x0.8x0.8mm	LTST-C190CKT	Lite-On		
D7	1	100V	Diode, P-N, 100V, 0.2A, SOT-23	SOT-23	MMBD914	Fairchild Semiconductor		
D8	1	600V	Diode, Ultrafast, 600 V, 3 A, SMC	SMC	MURS360T3G	ON Semiconductor		
H1, H2, H3, H4, H9, H11	6		HEX STANDOFF 6-32 NYLON 1-1/2"	HEX STANDOFF 6-32 NYLON 1-1/2"	4824	Keystone		
H5, H6, H7, H8, H10, H12	6		Standoff, Hex, 0.5"L #6-32 Nylon	6-32 HEX Nylon standoff 0.500 mil	1903C	Keystone		
H13, H20	2		Large thermal pad to substitute for the smaller one in the TO-247 Mounting Kit	Large thermal pad to substitute for the smaller one in the TO-247 Mounting Kit	SP900S-0.009-00-104	Bergquist	-	-
H14, H15, H16, H17	4		TO-220 Mounting Kit	TO-220 Mounting Kit	4880SG	Aavid Thermalloy	-	-
H18, H19	2		TO-247 Mounting Kit	TO-247 Mounting Kit	4880SG	Aavid Thermalloy	-	-
H21	1		3138ACC32EVM-149, EDGE#6588541	Control Card, UCD3138A control card, PCB assembly	3138ACC32EVM-149	Texas Instruments	-	-
H22	1		USB to GPIO adaptor, EDGE#6485487	Used in PnP output and some BOM reports	HPA172	Used in BOM report	-	-
HS1, HS2	2		HEATSINK TO-218/TO-247 W/PINS 2"	12.70x50.80x34.92 mm	513201B02500G	Aavid		
HS3, HS4, HS5, HS6	4		Heat Sink, TO-220	TO-220 Heat Sink	507302B00000G	Aavid		
J1	1		CONN HEADER 3POS .100 VERT TIN	7.62x11.7x5.8 mm	22-27-2031	Molex		
J2, J3	2		Header, 2mm, 20x2, Gold, TH	20x2 Header	87758-4016	Molex		
J4	1		Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin	PEC03SAAN	Sullins Connector Solutions		
J5	1		CONN DB9 FEMALE R/A SOLDER TH	D-SUB 9 PIN	182-009-213R171	NorComp		
J6	1		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions		
J8, J9, J11, J12	4		TERMINAL BLOCK 5.08MM VERT 2POS, TH	TERM, BLK, 2pos, 5.08mm	ED120/2DS	On-Shore Technology		
J10	1		Jumper Wire, 700mil spacing, Violet, pkg of 150, TH	700 mil Jumper Wire	923345-07-C	3M		
J13	1		Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe	131-5031-00	Tektronix		
L1	1		Inductor, TH	2900x2800x3100mm	11698	Payton		
Q1, Q2, Q3, Q5	4	60V	MOSFET, N-CH, 60V, 0.17A, SOT-23	SOT-23	2N7002-7-F	Diodes Inc.		None
Q4	1	0.75V	Transistor, NPN/PNP Pair, 40V, 0.6A, SOT-363	SOT-363	MMDT4413-7-F	Diodes Inc.		
Q6, Q7	2	650V	MOSFET, N-CH, 650V, 20.7A, TO-247	TO-247	SPW20N60CFD	Infineon Technologies		None
Q8, Q9, Q10, Q11	4	60V	MOSFET, N-CH, 60V, 195A, TO-220AB	TO-220AB	IRLB3036PBF	International Rectifier		None
R1	1	1.47k	RES, 1.47k ohm, 1%, 0.125W, 0805	0805	CRCW08051K47FKEA	Vishay-Dale		
R2, R3, R44, R45, R47, R48	6	1.00	RES, 1.00 ohm, 1%, 0.1W, 0603	0603	CRCW06031R00FKEA	Vishay-Dale		
R4, R6, R7, R8	4	301	RES, 301 ohm, 1%, 0.1W, 0603	0603	CRCW0603301RFKEA	Vishay-Dale		
R5, R67	2	10.0	RES, 10.0 ohm, 1%, 0.1W, 0603	0603	CRCW060310R0FKEA	Vishay-Dale		
R9, R37, R42, R68	4	5.11k	RES, 5.11k ohm, 1%, 0.1W, 0603	0603	CRCW06035K11FKEA	Vishay-Dale		
R12, R17, R18, R21, R22, R25, R28, R33, R46, R49	10	1.00k	RES, 1.00k ohm, 1%, 0.1W, 0603	0603	CRCW06031K00FKEA	Vishay-Dale		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
R13, R14, R15	3	549	RES, 549 ohm, 1%, 0.25W, 1206	1206	RC1206FR-07549RL	Yageo America		
R16, R27, R30, R31	4	100	RES, 100 ohm, 1%, 0.1W, 0603	0603	CRCW0603100RFKEA	Vishay-Dale		
R19, R23	2	35.7k	RES, 35.7k ohm, 1%, 0.1W, 0603	0603	CRCW060335K7FKEA	Vishay-Dale		
R20, R24, R26, R34, R38, R43, R58, R62, R64, R66, R69	11	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R29, R32	2	20.0k	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	CRCW060320K0FKEA	Vishay-Dale		
R35	1	2.2	RES, 2.2, 5%, 0.1 W, 0603	0603	CRCW06032R20JNEA	Vishay-Dale		
R36, R41	2	10.0	RES, 10.0 ohm, 1%, 0.125W, 0805	0805	RC0805FR-0710RL	Yageo America		
R39	1	5.1	RES, 5.1, 5%, 0.1 W, 0603	0603	CRCW06035R10JNEA	Vishay-Dale		
R40, R54, R55	3	0.003	RES, 0.003, 1%, 1 W, 1210	1210	PMR25HZPFV3L00	Rohm		
R50, R51	2	124	RES, 124 ohm, 1%, 0.125W, 0805	0805	CRCW0805124RFKEA	Vishay-Dale		
R52, R53	2	20.0	RES, 20.0, 1%, 0.1 W, 0603	0603	CRCW060320R0FKEA	Vishay-Dale		
R56, R63	2	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW0603000Z0EA	Vishay-Dale		
R57, R61	2	1.00k	RES, 1.00k ohm, 1%, 0.125W, 0805	0805	CRCW08051K00FKEA	Vishay-Dale		
R59, R60	2	51	RES, 51, 5%, 0.1 W, 0603	0603	CRCW060351R0JNEA	Vishay-Dale		
R65	1	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R70	1	549	RES, 549 ohm, 1%, 0.1W, 0603	0603	CRCW0603549RFKEA	Vishay-Dale		
S1	1		Switch, Toggle, SPDT 1Pos, TH	7 X 11 X4.5 mm	G12AP	NKK Switches		
SH-J1	1	1x2	Shunt, 100mil, Flash Gold, Black	Closed Top 100mil Shunt	SPC02SYAN	Sullins Connector Solutions		
T1	1		PQ35/35 Transformer, TH	41x39x38mm	11697	Payton		
T2	1	80 mH	Transformer, Current sense, 80 mH, TH	Transformer, 770x780x570 mil		Coilcraft		
TP1, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19	17	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
U1	1		PCBA, UCC28600EVM-400V-12V, EDGE#6543736	2200x335x1200mil	PWR050	Texas Instruments		
U2	1		Single Output LDO, 80 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Low IQ, 8-pin SON (DRB), -40 to 125 degC, Green (RoHS & no Sb/Br)	DRB0008A	TPS715A33DRBR	Texas Instruments	Equivalent	None
U3	1		Precision, Low Noise, Low Iq Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A	OPA376AIDBVR	Texas Instruments	Equivalent	None
U4	1		2.4V, 10µA Temperature Sensor, 5-pin SC-70 Micro SMD, Pb-Free	MAA05A	LM20BIM7/NOPB	Texas Instruments		
U5	1		3-V to 5.5-V Single-Channel RS-232 Compatible Line Driver / Receiver, -40 to 85 degC, 16-Pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0016A	SN65C3221PW	Texas Instruments	Equivalent	None
U6	1		High-Speed, 4A, 600V High-side Low-side Gate Driver Device, D0014A	D0014A	UCC27714D	Texas Instruments		Texas Instruments
U7	1		25 Mbps Automotive Catalog Quad, 4 / 0, Digital Isolator, Selectable Failsafe, 3.3 V / 5 V, -40 to +125 degC, 16-pin SOIC (DW), Green (RoHS & no Sb/Br)	DW0016A	ISO7240CFQDWRQ1	Texas Instruments	Equivalent	None
U8	1		HIGH INPUT VOLTAGE, MICROPOWER SON PACKAGED, 80mA, LDO LINEAR REGULATORS, DRB0008A	DRB0008A	TPS715A33DRB	Texas Instruments		None
U9, U10	2		UCD7138 Low Side Power MOSFET Driver with Body Diode Conduction Sensing	DRS0006A	UCD7138DRS	Texas Instruments		Texas Instruments
C10	0	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0603	0603	C0603C104K4RACTU	Kemet		
C49, C56	0	100pF	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	06033C101KAT2A	AVX		
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
J7	0		Header, 100mil, 3x2, Tin, TH	3x2 Header	PEC03DAAN	Sullins Connector Solutions		
Q12, Q13	0	25V	MOSFET, N-CH, 25V, 100A, SON 5x6mm	SON 5x6mm	CSD16325Q5	Texas Instruments		None
R10, R11	0	1.00k	RES, 1.00k ohm, 1%, 0.1W, 0603	0603	CRCW06031K00FKEA	Vishay-Dale		
TP2, TP3	0	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
U11	0		Full Featured N+1 and ORing Power Rail Controller	PW0014A	TPS2411PWR	Texas Instruments		None

Notes:

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

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