

ChangeMe in variant

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PMP30785	Any		
C1	1	330pF	CAP, CERM, 330 pF, 250 V, +/- 10%, X7R, 0603	0603	GRM188R72E331KW07D	MuRata		
C2	1	0.22uF	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C224KA12D	MuRata		
C3, C11, C15, C19, C24, C26, C30, C31, C46, C61, C66, C83	12	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	0402	GRM155R71H104ME14D	MuRata		
C4, C5, C8	3	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H104KA93D	MuRata		
C6, C7	2	4.7uF	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	1210	GCM32ER71H475KA55L	MuRata		
C9, C39, C45	3	10uF	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, 1210	1210	GRM32ER71H106KA12L	MuRata		
C10, C14	2	820uF	CAP, AL, 820 uF, 25 V, +/- 20%, 0.06 ohm, AEC-Q200 Grade 2, SMD	JA0	EMZR250ADA821MJAG	Chemi-Con		
C12, C13	2	22uF	CAP, CERM, 22 uF, 10 V, +/- 10%, X7R, 1210	1210	GRM32ER71A226ME20L	MuRata		
C16, C38	2	470pF	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H471KA01D	MuRata		
C17	1	22pF	CAP, CERM, 22 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402	GRM1555C1H220FA01D	MuRata		
C18	1	1uF	CAP, CERM, 1 uF, 10 V, +/- 10%, X7R, 0805	0805	GRM21BR71A105KA01L	MuRata		
C20, C21, C27, C62	4	22uF	CAP, CERM, 22 uF, 6.3 V, +/- 20%, X7R, 0805	0805	CL21B226MQQNNNE	Samsung Electro-Mechanics		
C22, C23, C29, C64, C65	5	22uF	CAP, CERM, 22 uF, 10 V, +/- 20%, X7R, 0805	0805	GRM21BZ71A226ME15L	MuRata		
C25, C32, C67	3	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7R1H104K050BB	TDK		
C33, C34, C68	3	10pF	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402	GRM1555C1H100JA01D	MuRata		
C35, C36, C69	3	0.01uF	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C103KA01D	MuRata		
C37	1	22uF	CAP, CERM, 22 uF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206	GCM31CR71A226KE02	MuRata		
C54	1	0.56uF	CAP, CERM, 0.56 uF, 10 V, +/- 10%, X7R, 0603	0603	GRM188R71A564KA61D	MuRata		
C70	1	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X7R, 0805	0805	GRM21BR71E475KA73L	MuRata		
C71, C72, C73, C76, C77	5	10uF	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805	GRM21BZ71E106KE15L	MuRata		
C74	1	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0805	0805	GRM219R71C104KA01D	MuRata		
C75	1	1000pF	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E102KA01D	MuRata		
C78, C79	2	10uF	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805	C2012X7R1A106K125AC	TDK		
C80, C81, C82	3	1uF	CAP, CERM, 1 uF, 10 V, +/- 10%, X7R, 0805	0805	0805ZC105KAT2A	AVX		
D1	1	40V	Diode, Schottky, 40 V, 5 A, AEC-Q101, SOD-128	SOD-128	PMEG4050EP,115	Nexperia		
J1	1		Standard Banana Jack, Insulated, Red	6091	6091	Keystone		
J2, J4, J5, J7, J12, J16, J17, J18	8		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions		
J3	1		Standard Banana Jack, Insulated, Black	6092	6092	Keystone		
J6	1		Header, 100mil, 9x2, Gold, TH	9x2 Header	TSW-109-07-G-D	Samtec		
J8	1		Header, 100mil, 6x1, Tin, TH	TH, 6-Leads, Body 608x100mil, Pitch 100mil	PEC06SAAN	Sullins Connector Solutions		
J14	1		Header, 100mil, 3x1, Gold, TH	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions		
J19	1		Header, 100mil, 4x1, Tin, TH	Header, 4x1, 100mil, TH	PEC04SAAN	Sullins Connector Solutions		
L1	1	1uH	Inductor, Shielded, 1 uH, 3.8 A, 0.035 ohm, AEC-Q200 Grade 1, SMD	1008	DFE252012PD-1R0M	MuRata Toko		
L2	1	1uH	Inductor, Shielded, Ferrite, 1 uH, 3.7 A, 0.019 ohm, AEC-Q200 Grade 0, SMD	5.3x5mm	CLF5030NIT-1R0N-D	TDK		
L3	1	470nH	Inductor, Shielded, Ferrite, 470 nH, 3.7 A, 0.029 ohm, SMD	2.5x1.2x2mm	1239AS-H-R47M=P2	MuRata Toko		
L4	1	1.5uH	Inductor, Shielded, Metal Composite, 1.5 uH, 2.6 A, 0.05 ohm, AEC-Q200 Grade 1, SMD	1008	DFE252012PD-1R5M	MuRata Toko		
L7	1	680nH	Inductor, Shielded, Metal Composite, 680 nH, 3.5 A, 0.03 ohm, AEC-Q200 Grade 1, SMD	1008	DFE252012PD-R68M	MuRata Toko		
R1	1	0	RES, 0, 1%, 0.25 W, 1206	1206	D55342E07B000ATTR	State of the Art		
R2	1	2.00	RES, 2.00, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06032R00FKEA	Vishay-Dale		
R3	1	0	RES, 0, 0%, 0.2 W, AEC-Q200 Grade 0, 0402	0402	CRCW04020000Z0EDHP	Vishay-Dale		
R4	1	49.9	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW0603499FKEA	Vishay-Dale		
R5	1	23.2k	RES, 23.2 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0723K2L	Yageo America		
R6	1	7.68k	RES, 7.68 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06037K68FKEA	Vishay-Dale		
R7	1	10.0k	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R8, R15, R18, R44	4	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	RCG060310K0FKEA	Vishay Draloric		
R9, R10, R40	3	49.9	RES, 49.9, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	TNPW0402499BEEED	Vishay-Dale		
R11	1	7.15k	RES, 7.15 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04027K15FKED	Vishay-Dale		
R12, R16, R42	3	9.09k	RES, 9.09 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04029K09FKED	Vishay-Dale		
R13, R17, R43	3	10.2k	RES, 10.2 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040210K2FKED	Vishay-Dale		
R14	1	20.0k	RES, 20.0 k, 0.1%, 0.063 W, 0402	0402	PCF0402-12-20K0BT1	TT Electronics/IRC		

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R19, R31	2	59.0	RES, 59.0, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805	CRCW080559R0FKEA	Vishay-Dale		
R20, R21, R30, R53, R56, R57, R58, R59, R60, R63, R64	11	0	RES, 0, 0%, 0.25 W, AEC-Q200 Grade 0, 0603	0603	RCS06030000Z0EA	Vishay-Dale		
R22, R24, R26, R27	4	10k	RES, 10 k, 5%, 0.1 W, 0603	0603	RC1608J103CS	Samsung Electro-Mechanics		
R28	1	499	RES, 499, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW0603499RFKEA	Vishay-Dale		
R41	1	15.0k	RES, 15.0 k, .1%, .063 W, AEC-Q200 Grade 0, 0402	0402	ERA-2AEB153X	Panasonic		
R45	1	102k	RES, 102 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW0603102KFKEA	Vishay-Dale		
R49, R50	2	10.1k	RES, 10.1 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0710K1L	Yageo America		
S1, S2	2		Switch, SPDT, On-Off-On, 1 A, 30 VDC, TH	14.1x7.5mm	25139NAH	APEM		
TP1, TP5, TP6, TP12, TP23, TP28, TP29	7		Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone		
TP2, TP7, TP8, TP9, TP10, TP24, TP25, TP27	8		Test Point, Multipurpose, Yellow, TH	Yellow Multipurpose Testpoint	5014	Keystone		
TP3	1		Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone		
TP4, TP26	2		Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint	5011	Keystone		
U1	1		3.5-V to 36-V, 2.5-A Synchronous Step-Down Voltage Regulator with Spread Spectrum, PWP0016K (HTSSOP-16)	PWP0016K	LM63625DQPWPRQ1	Texas Instruments		Texas Instruments
U2, U6	2		5.5-V, 2-A, 54mohm On-Resistance Load Switch, DBV0006A (SOT-6)	DBV0006A	TPS22918QDBVRQ1	Texas Instruments		Texas Instruments
U3	1		40V/200mohm Single Channel Smart High Side Power Switch, DGN0008D (VSSOP-8)	DGN0008D	TPS1H200AQDGNRQ1	Texas Instruments		Texas Instruments
U4	1		Automotive Low Input Voltage, Adjustable-Frequency Step-down Converter, RWY0009A (VQFN-HR-9)	RWY0009A	TPS62813QWRWYRQ1	Texas Instruments		Texas Instruments
U5	1		Automotive Low Input Voltage, Adjustable-Frequency Step-down Converter, RWY0009A (VQFN-HR-9)	RWY0009A	TPS62811QWRWYRQ1	Texas Instruments		Texas Instruments
U12	1		Automotive Low Input Voltage, Adjustable-Frequency Step-down Converter, RWY0009A (VQFN-HR-9)	RWY0009A	TPS62812QWRWYRQ1	Texas Instruments		Texas Instruments
U13	1		Single Output Automotive LDO, 3 A, 2.3 to 3.5 V Input, with DDR Termination, 10-pin SON (DRC), -40 to 125 degC, Green (RoHS & no Sb/Br)	DRC0010A	TPS51200QDRCRQ1	Texas Instruments		
U14	1		Switched Capacitor 5V Boost Converter, DSG0008A (WSO8)	DSG0008A	LM2775QDSGTQ1	Texas Instruments	LM2775QDSGRQ1	Texas Instruments
U15	1		Capacitor-Free, 300-mA, Low-Dropout Regulator for Automotive, DRV0006A (WSO8)	DRV0006A	TLV73312PQDRVRQ1	Texas Instruments		Texas Instruments
C28	0	100uF	CAP, AL, 100 uF, 6.3 V, +/- 20%, 0.7 ohm, SMD	E61	EMZA6R3ADA101ME61G	Chemi-Con		
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		

Notes:

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

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