

Fitted	Description	Designator	PartNumber	Quantity	Manufacturer	PackageReference	Value	Alternate Manuf	Alternate PartNumber
Fitted	Printed Circuit Board	IPCB	PROC177	1	Any				
Fitted	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	C2, C37, C38, C40, C41, C94, C95, C99, C106, C107	C0402C104K8RAC	23	Kemet	0402	0.1uF		
Fitted	Chip Multilayer Ceramic Capacitors for General Purpose	C3, C18, C22	GRM155C80105KJ	3	Murata	0402	1uF		
Fitted	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, 0402	C4, C5, C7, C8, C10, C11, C12, C14, C16, C19, C20	CL05B224K05NN	17	Samsung Electro-M	0402	0.22uF		
Fitted	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0402	C6	C1005X7R1H473K0	1	TDK	0402	0.047uF		
Fitted	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X6S, 0402	C9, C17, C20, C69, C70	GRM155C81225K	5	MuRata	0402	2.2uF		
Fitted	CAP, CERM, 10 uF, 10 V, +/- 20%, X6S, 0603	C13, C15, C23, C43, C44, C62, C72, C119, C120	GRM188C81A106M	11	MuRata	0603	10uF		
Fitted	Chip Multilayer Ceramic Capacitors for General Purpose	C24, C27	GRM21BR71C475K	2	Murata	0805	4.7uF		
Fitted	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	C30, C45	C0402C103KARACT	2	Kemet	0402	0.01uF		
Fitted	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0402	C31, C34	C1005X7R1H104K0	2	TDK	0402	0.1uF		
Fitted	CAP, CERM, 4.7 pF, 50 V, +/- 2%, COG/NPO, 0402	C32, C33	GJM1555C1H4R7B	2	MuRata	0402	4.7pF		
Fitted	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	C35	CL10B105K08NFN	1	Samsung Electro-M	0603	1uF		
Fitted	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200	C36, C49, C50, C52, C53, C56, C57, C58, C59, C60	GCM155R71H104K	16	MuRata	0402	0.1uF		
Fitted	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, AEC-Q200	C39	GCM155R71H472K	1	MuRata	0402	4700pF		
Fitted	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7S, 0402	C42, C105, C124	C1005X7S1A225K0	3	TDK	0402	2.2uF		
Fitted	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	C46, C47	GRM155R61A106M	2	MuRata	0402	10uF		
Fitted	CAP, TA, 47 uF, 10 V, +/- 10%, SMD	C48, C63	T491B476K010AT	2	Kemet	3528-21	47uF		
Fitted	CAP, CERM, 1 uF, 10 V, +/- 10%, X6S, 0402	C51, C93, C108, C114, C127, C136, C137	GRT155C81A105KE	7	TDK	0402	1uF		
Fitted	CAP, CERM, 47 uF, 10 V, +/- 10%, X5R, 1206	C55	GRM31CR61A476K	1	MuRata	1206	47uF		
Fitted	Chip Multilayer Ceramic Capacitors for General Purpose	C61, C79	GRM31CR70J226M	2	Murata	1206	22uF		
Fitted	CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, 0603	C66, C73	GRM188R71C474K	2	MuRata	0603	0.47uF		
Fitted	CAP, CERM, 470 pF, 50 V, +/- 5%, COG/NPO, 0402	C67, C74	GRM1555C1H471J	2	MuRata	0402	470pF		
Fitted	CAP, CERM, 47 uF, 6.3 V, +/- 20%, X5R, 1206	C68	GRM31CR60J476M	1	MuRata	1206	47uF		
Fitted	CAP, CERM, 0.47 uF, 10 V, +/- 10%, X7S, 0402	C84, C92	GCM155C71A474K	2	MuRata	0402	0.47uF		
Fitted	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, AEC-Q200	C85	GCM155R71C224K	1	MuRata	0402	0.22uF		
Fitted	CAP, CERM, 10 uF, 10 V, +/- 10%, X5R, 0603	C86, C96	GRM188R61A106KE	2	MuRata	0603	10uF		
Fitted	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	C88, C90, C102, C115, C118	GCM155R71E103K	5	MuRata	0402	0.01uF		
Fitted	CAP, CERM, 8 pF, 50 V, +/- 6.25%, COG/NPO, 0402	C97, C98	CC0402DRNPO98N	2	Yageo	0402	8pF		
Fitted	CAP, CERM, 220 pF, 50 V, +/- 5%, COG/NPO, 0402	C132	885012005063	1	Würth Elektronik	0402	220pF		
Fitted	CAP, CERM, 10 uF, 10 V, +/- 20%, X7R, 0603	C135	GRM188Z71A106M	1	MuRata	0603	10uF		
Fitted	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7S, 0603	C139, C141, C145	C1608X7S1A475K0	3	TDK	0603	4.7uF		
Fitted	Cap Ceramic 8pF 50V COG 0.5pF SMD 0402 125	C147, C148	GCM1555C1H8R00	2	Murata Electronics	0402			
Fitted	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200	C149, C151	GCM188R71C105K	2	MuRata	0603	1uF		
Fitted	CAP, CERM, 10 uF, 16 V, +/- 10%, X7R, 0805	C157	CL21B106K0QNN	1	Samsung Electro-M	0805	10uF		
Fitted	Diode, Schottky, 30 V, 2 A, AEC-Q101, SOD-128	D1, D2, D8, D12	PMEG3020EP.115	4	Nexperia	SOD-128	30V		
Fitted	LED, Yellow, SMD	D3, D10	TLMY1000-GS08	2	Vishay-Semiconduc	1.6x0.8mm	Yellow		
Fitted	Diode, TVS, Uni, 5.8 V, 10.5 Vc, AEC-Q101, SMD	D4	SZP65M86.8AT3G	1	Littelfuse	SMB	5.8V		
Fitted	LED, Green, SMD	D5, D6, D7	APHS1005CGCK	3	Kingbright	0402	Green		
Fitted	LED, Red, SMD	D9	APHS1005SURCK	1	Kingbright	0402	Red		
Fitted	Fuse, 5 A, 32VAC/VDC, SMD	F1	0440005.WR	1	Littelfuse	1206			
Fitted	Ferrite Bead, 30 ohm @ 100 MHz, 4 A, 0805	FB1	BLM21PG300SHD	1	MuRata	0805	30 ohm		
Fitted	Header, 2.54 mm, 3x1, Gold, R/A, TH	J1	61300311021	1	Würth Elektronik	Header, 2.54 mm, 3x1, R/A, TH			
Fitted		J2	002288072	1	Molex	HDR7			
Fitted	CONN HEADER R/A 3POS 1.27MM	J3	M50-3930342	1	Harwin	HDR3			
Fitted	CONN HDR 1.27MM R/A AU 4POS	J4	M50-3930442	1	Harwin Inc.	HDR4			
Fitted	Connector, Receptacle, Micro-USB Type B, R/A	J5, J10	105017-0001	2	Molex	Micro USB receptacle			
Fitted	Receptacle, 0.5 mm, 30x2, Gold, TH	J6	QSH-030-01-L-D-A	1	Samtec	Receptacle, 0.5 mm, 30x2, TH			
Fitted	DC POWER JACK, R/A, TH	J7	PJ-002AH	1	CUI Inc.	DC POWER JACK, R/A, TH			
Fitted		J8	BC050-12A-KO-020	1	GCT	HDR12			
Fitted		J9	BC084-12-A-0390-L	1	GCT	CONN_RCPT12			
Fitted	100nH Shielded Multilayer Inductor 4A 19mOhm	L1, L5, L6	LQM2MP2R10MIH	3	Murata	0806 (2016)	0.1uH		
Fitted	Ferrite Bead, 600 ohm @ 100 MHz, 0.3 A, 0402	L2, L3, L7	BLM15HG6015N1D	3	MuRata	0402	600 ohm		
Fitted	Inductor, Ferrite Bead, Ferrite, 2.2 A, 0.035 ohm	L8, L9	BLM15PD300S21D	2	MuRata	0402			
Fitted	470nH Shielded Wirewound Inductor 3A 42mOhm	L14, L15	DFE2012110U-R47M	2	Murata	0805 (2012)	0.47uH		
Fitted	Thermal Transfer Printable Labels, 0.650" W x 0.200" H	L1B, L1	THT-14-423-10	1	Brady	PCB Label 0.650 x 0.200 inch			
Fitted	N-Channel 20V 250mA (Ta) 500mV (Tb) Surface Mount MOSFET, N-CH, 100 V, 0.17 A, SOT-323	Q1, Q3, Q4	SSM3K35AMFV.L3F	3	Toshiba	SOT-723			
Fitted	RES, 0, 5%, 0.125 W, 0603	R1, R31, R129	MCT0603020000ZF	3	Vishay/Beyschlag	0603	0	None	
Fitted	0 Ohms Jumper Chip Resistor 0402 (1005 Metric)	R3, R18, R19, R25, R29, R34, R37, R38, R39, R44	ERJ-2GEOR00X	59	Panasonic	0402	0		
Fitted	10 kOhms +/- 1% 0.063W, 1/16W Chip Resistor 0402	R4, R9, R20, R44, R49, R75	RC0402FR-0710KL	6	Yageo	0402	10k		
Fitted	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R5, R7, R8, R10, R12, R17, R22, R23, R27, R54, 6	CRCW040210K0FKJ	44	Vishay-Dale	0402	10.0k		
Fitted	RES, 4.7 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	R6, R33	CRCW04024K70JN1	2	Vishay-Dale	0402	4.7k		
Fitted	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R11, R99, R120, R215	CRCW0402100KFKJ	4	Vishay-Dale	0402	100k		
Fitted	RES, 750, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R13, R16	CRCW0402750RFKJ	2	Vishay-Dale	0402	750		
Fitted	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R21, R70, R83, R191, R194, R195, R196, R233, 6	CRCW04021K00FKJ	9	Vishay-Dale	0402	1.00k		
Fitted	RES, 510, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	R28, R66, R141, R171, R172, R174, R179, R252	ERJ-2GEJ511X	8	Panasonic	0402	510		
Fitted	Res Jumper Thick Film 0402 0 Ohm 5% 1/16W	R35, R77, R119, R173, R198	RC0402JR-070RP	5	Yageo	0402	0		
Fitted	33.2 Ohms +/- 1% 0.063W, 1/16W Chip Resistor 0402	R45, R46, R47, R48, R51, R93	RT0402FRE0733R2	6	Yageo	0402	33.2		
Fitted	General Purpose Chip Resistor Thick Film 0402	R50	RC0402FR-1047K5L	1	YAGEO	0402	47.5k		
Fitted	RES, 220, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	R64, R213	CRCW0402220R0N1	2	Vishay-Dale	0402	220		
Fitted	RES, 61.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R68, R79	CRCW0402619RFKJ	2	Vishay-Dale	0402	61.9		
Fitted	100 kOhms +/- 1% 0.063W, 1/16W Chip Resistor 0402	R73, R74	WR04X1003FTL	2	Walsin Technology	0402	100k		
Fitted	Res Thick Film SMD 1k 1% 1/16W 0402 100pF	R86	RC0402FR-071KL	1	Yageo	0402	1k		
Fitted	RES, 33.2, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R122, R124, R125, R126, R186, R187, R209, R25	CRCW040233R2FKJ	8	Vishay-Dale	0402	33.2		
Fitted	Res Metal Strip 1206 0.02 Ohm 1% 1/4W +/-5pF	R134	WLS1206R0200FEB	1	Vishay Dale	1206	20m		
Fitted	RES, 100, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	R169	ERJ-2GEJ101X	1	Panasonic	0402	100		
Fitted	100 kOhms +/- 1% 0.063W, 1/16W Chip Resistor 0402	R175, R177, R201, R238, R244	CRCW0402100KFKJ	5	Vishay	0402	100k		
Fitted	Res Thick Film 0402 18K Ohm 1% 1/16W +/-100pF	R178, R180	CRCW040218K0FKJ	2	Vishay	0402	18k		
Fitted	RES, 2.2 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	R185	CRCW04022K20JN1	1	Vishay-Dale	0402	2.2k		
Fitted	40 mOhms +/- 1% 0.25W, 1/4W Chip Resistor Au	R192, R193, R200	WLS1206R0400FEB	3	Vishay	1206	40m		
Fitted	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R202	CRCW0402499RFKJ	1	Vishay-Dale	0402	49.9		
Fitted	RES, 7.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R204, R207	CRCW04027K87FKJ	2	Vishay-Dale	0402	7.87k		
Fitted	RES, 82.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R205, R208	CRCW040282K5FKJ	2	Vishay-Dale	0402	82.5k		
Fitted	RES, 4.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R234	CRCW04024K87FKJ	1	Vishay-Dale	0402	4.87k		
Fitted	RES, 330 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R236, R239	CRCW0402330KFKJ	2	Vishay-Dale	0402	330k		
Fitted	RES, 30.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	R260	CRCW040230K0FKJ	1	Vishay-Dale	0402	30.0k		
Fitted	Switch, SPST, Slide, Off-On, 6 Pos, 0.025A, 24V, S1	S4	218-6LPST	1	CTS Electrocomp	5.8x8.79mm			
Fitted	Switch, SPST-NO, Off-Mom, 0.05 A, 12 VDC, SM S2	S5	PTS645SM43SMTR	1	C&K Components	6x6mm			
Fitted	Switch, SPST-NO, Off-Mom, 0.01 A, 32 VDC, SM S3	S6	KMR243GLFG	1	C&K Components	4.2x2.8mm			
Fitted	Switch, Slide, SPST 4 poles, SMT	S7	218-4LPST	1	CTS Electrocomp	SW, SMT Half Pitch 4SPST, 5.8x2.7x6.25 mm			
Fitted	Switch, SPST, 2 Pos, 25mA, 24VDC, SMD	S8	218-2LPST	1	CTS Electrocomp	3.71x5.8mm			
Fitted	Slide Switch SPDT Surface Mount, Right Angle	SW1	AY20102AGRLC	1	C&K Switches	SMT_SW_7MM2_5MM3			
Fitted	C & K COMPONENTS -- Schiebeshalter, Subminiature	SW2	JS102011JCQN	1	C&K Components	SMD3			
Fitted	Slide Switch SPDT Surface Mount	SW3	CIS-1200A1	1	Nidec Components	SMT3			
Fitted	XWRL6432AoP	U1	XWRL6432AoP	1	Texas Instruments	FCSP101			
Fitted	ULTRA LOW POWER, 16M-BIT [x 1/x 2/x 4] CMOS	U2	MX25R1635F2UIHC	1	Macronix Internati	SON-8			
Fitted	Automotive Grade, 1.4V-Capable +/-0.5degC T	U3	TMP112AQDRLRQ	1	Texas Instruments	DRL0006A			Texas Instruments
Fitted	10-Ohm Quad SPDT Analog Switch, RSVO16A	U4, U24	TS3A5018RSVR	2	Texas Instruments	RSV0016A			Texas Instruments
Fitted	Automotive Fault Protected CAN Transceiver V	U5	TCAN1042HGVD0J	1	Texas Instruments	D0008A			Texas Instruments
Fitted	Current Sense Amplifier 1 Circuit 10-VSSOP	U6, U7, U8, U25	INA228AIDG5T	4	Texas Instruments	VSSOP10			TCAN1042HGVD0R1
Fitted	4-Channel ESD Protection Array for High-Speed	U9, U29	TPD4E004DRYR	2	Texas Instruments	DRY0006A			
Fitted	400 Mbps Enhanced Product Quad LVDS Trans	U							

Fitted	Description	Designator	PartNumber	Quantity	Manufacturer	PackageReference	Value	Alternate Manufac	Alternate PartNumber
Fitted	Local Interconnect Network (LIN) Transceiver	U23	TLIN1039DDFRQ1	1	Texas Instruments	SOT23-8			
Fitted	1K Microwire Compatible Serial EEPROM, TSSC	U26	93LC46B-I/ST	1	Microchip	TSSOP-8			
Fitted	Quad High Speed USB to Multipurpose UART/I	U27	FT4232HL	1	FTDI	LQFP_10x10mm			
Fitted	Crystal Resonator 40MHz ±10ppm (Tol) ±20ppm	Y1	XRCGB40M000F1S	1	Murata	SMT_CRYSTAL_2MM0_1MM6			
Fitted	16 MHz ±15ppm Crystal 8pF 80 Ohms 4-SMD, N	Y2	ECS-160-8-33Q-RE	1	ECS	SMT4_3MM2_2MM5			
Fitted	Crystal, 12 MHz, 15 ppm, 8 pF, AEC-Q200 Grad	Y3	NX32255A-12.000N	1	NDK	3.2x0.55x2.5mm			
Not Fitted	Multi-Layer Ceramic Capacitor 10pF COG ±1%	C1, C100	GJM1555C1H100FF	0	Murata	0402	10pF		
Not Fitted	CAP, CERM, 22 uF, 10 V, +/- 20%, X6S, 1206	C121, C122, C130, C131	C3216G6S1A226M1	0	TDK	1206	22uF		
Not Fitted	Ferrite Bead, 30 ohm @ 100 MHz, 4 A, 0805	FB2	BLM21PG300SH1D	0	MuRata	0805	30 ohm		
Not Fitted	Fiducial mark. There is nothing to buy or mou	FID1, FID2, FID3, FID4, FID5, FID6	N/A	0	N/A	N/A			
Not Fitted	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0	R2, R14, R65, R107, R113, R114, R116, R135, R	CRCW040210K0FKI	0	Vishay-Dale	0402	10.0k		
Not Fitted	0 Ohms Jumper Chip Resistor 0402 (1005 Metr	R15, R24, R26, R57, R59, R60, R127, R128, R19	ERJ-2GE0R00X	0	Panasonic	0402	0		
Not Fitted	RES, 0, 5%, 0.125 W, 0603	R30, R32	MCT060302000ZF	0	Vishay/Beyschlag	0603	0		
Not Fitted	40.2 kOhms ±1% 0.063W, 1/16W Chip Resistor	R36	CRCW040240K2FKI	0	Vishay	0402	40.2k		
Not Fitted	68 kOhms ±1% 0.063W, 1/16W Chip Resistor 0	R121	WR04X6802FTL	0	Walsin Technology	0402	68k		
Not Fitted	Res Jumper Thick Film 0402 0 Ohm 5% 1/16W	R176	RC0402JR-070RP	0	Yageo	0402	0		
Not Fitted	RES, 33.2, 1%, 0.063 W, AEC-Q200 Grade 0, 04	R248, R249	CRCW040233R2FKI	0	Vishay-Dale	0402	33.2		

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