

Pos.	Qtà	Rif	Descrizione	Value	PN Costruttore	PN Fornitore	Costruttore	Package	PcbFootprint	Note
1	2	C1,C2	Cond.Multilayer X7R, 50V 1210	2u2F	C1210C225K5RACTU	R-691-1246	KEMET	SMD1210	SMD1210	50V, X7R
2	13	C3,C6,C12,C39,C41,C42,C43,C44,C45,C47,C48,C111,C116	MLCC - SMD/SMT 50V 0.1uF X7R 0603 10%	100nF	C0603C104K5RACTU	M:80-C0603C104K5R	KEMET	SMD0603	SMD0603	50V, X7R
3	5	C7,C8,C9,C10,C11	Cond.Elt.Tantalio 35V SIZE C	4u7	T491C475K035AT	R- 538-2537	KEMET	TNT SIZE C	ETANT-C	35V
4	3	C13,C72,C110	MLCC - SMD/SMT 50V 0.01uF X7R 0603 5%	10nF	C0603C103J5RACTU	M:581-06035A103JAT2A	KEMET		SMD0603	
5	39	C14,C20,C31,C32,C33,C35,C50,C51,C58,C60,C62,C76,C77,C78,C79,C81,C82,C83,C84,C86,C88,C89,C91,C92,C94,C95,C97,C98,C100,C101,C103,C104,C106,C107,C108,C109,C117,C118,C119	MLCC - SMD/SMT 50V 0.1uF X7R 0603 10%	100nF	C0603C104K5RACTU	M:80-C0603C104K5R	KEMET		SMD0603	
6	1	C15	Film Capacitors 10uF 600V 5% PITCH 27.5 W=18	10uF	MKP1848C61060JK2	M:667-ECW-FG60106J	VISHAY		CPOL_P27.5_W18	
7	2	C16,C17	Elettrolitico con terminali M5 a vite VDCMAX=600V	1000uF	AG(U)X102M600BC1		ITELCOND		AG_SERIES_ITELCOND	
8	1	C21	Cond.Elettrolitico verticale d=10 25VDC	1000uF	ESK108M025AH4EA	M: 594-MAL214236102E3	VARI	Radial D=10mm	EV10	
9	1	C40	MLCC - SMD/SMT 10V 10uF X7R 0805 10%	10uF	C0805C106K8RACTU	M: 80-C0805X106K8RAUTLR	KEMET	SMD0805	SMD0805-MET	10V, X7R
10	10	C46,C61,C87,C90,C93,C96,C99,C102,C105,C114	MLCC - SMD/SMT 35V 4u7F X7R 1206 10%	4u7	C1206C475K6RACTU	M:80-C1206C475K6R	KEMET	SMD1206	SMD1206	
11	3	C73,C74,C75	MLCC - SMD/SMT 50V 1nF COG(NPO) 0603 5%	1nF	C0603C102J5RAC	M:80-C0603C102J5GAL	KEMET		SMD0603	
12	1	C85	Condensatore a film MKT 220nF 10% 1000Vdc Pitch 27,5mm	220nF		M: 71-MKT1820422105	VISHAY		CPOL_P27.5_W14	1000V MKT
13	3	C112,C113,C115	MLCC - SMD/SMT 25V X7R 0805 10%	330nF	C0805C334M3RACTU	M:80-C0805C334M3R	KEMET	SMD0805	SMD0805	25V, X7R
14	1	C120	Condensatori di sicurezza WCAP-CSSA X&Y Safety 470pF 5kV 10% 1812	470pF	8853522110011	M:710-8853522110011	WURTH	SMD1812	SMD1812	Safety X - 5kV
15	3	DL1,DL2,DL3	Diodo led smd 0805	VERDE	KP-2012SGD	F-2449804	KINGBRIGHT	SMD0805	LED0805-MET-12	
16	1	DL4	Diodo led smd 0805	ORANGE	APT2012NW	F-2449804	KINGBRIGHT	SMD0805	LED0805-MET-12	
17	1	DL5	Diodo led smd 0805	BLU	KP-2012PBC	F-8529884	KINGBRIGHT	SMD0805	LED0805-MET-12	
18	5	DL6,DL8,DL9,DL10,DL11	Diodo led smd 0805	GIALLO	KP-2012YD	F-2449812	KINGBRIGHT	SMD0805	LED0805-MET-12	
19	1	DL7	Diodo led smd 0805	ROSSO	APTD2012LSURCK	APTD2012LSURCK	KINGBRIGHT	SMD0805	LED0805-MET-12	
20	2	D2,D3	Diodi Schottky SiC SIC DIODE GEN2.0 1200V TO247-2L	NDSH50120C	NDSH50120C	M:863-NDSH50120C-F155	ONSEMI		TO247D_NUM	
21	1	D4	Fast-speed switching diodes	1N4148WT	1N4148WT	F-2453270	ONSEMI	SOD523F	SOD523F1-2	300mA

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22	1	D5	ESD Protection compatible with CAN BUS	ESD2CAN24DBZRQ1	ESD2CAN24DBZRQ1	M: 595-ESD2CAN24DBZRQ1	TEXAS	SMD	SOT23-123	
23	3	J1,J12,J13	Morsettiera a barriera 2P 12.7MM	38969-0002		M: 538-38969-0002	MOLEX		389690002	
24	1	J3	Molex Minifit 2x1	46999-0138-MOLEX	46999-0138	M-538-46999-0138	Molex	Minifit46999-0138	MOLEX-39281023	Connettore filo scheda verticale P2mm 2 VIE VERT. PTH
25	1	J6	Header boxed IDC dritto 2 X 3 P.2.54	61200621621	61200621621	F-2356251	WURTH	THT	61200621621-WE	
26	2	J9,J10	CONN.HEADER 2X2 DRITTO P2	NANO-FIT 105312-1104	105312-1104	M: 538-105312-1104	MOLEX		1053121104-MOLEX	SERIE NANO-FIT
27	1	L1	Induttore 8.2uH	8.2uH	SRR4528A-8R2Y	R-1765964	BOURNS	5X5MM SMD	SRR4528A-BOURNS	2A, 70moHm, ferrite
28	2	L3,L4	Ferrite Bead	BLM18BD102	BLM18BD102SN1D	R-724-1318	MURATA	SMD0603	SMD0603	200mA, 1K@100MHz
29	1	L5	Filtro Modo Comune x CAN BUS	DLW32SH101XF2L	DLW32SH101XF2L	D-490-DLW32SH101XF2LTR-ND	MURATA	DLW32SH101XF2L	DLW32S_MURATA	115mA
30	1	OP1	Precision Amplifiers 1x uP Zero-Drift Op Amps	LTC2054HS5TRMPBF	LTC2054HS5TRMPBF	M: 584-LTC2054HS5TRMPBF	ANALOG DEVICE		SOT23-5L	
31	2	OP2,OP3	High Speed Comparator	MAX999AAUK+T	MAX999AAUK+T	M: 700-MAX999AAUKT	ANALOG DEVICE	SOT-23-5	SOT23-5L	
32	1	Q2	MOSFETs 800V Vds 30V Vgs DPAK (TO-252)	SIHD2N80E-GE3	SIHD2N80E-GE3	M: 78-SIHD2N80E-GE3	VISHAY		DPACK	
33	9	Q3,Q4,Q5,Q6,Q7,Q8,Q9,Q10,Q26	SiC MOSFETs CoolSiC MOSFET discrete 1200V, 40 mohm, 62A	GP3T040A120H	GP3T040A120H	M: 148-GP3T040A120H	SEMIQ		TO247-4L	
34	7	Q13,Q14,Q15,Q16,Q17,Q18,Q19	MOSFETs FET 60V 7.5 MOHM SOT23	2N7002LT1G	2N7002L	M: 863-2N7002LT1G	ONSEMI		SOT23-123	
35	6	Q28,Q29,Q30,Q31,Q32,Q33	MOSFET CANALE N	2N7002LT1G	2N7002LT1G	M: 863-2N7002LT1G	ONSEMI	SOT23	SOT23-123	60V VDS, 115mA, Vth=1.8
36	2	RAD1,RAD2	Dissipatore Alluminio L=75	OMNI-UNI-40-75-D		M: 567-OMNI-UNI-40-75-D	WAKEFIELD THERMAL		OMNI-UNI-40-75-D	
37	1	R6	Resistore thick film 1/8W 1% 0603	3K3	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
38	7	R7,R8,R11,R28,R52,R90,R139	Resistore thick film 1/8W 1% 0603	1K	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
39	3	R9,R24,R25	Resistori a pellicola spessa - SMD 1210 510Kohm 1% High Voltage	510K	KTR25JZPF5103	M: 755-KTR25JZPF5103	ROHM Semiconductor	SMD1210	SMD1210	
40	3	R10,R26,R27	Resistori a pellicola spessa - SMD 1210 470Kohm 1% High Voltage	470K	KTR25JZPF4703	M: 755-KTR25JZPF4703	ROHM Semiconductor	SMD1210	SMD1210	
41	3	R14,R141,R142	Resistore thick film 1/8W 1% 0603	8K7	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
42	2	R16,R19	Resistori a ossido metallico 5W, 500V	4K7	RSF5SSJT-73-4K7	M:603-RSF5SSJT-73-4K7	YAGEO		RSF5SS-YAGEO	
43	6	R17,R18,R48,R53,R70,R71	Resistore thick film 1/8W 1% 0603	10K	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
44	3	R21,R22,R46	Resistore thick film 1/8W 1% 0603	4K7	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
45	3	R23,R39,R91	Resistore thick film 1/8W 1% 0603	20K	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
46	1	R30	Resistore thick film 1/4W 1% 0603	4K7	VARI	MULTICOMP	VARI	SMD1206	SMD1206	

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47	1	R31	Resistore thick film 1/4W 1% 0603	37K	VARI	MULTICOMP	VARI	SMD1206	SMD1206	
48	5	R36,R38,R40,R42,R72	Resistori a pellicola sottile - SMD 10K ohm 0.1% 10 ppm	10K	RN73H1JTDD1002B10	660-RN73R1JTD1002B10	KOA	SMD0603	SMD0603	
49	1	R37	Resistore thick film 1/8W 1% 0603	8K4	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
50	2	R43,R54	Resistore thick film 1/8W 1% 0603	330R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
51	14	R55,R57,R58,R59,R60,R61,R62,R137,R155,R156,R157,R158,R159,R160	Resistore thick film 1/8W 1% 0603	680R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
52	1	R69	Resistore thick film 1/8W 1% 0603	2K2	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
53	1	R73	Resistori a pellicola sottile - SMD TNPW0603 7K77 0.1%	7K77	RN73H1JTDD7771B25	M: 71-TNPW06037K77BEEA	VISHAY	SMD0603	SMD0603	
54	1	R75	Resistore thick film 1/8W 1% 0603	120R - non montare	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
55	1	R92	Resistore thick film 1/4W 1% 0603	100K	VARI	MULTICOMP	VARI	SMD1206	SMD1206	
56	3	R93,R94,R95	Resistori a pellicola spessa - SMD 1210 510Kohm 1% High Voltage	33K	KTR25JZPF3302	M: 755-KTR25JZPF5103	ROHM Semiconductor	SMD1210	SMD1210	
57	16	R110,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128	Resistore thick film 1/4W 1% 1206	2R		MULTICOMP	VARI	SMD1206	SMD1206	SMD 1206 1/4W 1%
58	3	R132,R136,R150	Resistore thick film 1/8W 1% 0603	0R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
59	1	R138	Resistore thick film 1/4W 1% 1206	0R		MULTICOMP	VARI	SMD1206	SMD1206	SMD 1206 1/4W 1%
60	1	R140	Resistore thick film 1/4W 1% 1206	5R		MULTICOMP	VARI	SMD1206	SMD1206	SMD 1206 1/4W 1%
61	1	R143	Resistore thick film 1/8W 1% 0603	33K	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
62	1	R144	Resistore thick film 1/8W 1% 0603	33R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
63	1	R145	Resistore thick film 1/8W 1% 0603	120R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
64	3	R146,R148,R149	Resistore thick film 1/8W 1% 0603	470R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
65	4	R151,R152,R153,R154	Resistore thick film 1/8W 1% 0603	0R - Non Montare	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
66	1	R161	Resistore thick film 1/8W 1% 0603	100K	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
67	8	R162,R163,R164,R165,R166,R167,R168,R169	Resistore thick film 1/8W 1% 0603	1R	VARI	MULTICOMP	VARI	SMD0603	SMD0603	
68	19	TP1,TP2,TP4,TP6,TP7,TP8,TP10,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20,TP21,TP22,TP23	Torretta x Test Point foro pcb 1mm	20-2137	20-2137	F-8731128	VERO	THT	TESTPOINT_1MM	

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69	2	TVS1,TVS2	Surface-Mount TRANSZORB® Transient Voltage Suppressors	SMBJ3V3-E3/5B	SMBJ3V3-E3/5B	M: 625-SMBJ3V3-E3/5B	VISHAY	SOD882BD	SMB-1_2	5V Nominal
70	1	U4	Non-Isolated DC/DC Converters DC/DC Converter non-isolated	TSR 0.5-2450	TSR 0.5-2450	R-817-9400	TRACO POWER	THT	TSR-0.5-TRACO	MAX 36V INPUT
71	1	U5	Linear 5V Regulator - 100mA	UA78L05ACPKM3	UA78L05ACPKM3	595-UA78L05ACPKM3	TI	SOT-89-3	SOT89_123	MAX 30V INPUT
72	1	U6	3.3VDC LDO	NCP1117ST33T3G	NCP1117ST33T3G	M-863-NCP1117ST33T3G	ON	SOT223	SOT223-1234	1.07V, v _{imax} = 20V, V _i min=3.5V
73	1	U8	Board Mount Current Sensors 80ARMS 500kHz Hall-effect current sensor	TMCS1126A1BQDV GR	TMCS1126A1BQDVGR	M: 595-TMCS1126A1BQDVGR	TEXAS		DVG0010A	
74	1	U13	CAN TRANSCEIVER	TJA1050T	TJA1050T	M-771-TJA1050T/CM,118	NXP	SOIC-8	SO8	5V
75	1	U14	Board Mount Current Sensors 80ARMS 500kHz Hall-effect current sensor	TMCS1126C3BQDV GR	TMCS1126C3BQDVGR	M: 595-TMCS1126A1BQDVGR	TEXAS		DVG0010A	
76	1	U18	32bit ARM 4F 1MB Flash, 256K Ram, 2xCAN-FD	SAME51J20A-A	SAME51J20A-A	M: 556-ATSAME51J20A-AF	MICROCHIP		QUAD.50M/64/WG12.00	1.7 to 3.6V
77	2	U27,U28	Amplificatori di isolamento High Stability Isolated Error Amplifier	ADUM3195		M: 584-ADUM3195BRQZ	ANALOG DEVICE	TQFP64	SOG.025/16/WG.244/L.1 96	
78	8	U29,U30,U31,U32,U33,U3 4,U35,U36	Driver di porta ISOLATED DRIVER	1ED3124MU12HXU MA1		M: 726-1ED3124MU12HXUMA	INFINEON		PG-DSO-8-24	
79	1	U37	Gate driver isolati galvanicamente Isolated switch driver with integrated	TPSI3050DWZR		M: 595-TPSI3050DWZR	TEXAS		PG-DSO-8-24	
80	1	U38	Counter ICs Johnson decade counter with 10 decoded outputs	74HC4017PW,118	74HC4017PW,118	M: 771-HC4017PW118	NEXPERIA		SOG.65M/16/WG6.6/L5. 1	
81	2	U39,U40	Logic Gates Quad 2-Input Positive-AND Gates	SN74HCT08DR	SN74HCT08ANSR	M: 595-SN74HCT08DR	TEXAS		SOG.050/14/WG.244/L.3 44	
82	1	U41	Convertitori CC/CC - A foro passante 6W 9-75Vin 15Vout 0-400mA SIP Regulated	SPBW06W8-15	SPBW06W8-15	M: 709-SPBW06W8-15	MEAN-WELL		SPBW06W8- MEANWELL	