

R106, R145, R2, R232, R3, R5, R564, R566, R568, R6, R600, R604, R7, R72, R83, RP27, RP29, RP44, RP46, RP9, RP97

RL36, RP23

R601

21

2

Board Assembly Bill Of Materials Board ID: B2260B BOM issue: 1 Date: 26 Jul 2016

		Date	. 20 Jul 2010			
Dort Oty	Defe	Value	Description	Dookogo		Manufacturer
Part Qty	Refs	Value	Description	Package	Name	Part Number
2	C5, C6	100p	Surface mount, general purpose multilayer ceramic chip capacitor 100p; 50V; COG; +/-5%;	402	TDK	C1005C0G1H101JT
1	CP79	150p	Surface mount, general purpose multilayer ceramic chip capacitor 150p; 50V; COG; +/-5%;	402	TDK	C1005C0G1H151JT
3	CE17, CE18, CU41	33p	Surface mount, general purpose multilayer ceramic chip capacitor 33p; 50V; COG; +/-5%;	402	TDK	C1005C0G1H330JT
1	CO10	56p	Surface mount, general purpose multilayer ceramic chip capacitor 56p; 50V; COG; +/-5%;	402	TDK	C1005C0G1H560JT
93	C11, C1704, C1705, C1707, C1708, C1712, C1713, C1714, C1715, C1716, C1717, C1718, C1719, C1720, C1721, C1722, C1723, C1724, C1725, C1726, C1727, C1728, C1729, C195, C196, C197, C198, C278, C279, C280, C281, C282, C283, C284, C291, C292, C293, C294, C296, C297, C37, C39, C407, C54, C55, C68, C8, C861, C862, C862, C863, C864, C11, CL10, C115, C16, C17, C18, C19, C122, C120, C121, C125, C126, C127, C128, C129, C13, C130, C131, C132, C133, C134, C135, C136, C137, C138, C14, C15, C154, C155, C156, C157, C16, C16, C16, C19, CP1, CP24, CP25, CP33, CP35, CP84	100n	Surface mount, general purpose multilayer ceramic chip capacitor 100n; 10V; X5R; +/-10%;	402	MURATA	GRM155R61A104KA01
4	C1700, C1701, C1702, C1703	10n	Surface mount, general purpose multilayer ceramic chip capacitor 10n; 25V; X5R; +/-10%;	402	TDK	C1005X5R1E103KT
2	C45, C51	100n	Surface mount, general purpose multilayer ceramic chip capacitor 100n; 10V; X5R; +/-20%;	402	TDK	C1005X5R1A104MT
1	C3718	1n	Surface mount, general purpose multilayer ceramic chip capacitor 1n; 50V; X7R; +/-10%;	402	TDK	C1005X7R1H102KT
1	CP11	220p	Surface mount, general purpose multilayer ceramic chip capacitor 220p; 50V; X7R; +/-10%;	402	TDK	C1005X7R1H221KT
1	CP23	3n3	Surface mount, general purpose multilayer ceramic chip capacitor 3n3; 50V; X7R; +/-20%;	402	TDK	C1005X7R1H332MT
1	C306	100n	Surface mount, general purpose multilayer ceramic chip capacitor 100n; 16V; X5R; +/-20%;	402	TDK	C1005X5R1C104MT
1	C1025	100n	Surface mount, general purpose multilayer ceramic chip capacitor 100n; 50V; X5R; +/-20%;	603	TDK	C1608X5R1H104MT
2	CE10, CE15	4u7	Surface mount, general purpose multilayer ceramic chip capacitor 4u7; 6.3V; X5R; +/-20%;	805	TDK	C2012X5R0J475MT
4	CE22, CE27, CE31, CE35	22u	Surface mount, general purpose multilayer ceramic chip capacitor 22u; 6.3V; Y5V; +80%-20%;	805	Yageo	CC0805ZKY5V5BB226
2	C1, C190	220u	Surface mount, general purpose Tantalum capacitor 220u; 2.5V; Tantalum; +/-10%;	C3528 (TAJB)	AVX	TAJB227K002R
3	C1706, C1709, C38	220u	Surface mount, general purpose Tantalum capacitor 220u; 6.3V; Tantalum; +/-10%;	C6032 (TAJC)	AVX	TAJC227K006R
5	R111, RO38, RP45, RP50, RP99	100K	Surface mount chip resistor 100K; 1%; 0.0625W;	402	Rohm	MCR01MZPF1003
1	RP18	100R	Surface mount chip resistor 100R; 1%; 0.0625W;	402	Rohm	MCR01MZPF1000

Surface mount chip resistor 10K; 1%; 0.0625W;

Surface mount chip resistor 120R; 1%; 0.0625W;

Surface mount chip resistor 12K; 1%; 0.0625W;

402

402

402

Rohm

Rohm

Rohm

MCR01MZPF1002

MCR01MZPF1200

MCR01MZPF1202

10K

120R

12K

1	RU8	147K	Surface mount chip resistor 147K; 1%; 0.0625W;	402	Rohm	MCR01MZPF1473
1	R85	150K	Surface mount chip resistor 150K; 1%; 0.0625W;	402	Rohm	MCR01MZPF1503
7	R121, R122, R123, R124, R576, R577, RO41	1K	Surface mount chip resistor 1K; 1%; 0.0625W;	402	Rohm	MCR01MZPF1001
2	RE17, RE18	1K5	Surface mount chip resistor 1K5; 1%; 0.0625W;	402	Rohm	MCR01MZPF1501
1	RP7	1K65	Surface mount chip resistor 1K65; 1%; 0.0625W;	402	Rohm	MCR01MZPF1651
2	R102, R103	1K8	Surface mount chip resistor 1K8; 1%; 0.0625W;	402	Rohm	MCR01MZPF1801
1	R81	200R	Surface mount chip resistor 200R; 1%; 0.0625W;	402	Rohm	MCR01MZPF2000
1	RP26	20K	Surface mount chip resistor 20K; 1%; 0.0625W;	402	Rohm	MCR01MZPF2002
4	R91, RL15, RL52, RL61	240R	Surface mount chip resistor 240R; 1%; 0.0625W;	402	Rohm	MCR01MZPF2400
1	R90	249R	Surface mount chip resistor 249R; 1%; 0.0625W;	402	Rohm	MCR01MZPF2490
1	R107	27K	Surface mount chip resistor 27K; 1%; 0.0625W;	402	Rohm	MCR01MZPF2702
17	RL1, RL11, RL12, RL16, RL17, RL2, RL20, RL23, RL3, RL4, RL5, RL6, RL60, RL7, RL8, RO42, RP13	2K	Surface mount chip resistor 2K; 1%; 0.0625W;	402	Rohm	MCR01MZPF2001
1	RP98	2K2	Surface mount chip resistor 2K2; 1%; 0.0625W;	402	Rohm	MCR01MZPF2201
1	RE28	2K49	Surface mount chip resistor 2K49; 1%; 0.0625W;	402	Rohm	MCR01MZPF2491
7	R105, R144, R146, R147, R148, R149, R150	33R	Surface mount chip resistor 33R; 1%; 0.0625W;	402	Rohm	MCR01MZPF33R0
1	RP10	35K7	Surface mount chip resistor 35K7; 1%; 0.0625W;	402	Rohm	MCR01MZPF3572
1	RP12	392K	Surface mount chip resistor 392K; 1%; 0.0625W;	402	Rohm	MCR01MZPF3923
1	RP30	3K6	Surface mount chip resistor 3K6; 1%; 0.0625W;	402	Rohm	MCR01MZPF3601
1	RO25	41K2	Surface mount chip resistor 41K2; 1%; 0.0625W;	402	Rohm	MCR01MZPF4122
1	RP14	43K	Surface mount chip resistor 43K; 1%; 0.0625W;	402	Rohm	MCR01MZPF4302
1	RH30	470R	Surface mount chip resistor 470R; 1%; 0.0625W;	402	Rohm	MCR01MZPF4700
2	RO24, RU11	47K	Surface mount chip resistor 47K; 1%; 0.0625W;	402	Rohm	MCR01MZPF4702
3	R58, R62, R79	487R	Surface mount chip resistor 487R; 1%; 0.0625W;	402	Rohm	MCR01MZPF4870
1	RP15	4K3	Surface mount chip resistor 4K3; 1%; 0.0625W;	402	Rohm	MCR01MZPF4301
12	R16, R18, R20, R23, R26, R28, R30, R33, R35, R68, R69, RP24	4K7	Surface mount chip resistor 4K7; 1%; 0.0625W;	402	Rohm	MCR01MZPF4701
1	RL26	56R	Surface mount chip resistor 56R; 1%; 0.062;		Rohm	MCR01MZPF56R0
1	R84	91K	Surface mount chip resistor 91K; 1%; 0.0625W;	402	Rohm	MCR01MZPF9102
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25	R1419, R1420, R400, R559, R560, R561, R562, R563, R581, R583, R584, R585, R586, R588, R590, R592, R594, R596, R597, R598, RE5, RP11, RP25, RP8, RU40	0R	Surface mount chip resistor 0R; 5%; 0.0625W;	402	Rohm	MCR01MZPJ0R
2	R602, R603	100K	Surface mount chip resistor 100K; 5%; 0.0625W;	402	Rohm	MCR01MZPJ104
6	R142, RE4, RP2, RP47, RP48, RP51	10K	Surface mount chip resistor 10K; 5%; 0.0625W;	402	Rohm	MCR01MZPJ103
1	R54	200R	Surface mount chip resistor 200R; 5%; 0.0625W;	402	Rohm	MCR01MZPJ201
3	R605, R606, R607	27R	Surface mount chip resistor 27R; 5%; 0.0625W;	402	Rohm	MCR01MZPJ270
1	R444	2K7	Surface mount chip resistor 2K7; 5%; 0.0625W;	402	Rohm	MCR01MZPJ272
8	R188, R189, R569, R570, R571, R572, R573, R574	3K3	Surface mount chip resistor 3K3; 5%; 0.0625W;	402	Rohm	MCR01MZPJ332
1	RP105	47K	Surface mount chip resistor 47K; 5%; 0.0625W;	402	Rohm	MCR01MZPJ473
15	R132, R231, R543, RE10, RE19, RE20, RE21, RE22, RE23, RE24, RE25, RE26, RE27, RE35, RE9	4K7	Surface mount chip resistor 4K7; 5%; 0.0625W;	402	Rohm	MCR01MZPJ472
1	RP22	51K	Surface mount chip resistor 51K; 5%; 0.0625W;	402	Rohm	MCR01MZPJ513
3	R60, R61, RE6	51R	Surface mount chip resistor 51R; 5%; 0.0625W;	402	Rohm	MCR01MZPJ510
4	R554, R555, R556, R557	75R	Surface mount chip resistor 75R; 5%; 0.0625W;	402	Rohm	MCR01MZPJ750
3	R240, RP54, RP55	0R (Zero)	Surface mount chip resistor 0R (Zero); 5%; 0.1W;	603	Rohm	MCR03EZPJ000
6	RL54, RL55, RL56, RL57, RL58, RL59	56R	Surface mount quad isolated chip resistor network 56R; 5%; 0.063;	MN04	Rohm	MNR04M0APJ560
2	R541, R542	6R8	Surface mount quad isolated chip resistor network 6R8; 5%; 0.063W;	MN14	Rohm	MNR04MRAPJ6R8
1	C1732	1p5	Surface mount, general purpose multilayer ceramic chip capacitor 1p5; 50V; COG; +/-0.25pF;	402	TDK	C1005C0G1H1R5CT
2	C1419, C255	220n	Surface mount, general purpose multilayer ceramic chip capacitor 220n; 10V; X5R; +/-10%;	402	Phycomp	2238-247-13654
4	CP34, CP7, CP78, CU30	22uF	Surface mount, general purpose multilayer ceramic chip capacitor. 22uF; 6.3V; X5R; +-20%;	805	Murata	GRM21BR60J226ME39L
11	C193, C194, C262, C263, C69, CL12, CL13, CL14, CL22, CL23, CL24	10u	Surface mount, general purpose multilayer ceramic chip capacitor 10u; 6.3V; X5R; +/-20%;	603	MURATA	GRM188R60J106M
1	CP39	10n	Surface mount, general purpose multilayer ceramic chip capacitor 10n; 25V; X7R; +/-10%;	402	Murata	GRM155R71E103K
4	CP10, CP21, CP83, CPU16	10uF	Surface mount, general purpose multilayer ceramic chip capacitor 10uF; 16V; X5R; 10%;	805	Murata	GRM21BR61C106KE15
2	C1730, C1731	18p	Surface mount, general purpose multilayer ceramic chip capacitor 18p; 50V; COG; +/-5%;	402	Murata	GRM1555C1H180J
1	CP80	22uF	Surface mount chip capacitor. Low ESR. 22uF; 16V; +/-20%;	1206	Murata	GRM31CR61C226M
2	C19, C20	27p	Surface mount, general purpose multilayer ceramic chip capacitor 27p; 50V; COG; +/-5%;	402	Murata	GRM1555C1H270J
1	CE4	1nF	High Voltage Chip Monolithic Ceramic Capacitor specifically for Ethernet LAN 1nF; 10000; X7R; 10;	1206	Kemet	C1206X102KDRACTU

100	C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C156, C167, C1710, C203, C204, C205, C206, C267, C268, C269, C270, C271, C272, C273, C274, C275, C276, C277, C58, C80, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97	1u	Surface mount, general purpose multilayer ceramic chip capacitor 1u; 6.3V; X5R; +/-10%;	402	Murata	GRM155R60J105KE19D
10	C10, C186, C187, C188, C189, C199, C200, C201, C202, CP13	1u	Surface mount, general purpose multilayer ceramic chip capacitor 1u; 10V; X5R; +/-10%;	402	Murata	GRM155R61A105KE15
1	CO7	10uF	Ceramic chip capactior. 10uF; 16V; X5R; 10%;	3216	TDK	C3216X5R1C106K
1	CP19	1u	Surface mount, general purpose multilayer ceramic chip capacitor 1u; 6.3V; X5R; +/-10%;	402	TDK	C1005X5R0J105K
1	CP12	2u2	Surface mount, general purpose multilayer ceramic chip capacitor 2u2; 10V; X5R; +10%-10%;	603	Murata	GRM188R61A225KE34
2	CP22, CP28	4u7	Surface mount, general purpose multilayer ceramic chip capacitor 4u7; 16V; X7R; +/-10%;	805	Murata	GRM21BR71C475KA73L
17	CE11, CE16, CE19, CE20, CE21, CE23, CE24, CE25, CE26, CE28, CE29, CE30, CE32, CE33, CE34, CE5, CE8	100n	Surface mount, general purpose monolithic ceramic capacitor 100n; 25V; X7R; +/-10%; 100n; 25V; X7R; +/-10%;	402	AVX	04023C104KAT2A
3	C57, C59, C61	4.7uF	Ceramic chip capactior. 4.7uF; 6.3V; X5R; 20%;	603	TDK	C1608JB0J475M
2	CP5, CP6	47uF	Surface mount, general purpose multilayer ceramic chip capacitor. 47uF; 6.3V; X5R; +-20%;	805	Murata	GRM21BR60J476ME15
2	CP17, CP20	100uF	Surface mount, general purpose multilayer ceramic chip capacitor. 100uF; 6.3V; X5R; +-20%;	C1206	Murata	GRM31CR60J107ME39L
1	CO34	47µF	Surface mount capacitor. Low ESR 47μF; 6.3V; X5R; +/- 20 %;	1210	TDK	C3225X5R0J476M
2	CO35, CP81	1uF	Surface mount capacitor chip. Low ESR 1uF; 16V; X7R; +/-10%;	603	TDK	C1608X7R1C105K
1	C1018	22uF	Surface mount, general purpose multilayer ceramic chip capacitor (DC bias: 20uF@5V; 14uF@12V; 11uF@16V; ESR:2mohm 22uF; 16V; X5R; +/-20%;	1210	MURATA	GRM32ER61C226ME20
1	J2		HTST series, 10 way vertical terminal strip through hole shrouded pin header connector. Double row, 2x5 pins, pitch 2.54mm. Straight tail length: 3.3mm.	IDC_2x5	Samtec	HTST-105-01-L-D
2	CN10, CN4		Single USB type A connector, kinked board-locks.	USB_TYPEA	Molex	67643-0910
1	CN1700		SATA signal connector. SMT. Vertical PCB mount.	SATA_SMT_V	Molex	678005011
1	CN1703		Single USB 2 type AB micro connector.		Molex	47589-0001
1	CN1702		60 pins 8mm TYCO Board to Board connector		tyco	5177983-2
1	CN1701		40 pins 8mm molex Board to Board connector		mOLEX	873814063
1	CN6		HDMI Receptacle (male) no flange, surface mount, 19 pin + 6 shield.		FCI	10029449-111RLF
1	CN3		micro SD Card		ALPS	SCHA4B0419
1	CN5		1.65mm DC JACK		CUINC	PJ-041H
1	CN9		RJ45 shielded no led no transformer		Molex	95540-6886
1	D1004	SM6T18A	Transil unidirectional Diode SM6T18A; 15.3;	SMB	STMicroelectro nics	SM6T18A

3	D24, D5, D8	BAT54JFILM	Double schotky diode, surface mount BAT54JFILM; 40V; 0.3A;	SOD-323	STMicroelectro nics	BAT54JFILM
1	F7		Surface mount resettable polyswitch fuse.I hold=0.35A and I trigger=0.75A 0.35A;	2012(0805)	Тусо	picoSMDC035S
1	HW1		Board label Zebra 27mm x 14mm			
1	HW2		MAC address label 18mm x 6mm		Novatech	NOVET00002
1	U1704		WIFI/BLUETOOTH LGA module based on RTL8723BU		FN-LINK	F23BUUM13-W2
1	UP6	LD1117AS18TR	Low drop voltage regulator. LD1117AS18TR; +1V8; 1A;	SOT223_TAB	STMicroelectro nics	LD1117AS18TR
1	U41		2A PEAK SINK_SOURCE DDR TERMINATION REGULATOR 2A;	DSQ_SON10_epad	Texas Instruments	TPS51206DSQ
1	U43		Multilayer Chip Antenna for 2.4GHz Wireless Communication		JOHANSON	2450AT45A100
1	D14		Quad transil array for ESD protection. Low capacitance device to support high speed signals. 6V1;	SOT323-5L	STMicroelectro nics	ESDALC6V1W5
3	U11, U7, U9		2 line USB protection diode.	SOT23_6L	STMicroelectro nics	USBLC6-2SC6
2	D1, D2		Quad Bidirectional transil array for ESD protection. 6V1;	SOT23-6L	STMicroelectro nics	ESDA6V1BC6
1	U22		Single channel power distribution switch (Active high Enables). 500mA;	SOT23-5L	STMicroelectro nics	STMPS2151STR
4	UO7, UP3, UP8, UU3		4 A peak step-down switching regulator 4A;	VFQFPN8	STMicroelectro nics	ST1S40IPUR
3	U10, U6, U8	STMPS2171STR	Enhanced single channel power switches (Active high Enables). STMPS2171STR; 1000mA;	SOT23-5L	STMicroelectro nics	STMPS2171STR
1	UE1		REALTEK 10/100/1000 GIGABIT Ethernet Transceiver	qfn_64_epad	REALTEK	RTL8211EG-VB-CG
1	U12		Micro-Power Comparator. Voltage threshold detector, 2V55 reference voltage. H Version - active high, push pull output.	SC-70-5	Micrel	MIC845HYC5
1	U24		IC type voltage monitor (2.85V to 3.00V thshd) active-low Reset output. 2.85V; 6uA;	SOT23-3	STMicroelectro nics	STM809SWX6F
2	UL1, UL2		DDR3L-SDRAM, 32M * 16bit * 8 Bank (4 Gbit), 1866Mb/s, CL of 13, DDR3-1866 equivalent. +1V35;	FBGA_96	Micron	MT41K256M16HA-107:E
1	UP1		6A Continuous, 12A Peak step-down switching regulator 6A;	QFN3x3_10	Silergy	SY8366QNC
5	U1701, U19, U20, U37, U38		0.3pF,4 line ESD protection for high speed lines.	uQFN-10L	STMicroelectro nics	HSP051-4M10
1	U14		Single Power Supply Inverter Gate CMOS Logic Level Shifter	SOT-23	Texas Instruments	SN74LV1T04DBVR
1	U1702		USB2.0 tree port Hub 3.3V;	QFN-36	SMSC	USB2513BI-AEZG
1	U46	1000 Base-T	1000 Base-T single port Ethernet isolation transformer module. 1000 Base-T; 1000;		PULSE	H5084NLT
1	U401		N25Q128 SPI Flash. 128Mbit. 3V, Multiple I/O, 4KB Sector Erase,108 MHz,support dual I/O and quad I/O		Micron	N25Q128A13E1240
1	U1		STiH410 Cut2.0.a processor, Cannes	bga_25x25	STMicroelectro nics	STIH410EJB
5	U1705, U1706, U1707, U1708, U1709		8-Bit Bidirectional Voltage-Level Translator with Auto-Direction Sensing. for open drain and push pull 3.3V/1.8V;		TI	TXS0108ERGYR
1	LP6	3u3H	Surface mount magnetically shielded, wire wound inductor for power line applications. 3u3H; 4.1A;	6.8x7.3mm SMT	TDK	RLF7030T-3R3M4R1

1	LU16	100R @ 100MHz	resistance: 0.10hm. 100R @ 100MHz;	603	Murata	BLM18EG101TN1
12	F15, F20, F23, F33, F34, F35, F36, F37, F38, F4, FP3, FP7	26R @ 100MHz	2A: On-board type (DC) EMI suppression filter. Chip ferrite bead. Max DC resistance: 0.0070hm. 26R @ 100MHz; 6A;	603	Murata	BLM18KG260TN1
1	LP3	6u8H	Surface mount magnetically shielded, wire wound inductor for power line applications. 6u8H; 2.8A;	6.8x7.3mm SMT	TDK	RLF7030T-6R8M2R8
1	LP1	1u5H	Surface mount magnetically shielded, wire wound inductor for power line applications. 1u5H; 6.1A;	6.8x7.3mm SMT	TDK	RLF7030T-1R5N6R1
1	LE1	2u2	Surface mount inductor. 2u2; 10%; 350mA;	l1210	murata	LQH32MN2R2K23
3	FO11, FP12, LU11	220R @ 100MHz	On-board type (DC) EMI suppression filter. Chip ferrite bead. Max DC resistance: 0.05 Ohm. 220R @ 100MHz; 2.2 A:	603	Murata	BLM18KG221SN1
2	LU10, LU17	4u7H	Surface mount magnetically shielded, wire wound inductor for power line applications. (For new design, recommended to use VLS6045EX series:	6.8x6.8mm SMT	TDK	VLP6045LT-4R7M
1	L3767	3.9nH	3.9nH - Surface mount inductor - +/- 0.3nH - 300mA - 0402 3.9nH; +/-0.3nH; 300mA;	402	murata	LQG15HN3N9S02
4	LD2, LD3, LD4, LD5	Green LED	Surface mount bright LED. Colour: green. Mark denotes cathode. Forward current: 25mA. Green LED; 2.2V;		KINGBRIGHT	APT1608SGC
1	D1006	Yellow LED	Surface mount bright LED. Colour: Yellow. Mark denotes cathode. Forward current: 30mA. Yellow LED; 2.1V;		KINGBRIGHT	APT1608YC
1	D1005	Blue LED	Surface mount bright LED. Colour: Blue. Mark denotes cathode. Forward current: 30mA. Blue LED; 3.3V;		KINGBRIGHT	APT1608QBC/D
1	PCB1		PCB B2260B 100*85mm 4 layers			
1	R575	0R	Ultra-Low ohmic jumper chip resistors. 0R; 31.6A;	R0805	ROHM	PMR10EZPJ000
1	R187	2K	Automotive grade Surface mount chip resistor 2KOhm 5% 0402 2K; 5; 0.0625;	402	Vishay	CRCW04022K0J
1	F1000	5A fuse + holder	Fuse holder pre-fitted with 5A fuse. Use 451/453/448 series fuses for replacement 5A fuse + holder; 125V; 5A;	154	Littelfuse	0154005DRL
1	J1		Switch, push button 3.9 × 2.9mm surface mount.		ALPS	SKRKAHE010
2	Q11, QP1	BC846	Surface mounted n-p-n general purpose transistor. BC846;	SOT23	Fairchild	BC846BMTF
1	Q10		N-CHANNEL 60V - 1.8ohm - 0.35A SOT23-3L - TO-92 STripFET™II MOSFET	SOT23	STMicroelectro nics	2N7002
2	QP6, QP7	SI2399DS	P Channel 20V(D-S) MOSFET.Vgs=1.5V Sl2399DS; 6A;	SOT23	VISHAY	SI2399DS
1	XE1	25MHz	SMD crystal. Load capacitance: 20pF. 25MHz; +-20ppm; 25MHz;	HCX-5SA	Hosonic	E5SA25.0000F20D25 (discontinued)
1	Х3	30MHz	SMD crystal. Load capacitance: 20pF. 30MHz; +-20ppm; 30MHz;	HCX-5SA	Hosonic	E5SA30.0000F20D25
1	X4		Surface mount crystal,Load capacitance: 12pF,30 PPM 24MHz;		TXC	7A-24.000MAAE-T