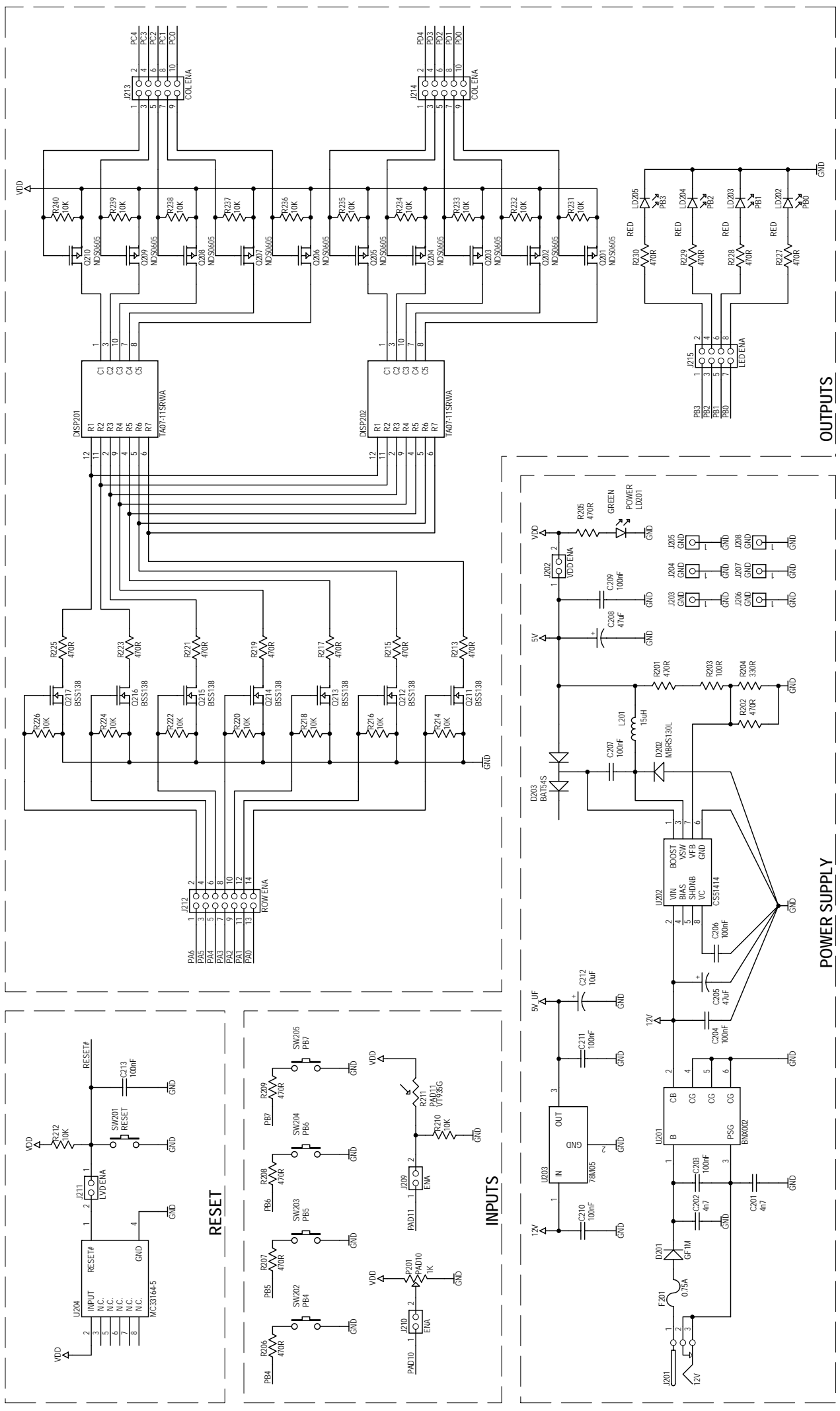
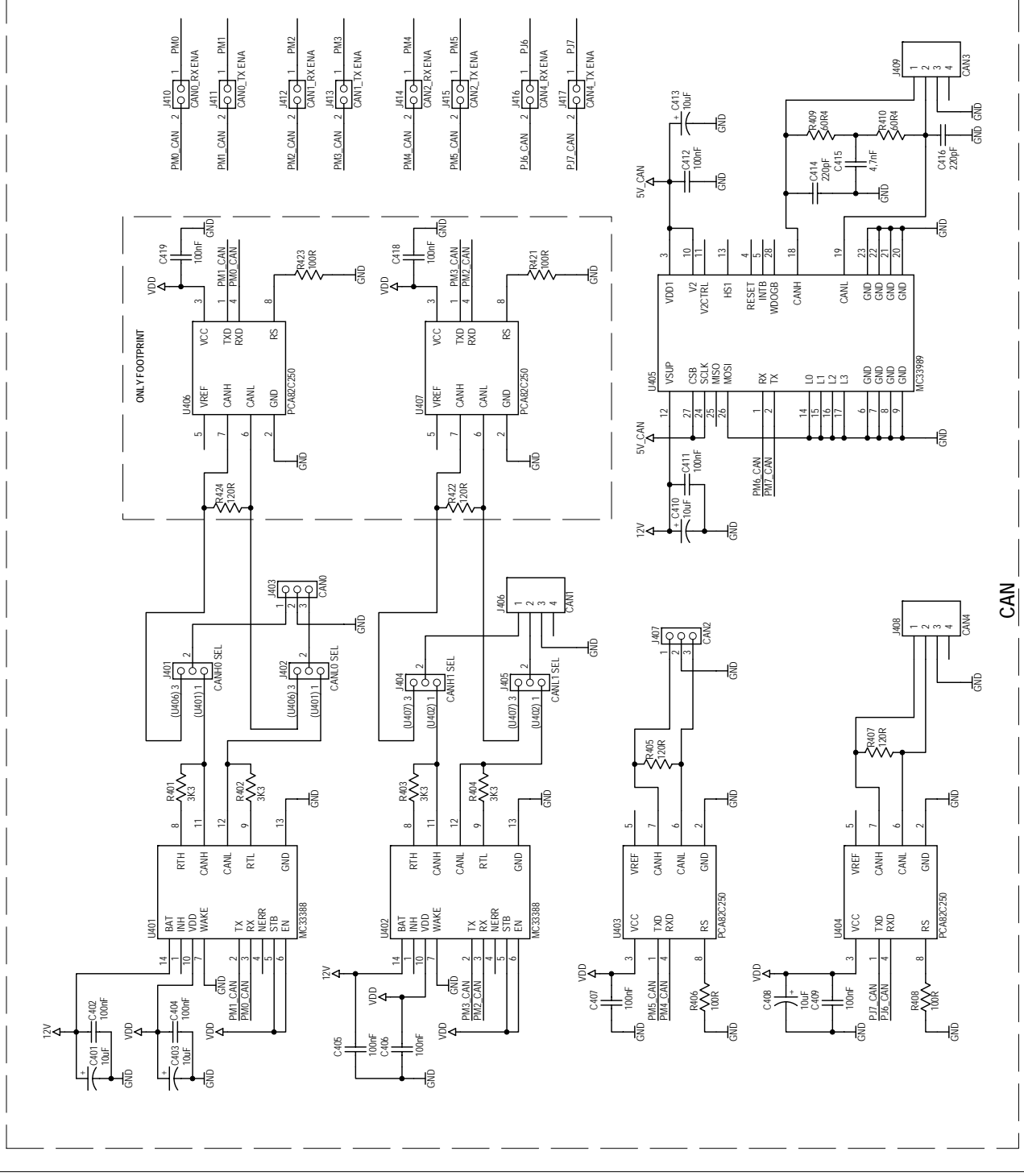


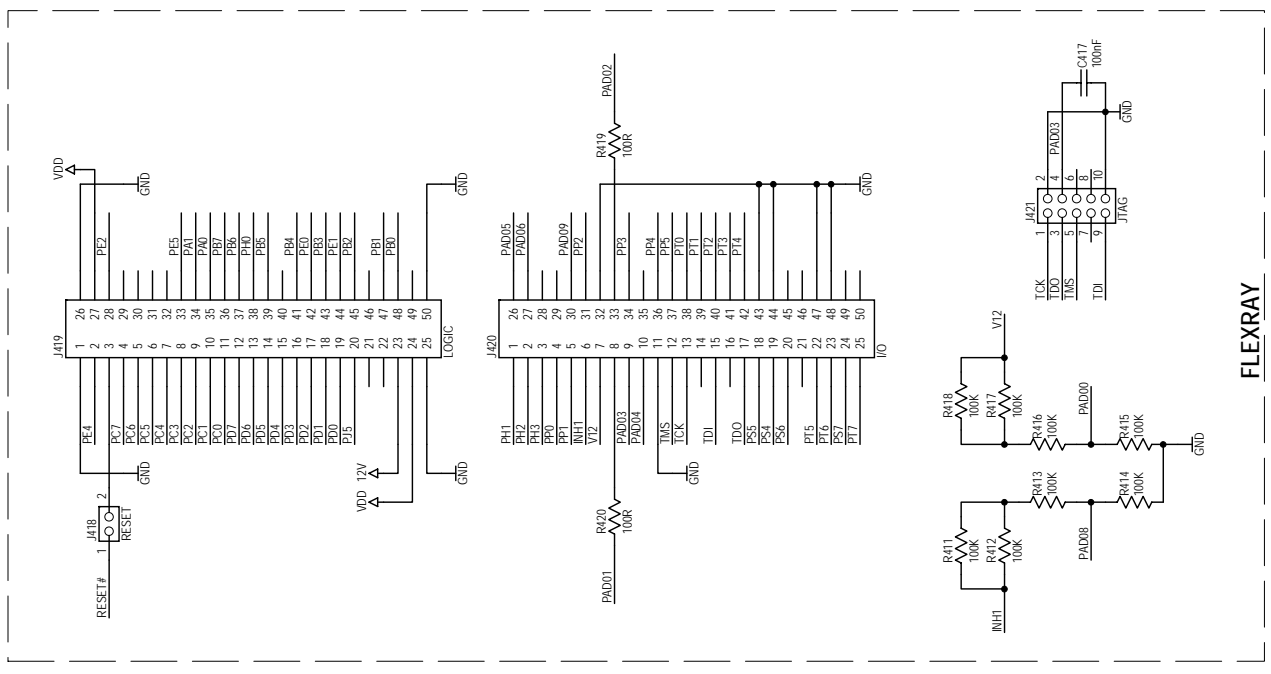
SK-S12XDP512-A

Schematic and Bill of Material





CAN



FLEXRAY

SK-S12XDP512-A Bill of Material

Qty	Description	Ref. Designators	Vendor Part#
Capacitors			
34	Ceramic Capacitor 100nF X7R 50V 0805	C104, C107, C109, C111, C113, C116, C203, C204, C206, C207, C209, C210, C211, C213, C307, C308, C309, C310, C312, C313, C402, C404, C405, C406, C407, C409, C411, C412, C417(Optional), C418(Optional), C419, C503, C504, C506, C508, C509	Walsin, 0805B104K500CT
2	Ceramic Capacitor 10pF X7R 50V 0805	C118, C119	Walsin, 0805N100K500CT
4	Ceramic Capacitor 1uF X7R 25V 0805	C301, C302, C303, C304	Walsin, 0805B105K250CT
1	Ceramic Capacitor 2.2nF X7R 50V 0805	C114	Walsin, 0805B222K500CT
3	Ceramic Capacitor 220nF X7R 25V 0805	C101, C102, C103	Walsin, 0805B224K250CT
2	Ceramic Capacitor 220pF X7R 50V 0805	C414, C416	Walsin, 0805B221K500CT
1	Ceramic Capacitor 22nF X7R 50V 0805	C115	Walsin, 0805B223K500CT
3	Ceramic Capacitor 22pF NP0 50V 0805	C117, C501, C502	Walsin, 0805N220K500CT
3	Ceramic Capacitor 4,7nF X7R 50V 0805	C201, C202, C415	Walsin, 0805B472K500CT
16	Tantalum Capacitor 10uF 16V size B	C105, C106, C108, C110, C112, C212, C305, C306, C311, C401, C403, C408, C410, C413, C505, C507	NIC Components, NTC-T106M16TRBF
2	Tantalum Capacitor 47uF 16V (low ESR) size D	C205, C208	NIC Components, NTC-L476M16TRD
Connectors			
1	Box Header Connector 10 way male straight solder pitch 2,54mm	J421	Coxoc, 302A-10PGAS003
1	Box Header Connector 6 way male straight solder pitch 2,54mm	J110	Coxoc, 302A-06PGAS003
2	Connector IP Module 50 way male Comm Con Connectors 8061-50G2	J419, J420	Comm Con Connectors, 8061-50G2
1	DC Power Connector 2.1 mm male 90° PCB mounting	J201	Samar, 22HP037
2	D-Sub Connector 9 pin female 90°	J301, J302	Coxoc, 205A-09FSTUBE3
4	Header Connector 18x2 pin male gold straight 6mm pitch 2,54mm	J101, J102, J103, J104	Coxoc, 307A-040GBSAA3
31	Header Connector 2x1 pin male gold straight 6mm pitch 2,54mm	J107, J108, J114, J202, J209, J210, J211, J308, J310, J312, J314, J316, J318, J321, J322, J323, J324, J325, J326, J327, J410, J411, J412, J413, J414, J415, J416, J417, J418, J502, J503	Coxoc, 307A-040GASAA3
16	Header Connector 3x1 pin male gold straight 6mm pitch 2,54mm	J105, J106, J109, J111, J112, J113, J309, J313, J317, J320, J401, J402, J403, J404, J405, J407	Coxoc, 307A-040GASAA3
5	Header Connector 3x2 pin male gold straight 6mm pitch 2,54mm	J303, J304, J305, J306, J307	Coxoc, 307A-080GBSAA3
1	Header Connector 4x2 pin male gold straight 6mm pitch 2,54mm	J215	Coxoc, 307A-040GBSAA3
2	Header Connector 5x2 pin male gold straight 6mm pitch 2,54mm	J213, J214	Coxoc, 307A-040GBSAA3
1	Header Connector 7x2 pin male gold straight 6mm pitch 2,54mm	J212	Coxoc, 307A-040GBSAA3
3	Mini-Fit Connector Molex 5569 series 4 way 90° dual row pitch 4,20mm	J311, J315, J319	Molex, 39-29-5043
3	Mini-Fit Connector Molex 5569 series 4 way 90° single row pitch 4,20mm	J406, J408, J409	Molex, 39-30-3047
6	PCB Terminal Connector black 1,32mm	J203, J204, J205, J206, J207, J208	William Hughes, 100-103

Qty	Description	Ref. Designators	Vendor Part#
73	Shunt jumper 2,54mm totally insulated black		Coxoc, 308A02PGBA003
1	USB Connector Receptacle Type B 90°	J501	Coxoc, 317A-04PSB0003
Crystals			
1	SMD Crystal 12MHz HC-49USMD (11x5x3)	Y501	Megatec, HC49/USM4-012M000000CR
1	SMD Crystal 4MHz HC-49USMD (11x5x3)	Y101	Megatec, HC49/USM4-004M000000CR
Diodes			
1	Rectifier Diode GF1M SMA	D201	Fairchild Semiconductor, GF1M
9	Schottky Diode BAT54S SOT23	D203, D301, D302, D303, D304, D305, D306, D501, D502	Philips, BAT54S
1	Schottky Diode MBRS130L SMB	D202	On Semiconductor, MBRS130LT3G
Displays			
2	LED Dot Matrix Display TA07-11SRWA DIP12	DISP201, DISP202	Kingbright, TA07-11SRWA
Filters			
1	EMI Filter 50Vdc 6-pin	U201	Murata, BNX002-1
Fuses			
1	Autorestore Fuse 0,75A 1812	F201	Raychem Circuit Protection, miniSMDC075F-2
Inductors			
1	SMD Inductor 10uH 150mA 1210	L101	TDK, NL322522T-100J
1	SMD Inductor 15uH 1,47A 2-pin	L201	Würth, 744777115
Integrated Circuits			
1	IC Microcontroller MC9S12UF32 LQFP64	U501	Freescale, MC9S12UF32PB
1	IC Microcontroller MC9S12XDP512 QFP144	U101	Freescale, MC9S12XDP512CFV
1	IC Supervisor Reset MC33164D-5 SOIC8	U204	On Semiconductor, MC33164D-5R2G
2	IC Transceiver CAN MC33388 SOIC14	U401, U402	Freescale, MC33388D
6	IC Transceiver LIN MC33661 SOIC8	U302, U303, U304, U305, U306, U307	Freescale, MC33661D/R2
1	IC Transceiver MC33989 SOIC28	U405	Freescale, MC33989DW
2	IC Transceiver PCA82C250 SOIC8	U403, U404, U406(Optional), U407(Optional)	Philips, PCA82C250T
1	IC Transceiver RS-232 MAX3232 SOIC16	U301	STMicroelectronics, ST3232CD
1	IC Voltage Regulator CS51414 SOIC8	U202	On Semiconductor, CS51414G
1	IC Voltage Regulator LM78M05 5V TO252 (DPAK)	U203	National Semiconductor, LM78M05CDT
LEDs			
1	SMD LED Green 1206	LD201	Agilent Technologies, HSMG-C150
4	SMD LED Red 1206	LD202, LD203, LD204, LD205	Agilent Technologies, HSMH-C150
Oscillators			
1	PTH Oscillator Module 16 MHz DIP4	U102	Megatec, DH2100S
Potentiometers			
1	Potentiometer 1K vertical adjust	P201	Phier, PT10MVP102A2020
Resistors			
1	Photoresistor VT935G pitch 2,54mm	R211	PerkinElmer Optoelectronics, VT935G
1	SMD Resistor 0R 5% 1/8W 0805	R109	Kamaya, RMC1/10JPTP
1	SMD Resistor 1,5K 1% 0805	R503	Kamaya, RMC1/10K1501FTP
13	SMD Resistor 1,8K 1% 0805	R101, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312	Kamaya, RMC1/10K1801FTP
9	SMD Resistor 100K 1% 0805	R411, R412, R413, R414, R415, R416, R417, R418, R507	Kamaya, RMC1/10K1003FTP

Qty	Description	Ref. Designators	Vendor Part#
7	SMD Resistor 100R 1% 0805	R203, R406, R408, R419, R420, R421(Optional), R423(Optional), R508, R510	Kamaya, RMC1/10K1000FTP
23	SMD Resistor 10K 1% 0805	R210, R212, R214, R216, R218, R220, R222, R224, R226, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R313, R314, R506, R509	Kamaya, RMC1/10K1002FTP
1	SMD Resistor 10M 1% 0805	R108	Kamaya, RMC1/10K1005FTP
2	SMD Resistor 120R 5% 1/4W 1210	R405, R407, R422(Optional), R424(Optional)	Kamaya, RMC1/4K121JTE
3	SMD Resistor 1K 1% 0805	R102, R106, R107	Kamaya, RMC1/10K1001FTP
1	SMD Resistor 1M 1% 0805	R505	Kamaya, RMC1/10K1004FTP
7	SMD Resistor 3,3K 1% 0805	R103, R104, R110, R401, R402, R403, R404	Kamaya, RMC1/10K3301FTP
1	SMD Resistor 330R 1% 0805	R204	Kamaya, RMC1/10K3300FTP
2	SMD Resistor 33R 1% 0805	R501, R502	Kamaya, RMC1/10K33R0FTP
1	SMD Resistor 4,7K 1% 0805	R105	Kamaya, RMC1/10K4701FTP
18	SMD Resistor 470R 1% 0805	R201, R202, R205, R206, R207, R208, R209, R213, R215, R217, R219, R221, R223, R225, R227, R228, R229, R230	Kamaya, RMC1/10K4700FTP
1	SMD Resistor 510R 1% 0805	R504	Kamaya, RMC1/10K5100FTP
2	SMD Resistor 60R4 1% 1/4W 1210	R409, R410	Kamaya, RMC1/4K60R4FTE
Sockets			
1	IC Socket 4(8) pin tulip for oscillator module DIP4		E-tec, COS-084-S001-01
Switches			
5	Push Button SMD	SW201, SW202, SW203, SW204, SW205	Augat, FSM4JSMA
Transistors			
7	NMOS Transistor BSS138 SOT23	Q211, Q212, Q213, Q214, Q215, Q216, Q217	On Semiconductor, BSS138LT1G
10	PMOS Transistor NDS0605 SOT23	Q201, Q202, Q203, Q204, Q205, Q206, Q207, Q208, Q209, Q210	Fairchild Semiconductor, NDS0605_NL