

SOPIKA TRANSMITTER - Final Parts List - December 2012

Assembly	Part name	Pcs/unit	Description	Manufacturer	Part number	Supplier	Ordering code
TRANSMITTER RF MODULE							
U2	LNA Low noise amplifier	1	CC2590 IC RF FRONT END 2.4GHZ 16-QFN Low Noise Amplifier TI		CC2590RGVT	DIGIKEY	296-23853-1-ND
U1	RF Transceiver	1	CC8520 IC SOC W/RF 2.4GHZ LP 40VQFN Transceiver TI		CC8520RHAT	DIGIKEY	296-27249-1-ND
C4; C5;	0.1uF 10V X5R 0402 SMD	2	CAP CER 0.1UF 10V 10% X5R 0402 Murata		GRM155R71A104KA01D	DIGIKEY	GRM155R71A10
C13	18pF, NP0 50V 0402SMD	1	CAP CER 18PF 50V 5% NP0 0402 Murata		GRM1555C1H180JZ01D	DIGIKEY	490-1281-1-ND
C10; C11; C12	C_1N_0402_NP0_J_50	3	CAP CER 1NF 50V 5% NP0 0402 Murata		GRM1555C1H102JA01D	DIGIKEY	490-3244-1-ND
C14	1.2pF, NP0 50V 0402SMD	1	CAP CER 1.2PF 50V NP0 0402 Murata		GRM1555C1H1R2CZ01D	DIGIKEY	490-1265-1-ND
C16	1.8pF, NP0 50V 0402SMD	1	CAP CER 1.8PF 50V NP0 0402 Murata		GRM1555C1H1R8CZ01D	DIGIKEY	490-3203-1-ND
C1;	1uF 6.3V 10% X5R 0402SMD	1	CAP CER 1UF 6.3V 10% X5R 0402 Murata		GRM155R60J105KE19D	DIGIKEY	490-1320-1-ND
C6	220pF, NP0 5% 50V 0402SMD	1	CAP CER 220PF 50V 5% NP0 0402 Murata		GRM1555C1H221JA01D	DIGIKEY	490-1293-1-ND
C7; C8	27pF, NP0 5% 50V 0402SMD	2	CAP CER 27PF 50V 5% NP0 0402 Murata		GRM1555C1H270JZ01D	DIGIKEY	490-1284-1-ND
C2; C3; C9;	2.2uF 6.3V 20% X5R 0402 SMD	3	CAP CER 2.2UF 6.3V 20% X5R 0402 Murata		GRM155R60J225ME15D	DIGIKEY	490-4519-1-ND
C15	6.8pF, NP0 5% 50V 0402SMD	1	CAP CER 6.8PF 50V NP0 0402 Murata		GRM1555C1H6R8CZ01D	DIGIKEY	490-1276-1-ND
L12	1.5nF Inductor, 0402 SMD	1	INDUCTOR 1.5NH 300MA 0402 Murata		LQG15HS1N5S02D	DIGIKEY	490-2612-1-ND
L10	2.2nF Wirewound Inductor, 0402 SMD	1	IND CHIP WIREWOUND 2.2NH Murata		LQW15AN2N2C10D	DIGIKEY	LQW15AN2N2C
L11	3.9nF Wirewound Inductor, 0402 SMD	1	IND CHIP WIREWOUND 3.9NH Murata		LQW15AN3N9B00D	DIGIKEY	LQW15AN3N9B00D-ND
L1; L2; L3; L4; L5; L6; L7	6.8nF Inductor, 0402 SMD	7	INDUCTOR 6.8NH 300MA 0402 Murata		LQG15HS6N8J02D	DIGIKEY	490-2621-1-ND
L8; L9	Filter Bead	2	FILTER CHIP 1000 OHM 250MA 0402 Murata		BLM15HG102SN1D	DIGIKEY	490-3999-1-ND
R3	100K, 1/10W 1% 0402 SMD	1	RES 100K OHM 1/10W 1% 0402 SMD Panasonic		ERJ-2RKF1003X	DIGIKEY	P100KLCT-ND
R1	10K, 1/10W 1% 0402 SMD	1	RES 10.0K OHM 1/10W 1% 0402 SMD Panasonic		ERJ-2RKF1002X	DIGIKEY	P10.0KLCT-ND
R4; R5	4.3K, 1/10W 1% 0402 SMD	2	RES 4.30K OHM 1/10W 1% 0402 SMD Panasonic		ERJ-2RKF4301X	DIGIKEY	P4.30KLCT-ND
R2	56K, 1/10W 1% 0402 SMD	1	RES 56.0K OHM 1/10W 1% 0402 SMD Panasonic		ERJ-2RKF5602X	DIGIKEY	P56.0KLCT-ND
JS1 (SOCKET S1); JS2 (SOCKET S2)	SMD_SOCKET_2X10	2	SMD pinrow socket, .050 spacing, 2x10 Samtec		SFM-110-01-S-D-A	DIGIKEY	SFM-110-01-S-C
X1	48 MHz Crystal SMD	1	CRYSTAL 48.0000 MHZ 10PF SMD Abracon		ABM11-48.000MHZ-B7G-T	DIGIKEY	535-9824-1-ND
Total number of components		38					
TRANSMITTER MAIN BOARD							
U1	Low Voltage Flip Flop	1	IC LOW VOLTAGE 8 pin DCT package TI		SN74LVC1G74DCT	MOUSER	
U2	Low Voltage Schmidt Trigger	1	IC LOW VOLTAGE 6 pin SOT SC-70 package TI		SN74AUP2G14DCK	MOUSER	
U3	Charger Regulator	1	IC CHARGER REGULATOR 20 pin QFN package LTC		LTC3553EUB#PBF	LTC	
U4	Stereo Audio Codec	1	IC STER AUD CODEC 24 BIT 32-VQFN TI		TLV320AIC3101RHBT	DIGIKEY	296-21969-1-ND
JS4 (BATTERY SOCKET CONNECTOR)	2 pin socket connector	1	2 pin socket, 2x1 0.1" pin spacing				
JP1 (PLUG P1); JP2 (PLUG P2)	SMD_PLUG_2X10	2	SMD pinrow plug, .050" spacing, 2x10 Samtec		TFM-110-01-S-D-WT or TFM-110-01-S	DIGIKEY	SAM8699-ND
J2 (USB CONN)	Mini USB Female Connector Type B SMT	1	USB MINIB SMT RCPT 5CKT GOLD Molex		675031230	DIGIKEY	WM3453TR-ND
SW1; SW2	SPST Switch Pushbutton	2					
J1	Stereo Jack	1	STEREO JACK Keystone		981TR		
BC1	PCB Connector		2 X 3 Pin PCB connector				
BC2	PCB Connector		2 X 2 Pin PCB connector				
T1; T2	Isolation Transformer	2	600 Ohm : 600 Ohm Center Tap Audio Isolation Transformer Datatronics		502-1	DATATRONICS	
D1; (Ref # Not Used)							
D4; (Ref # Not Used)							
D3	Small Signal Diode	1	DIODE SS FAST 100V 200MA DO35 Fairchild		1N4148TA	DIGIKEY	1N4148TACT-ND
D7; D8	Dual LED (Charging and Power Indication)	2					
R3	1.8K Ohm 1/8W 5% 0805 SMD	1	RES 1.8K OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ182V	DIGIKEY	P1.8KACT-ND
R6	2.0K Ohm 1/8W 5% 0805 SMD	1	RES 2.0K OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ202V	DIGIKEY	P2.0KACT-ND
R7; R21	330 Ohm 1/8W 5% 0805 SMD	2	RES 330 OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ331V	DIGIKEY	P330ACT-ND
R2; R8;	10K Ohm 1/10W 5% 0603 SMD	2	RES 10K OHM 1/10W 5% 0603 SMD Panasonic		ERJ-3GEYJ103V	DIGIKEY	P10KGCT-ND
R1; R4; R11; R13	100K, 1/8W 5% 0805 SMD	4	RES 100K OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ104V	DIGIKEY	
R12;	1M Ohm 1/10W 5% 0603 SMD	1	RES 1M OHM 1/10W 5% 0603 SMD Panasonic		ERJ-3GEYJ105V	DIGIKEY	
R9; R10	2.2K Ohm 1/10W 5% 0603 SMD	2	RES 2.2K OHM 1/10W 5% 0603 SMD Panasonic		ERJ-3GEYJ222V	DIGIKEY	P2.2KGCT-ND
R5; R14; R17	20 Ohm 1/8W 5% 0805 SMD	3	RES 20 OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ200V	DIGIKEY	
R15	2.0 M Ohm 1/10W 0402 SMD	1	RES 2.0M OHM 1/10W 5% 0402 SMD Panasonic		ERJ-2GEJ205X	DIGIKEY	
R18	750K, 1/10W 0402 SMD	1	RES 750K OHM 1/10W 5% 0402 SMD Panasonic		ERJ-2GEJ754X	DIGIKEY	
R16; R19	620K, 1/10W 0402 SMD	2	RES 620K OHM 1/10W 5% 0402 SMD Panasonic		ERJ-2GEJ624X	DIGIKEY	
R20	560 Ohm 1/8W 5% 0805 SMD	1	RES 560 OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ561V	DIGIKEY	P560ACT-ND
R22; R23	470 Ohm 1/8W 5% 0805 SMD	2	RES 470 OHM 1/8W 5% 0805 SMD Panasonic		ERJ-6GEYJ471V	DIGIKEY	P470ACT-ND
C3; C4, C6; C7	10uF 10V	4	CAP CER 10UF 10V Y5V 1206 Murata		GRM31MR61A106ME19L	DIGIKEY	490-1819-1-ND
C2; C9; C16	0.1uF Ceramic	3	CAP CER 0.1UF 10V 10% X5R 0402 Murata		GRM155R61A104KA01D	DIGIKEY	490-1318-1-ND
C10; C11; C12; C13; C14; C15	4.7uF 6.3V	6	CAP CER 4.7UF 6.3V Y5V 0603 Murata		GRM188F50J475E20D	DIGIKEY	490-3303-1-ND
C1;	1uF 10V	1	CAP CER 1UF 10V 10% X5R 0603 Murata		GRM188R61A105KA61D	DIGIKEY	490-1543-2-ND
C5	2.2uF 10V	1	CAP CER 2.2UF 10V Y5V 0603 Murata		GRM188F51A225E01D	DIGIKEY	490-1586-2-ND
C8	10pF, NP0 5% 50V 0402SMD	1	CAP CER 10PF 50V 5% NP0 0402 Murata		GRM1555C1H100JZ01D	DIGIKEY	490-1278-2-ND
L1; L2	Filter Bead	2	FILTER CHIP 1000 OHM 250MA 0402 Murata		BLM15HG102SN1D	DIGIKEY	490-3999-1-ND
L3	6.8uH Inductor	1	6.8uH INDUCTOR 2014 SMD Coilcraft		EPL2014-682MLB	Coilcraft	

Total number of components		58					
NETWORK PAIRING SUB-BOARD							
SW3;	SPST Button Switch (Push ON, Push OFF)	1					
D2; D4	Network Status PAIRING LED	2					
R7; R21	330 Ohm 1/8W 5% 0805 SMD	2	RES 330 OHM 1/8W 5% 0805 SMD	Panasonic	ERJ-6GEYJ331V	DIGIKEY	P330ACT-ND
BP1	PCB Connector	2	2 X 3 Pin PCB connector				
BP2	PCB Connector		2 X 2 Pin PCB connector				
Total number of components		5					
TRANSMITTER BATTERY BOARD							
JS5 (BATTERY PLUG)	2 pin plug conn. (mates with JS4 on MB)	1	2 pin plug, 2x1 0.1" pin spacing				
BT1	LiOn 3.7V battery pack	1	BATTERY PACK Li-Polymer 3.7V 240mAh w/PCB protection	All-Battery	602025 (Order code 30113-1)	TENERGY	30113-1
Total number of components		2					