

SPY3 DSP-AUDIO-RF Board Revised: Tuesday, December 13, 2016													
SPY3-DSP_RevC_0_120916__PAM63.DSN Revision: C_0													
Bill Of Materials December 13,2016 16:52:30													
Item	Qty	RefDes	Description	Tolerance	Zaxcom_PN	Manuf	Manuf_PN	FootPrint	Note	Alt_manuf	Alt_manuf_PN	PartDesc	Qty_in_Kit
1	6	C4,C14,C38,C75,C96,C148	0.1uF	20%	ZC-0201-0.1uF-20%-6.3V (X5R)	Venkel	C0201X5R6R3-104MNP (or MNE)	R0201	0.013"H	Murata	4905404-2-ND)	mlcc	
2	5	C7,C53,C110,C295,C603	0.01uF	20%	ZC-0201-0.01uF-20%-6.3V (X7R)	Venkel	C0201X7R6R3-103MNP (or MNE)	R0201	X7R. 6.3V,higher; 20%,10%,tighter	TDK	445-7308-2-ND)	mlcc	
3	21	C8,C65,C77,C79,C100,C156,C157,C158,C170,C171,C172,C173,C308,C400,C590,C591,C592,C601,C604,C605,C606	100pF COG	5%	ZC-0201-100pF-5%-25V (COG)	Murata	490-3160-2-ND)	R0201	5%/2%/1%; 0.013"	Venkel	C0402COG250-101JNP (or JNE)	mlcc	
4	1	C9	DNI	+/-0.5pF	ZC-0201-9pF+/-0.5pF-50V			R0201	0.1pF			mlcc	
5	2	C10,C638	100uF S/1206 PolyT	20%	6.3V PolyT LoE	AVX	TCNS107M006R0250	Aux Code A W (1206)	PolymerTant;ESR250mohm;.047"H	ND	9594-2-ND		
6	9	C60,C61,C66,C95,C210,C211,C597,C653,C654	220pF X7R	5%	ZC-0201-220pF-5%-10V (X7R)	Venkel	C0201X7R100-221JNP	R0201	X7R. 10V/16V/25V;10%/5%; 0.013"H	221KNP	GRM033R71E221KA01D		
7	1	C62	12pF COG	2%	ZC-0201-12pF-2%-25V (COG)	Venkel	C0201COG250-120GNP	R0201	COG. 10V/16V/25V;2%/5%; 0.013"H	Murata	(Digikey#: 490-11967-2-ND)		
8	1	C63	2200pF X7R	10%	ZC-0201-2200pF-10%-10V (X7R)	Venkel	C0201X7R100-222KNP	R0201	X7R. 10V/16V/25V;10%/5%; 0.013"H	Murata	(Digikey#: 490-6144-2-ND)		
9	1	C64	470nF X5R	20%	ZC-0201-0.47uF-20%-6.3V (X5R)	Murata	GRM033R60J474KE90D	R0201	X5R. 6.3V/higher;20%/10%; 0.013"H		10409-2-ND		
10	12	C135,C136,C137,C138,C139,C140,C141,C142,C403,C404,C405,C406	5600pF X5R	10%	ZC-0201-5600pF-10%-25V X5R	Murata	GRM033R61E562KA12D	R0201	10%/5%/better	10426-2-ND		mlcc	
11	1	C149	2.2uF S/1206 TANT	10%	ZC-SCASE(shrtA)-2.2uF-10%-16V	AVX	TAJS225K016RNJ	Aux Code A W (1206)	S=shortA=0.047"H	8932-2-ND			
12	1	C150	0.22uF 0402	10%	ZC-0402-0.22uF-10%-16V (X7R)	Murata	490-5418-2-ND or -1-ND)	R0402	X7R. 6.3V/10V/16V;10%/20%; 0.022"H	TDK	445-5936-2-ND or -1-ND)	mlcc	
13	2	C203,C623	5.1pF HiQ	+/-0.25pF	(COG/NPO)	Murata	GJM0335C1E5R1CB01D	R0201	COG/NPO HiQ; 6.3V or higher		3072-2-ND		
14	3	C392,C393,C394	47uF T/3528 6.3V TANT	20%	ZC-TCASE(shrtB)-47uF-10%-6.3V	AVX	TAJT476K006RNJ	CAP ELEC SMD Bcase	T=shortB=0.047"H		3276-2-ND	Cap,Tant	
15	1	C588	10uF S/1206 6.3V TANT	20%	6.3V	AVX	TAJS106K006RNJ	Aux Code A W (1206)	(shortA)=0.047"H		478-3965-2-ND	AVX 20%: TAJS106M006RNJ	
16	1	C593	1.8pF 0402 HiQ	+/-0.25pF	ZC-0402-1.8pF+/-0.25pF-50V	Murata	490-3089-1-ND)	C0402	0.1pF;0.022"H	Murata	GJM1555C1H1R8BB01D	mlcc	
17	4	C594,C596,C598,C600	9pF	+/-0.1pF	ZC-0201-9pF+/-0.1pF-25V COG	Murata	490-13325-2-ND)	R0201	COG 25V,50V; +/-0.1pF		R0BA1D	mlcc	
18	1	C656	10uF T/3528 TANT	20%	16V	AVX	TPST106K016R0800	CAP ELEC SMD Bcase	T (shortB)=0.047"		9270-2-ND		
19	1	D1	SMV1405-040LF		SMV1405-040LF	nsInc	SMV1405-040LF	C0402	L361		1-ND (-2-ND)		
20	1	J1	DNlz - HDR1X2					HDR 1X2	Shiled to Pin1SqPad				
21	3	L1,L353,L372	LFCN-630+		LFCN-630+	Mini-Circuits	LFCN-630+	FILTER LFCN (2500)	LowPass Filter DC to 630MHz 50ohm			LPFitr	
22	1	L2	8.2nH 0201 TF	5%	ZL-0201-8.2nH-5%	Murata	5566-2-ND)	R0201	00mohm;250mA	Murata	490-6740-2-ND)		
23	2	L5,L363	68nH 0402	5%	ZL-0402-68nH-5%	Bourms	CI100505-68NJ	R0402	0ohm,Irms=100mA			Ind	
24	3	L17,L377,L383	0.82uH 0805	20%	ZL-0805-0.82uH-20%	(B&R)	GMLI-201209-R82J	Ind SMD 0805	0%;.035"H	Venkel	MLF2012-R82KT	Ind	
25	8	L20,L21,L22,L23,L304,L305,L306,L307	68uH 0805	10%	ZL-0805-68uH-10%	TDK	1069-1-ND)	C0603	SRF9M;0.057"H		DK# 445-1069-2-ND (2KpcT&R)		
26	2	L200,L203	18nH 0201	5%	ZL-0201-18nH-5%	TDK	7829-2-ND T&R15K)	R0201	F3G;0.013"H				
27	1	L301	4.7nH 0201 TF	5%	ZL-0201-4.7nH-5%	Murata	11734-2-ND 15KT&R)	R0201	00mohm;350mA; 0.013"H	Murata	(DK#490-12998-2-ND 5KT&R)		
28	1	L356	100nH 0603	5%	ZL-0603-100nH-5%	Bourms	CI160808-R10J	Ind SMD 0603	F500M;0.037"H			Ind	
29	1	L360	47nH 0402	5%	ZL-0402-47nH-5%	Bourms	CI100505-47NJ	C0402	ohm;Q8;SRF1G; 0.022"H			Ind	
30	2	L361,L362	See Table 0603	2%	ZL-0603- (See Table) nH-2%			0603	Low=30nH/Mid=x/High=22nH			Ind	
31	1	L364	100nH 0402	5%	ZL-0402-100nH-5%	Bourms	CI100505-R10J	R0402	550M;0.022"H			Ind	
32	4	L365,L366,L367,L368	18nH 0402	5%	ZL-0402-18nH-5%	Bourms	CI100505-18NJ	402	5ohm,Irms=200mA			Ind	
33	1	Q2	MMBT3904		MMBT3904	Fairchild	MMBT3904FSTR-ND)	SOT-23	350mW;Ic200mA;Vceb40V;300MHz	Commercial	MMBT3904TPMSTR-ND T&R3K)	PNP	
34	4	R1,R201,R205,R598	100R	1%	ZR-0201-100R-1%	Venkel	CR0201-20W-1000FT	R0201		Panasonic-ECG	P100ABTR-ND)	Res	
35	4	R3,R4,R5,R6	4.22K	1%	ZR-0201-4.22K-1%	Venkel	CR0201-20W-4221FT	R0201		Panasonic-ECG	P4.22KABTR-ND)	Res	
36	4	R7,R8,R9,R10	7.87K	1%	ZR-0201-7.87K-1%	Venkel	CR0201-20W-7871FT	R0201		Panasonic-ECG	P7.87KABTR-ND)	Res	
37	4	R11,R12,R13,R14	68.1R	1%	ZR-0201-68.1R-1%	Venkel	CR0201-20W-68R1FT	R0201	either 68.1R or 68.0R DoNotMix	R-ND	(DK#P68.0ABTR-ND		
38	8	R15,R16,R17,R18,R19,R20,R21,R22	220R	1%	ZR-0201-220R-1%	Venkel	CR0201-20W-2200FT	R0201		Panasonic-ECG	P220ABTR-ND)	Res	
39	3	R42,R43,R44	47R 5%	1%	ZR-0201-47R-5%	Venkel	CR0201-20W-470JT	R0201		Panasonic-ECG	P47AGTR-ND)	Res	
40	1	R66	30.0K	1%	ZR-0201-30.0K-1%	Venkel	CR0201-20W-3002FT	R0201		Panasonic-ECG	P30.0KABTR-ND)	Res	
41	1	R67	47R	1%	ZR-0201-100R-1%	Venkel	CR0201-20W-1000FT	R0201		Panasonic-ECG	P100ABTR-ND)	Res	
42	1	R68	18.7K	1%	ZR-0201-18.7K-1%	Venkel	CR0201-20W-1872FT	R0201		Panasonic-ECG	P18.7KABTR-ND)	Res	
43	1	R72	470R 5%	5%	ZR-0201-470R-5%	Venkel	CR0201-20W-471JT	R0201		Panasonic-ECG	P470AGTR-ND)	Res	
44	1	R73	12.1K	1%	ZR-0201-12.1K-1%	Venkel	CR0201-20W-1212FT	R0201		Panasonic-ECG	P12.1KABTR-ND)	Res	
45	1	R168	300R	1%	ZR-0201-300R-1%	Venkel	CR0201-20W-3000FT	R0201		Panasonic-ECG	P300ABTR-ND)	Res	
46	1	R200	27K 5%	5%	ZR-0201-27K-5%	Venkel	CR0201-20W-273JT	R0201		Panasonic-ECG	P27KAGTR-ND)	Res	
47	2	R300,R602	15.0R	1%	ZR-0201-15.0R-1%	Venkel	CR0201-20W-15R0FT	R0201		Panasonic-ECG	P15.0ABTR-ND)	Res	
48	2	R603,R301	120R	1%	ZR-0201-120R-1%	Venkel	CR0201-20W-1200FT	R0201		Panasonic-ECG	P120ABTR-ND)	Res	
49	1	R302	8.25K	1%	ZR-0201-8.25K-1%	Venkel	CR0201-20W-8251FT	R0201		Panasonic-ECG	P8.25KABTR-ND)	Res	
50	3	R377,R381,R599	10.0K	1%	ZR-0201-10.0K-1%	Venkel	CR0201-20W-1002FT	R0201		Panasonic-ECG	P10.0KABTR-ND)	Res	
51	1	R595	100K	1%	ZR-0201-100K-1%	Venkel	CR0201-20W-1003FT	R0201		Panasonic-ECG	P100KABTR-ND)	Res	
52	1	R600	4.7R	5%	ZR-0201-4.7R-5%	Venkel	CR0201-20W-4R7JT	R0201		Panasonic-ECG	ND)	Res	
53	1	U2	PL611S-19-R24TC		PL611S-19-R24TC	Micrel	PL611S-19-R24TC	sot-23-6	replace obsolete peregrine part				
54	1	U5	AK1573B		AK1573B	AKM	AK1573B	QFN 24 Pin 4x4mm	VCOFreq1728to2600MHz			FreqSynth	
55	1	U9	19.2MHz TCXO (CTS)		CTS 520L15IA19M2000	CTS	520L15IA19M2000	Crystal (CTS-520)	underside cut-corner pad.	Digikey	ND		
56	1	U14	AD8346ARUZ		AD8346ARUZ	Analog Devices	AD8346ARUZ	TSSOP16	RoHS="Z"	Digikey	AD8346ARUZ-ND		
57	2	U27,U26	MAX4126EUA+		MAX4126EUA+	Maxim	MAX4126EUA+	msop8	Tape&Reel	ND")	MAX4126EUA+T	OpAmp,Dual	
58	1	U30	MIC5216-3.3YM5		MIC5216-3.3YM5	Micrel	MIC5216-3.3YM5	SOT-23-5	YM5 is RoHS (BM5 not RoHS)				
59	1	U32	MGA-633P8		MGA-633P8	Avagotech	MGA-633P8-BLKG	Ina gain block (.5mm)	"9035" & lot code.	ND (Bulk)	MGA-633P8-TR1G (3K T&R)	GainBlk	
60	1	U40	MIC94069YML		MIC94069YML	Micrel	MIC94069YML-TR	MLF (2x2mm)	=RoHS; 5K T&R	cuttape)	Mouser# 998-MIC94069YMLTR	DualPwrSw	
61	1	U75	MGA-685T6		MGA-685T6	Avagotech	516-2869-ND))	mmic amp (.5mm)	ctrpad PartMark "68" and year/month	Avagotech	MGA-685T6-TR1G (3K 7"Reel)	LNA	