

Bill of Materials MicroField MAIN Board						
2003-7-5		SCH-microfield-MAIN Rev C.sch				
Parts listing for basic Board		File Name = BOM-microfield-MAIN-RevC.sch				
Qty	RefDes	Part Type	Description	Manufacturer	Case	Digi-Key Number
1		PCB-FPLCD-Rev B	Assembly, MicroField Antenna Board Assembly	SW		
1		PCB	PCB-	-		
1	216TXANT1		WIRE 20 GAUGE	-	PAD/60MIL	
1	W1,W2		WIRE 22 GAUGE TO GROUND XT2 CASE	-	PAD/60MIL	
1	BA3			-	W16AB	
1	BA4			-	W16AA	
1	BATT1	2477	AA 4 Cell Battery Holder	Keystone Electronics	BATT_ HOLDER2477AA	
3	C1,C2,C81	47uF	Capacitor, 47 uF 16V, Radial Electrolytic, D Case	Any -	SMD/ELD	
32	C3,C4,C5,C8,C10,C14,C27,C29,C30,C33,C36,C37,C46,C60,C62,C64,C77,C86,C89,C91,C92,C95,C96,C101,C104,C110,C112,C115,C118,C135,C144,C146,C75,C76,C106	0.1uF 4.7uF	Capacitor, 0.1uF, 25V, 0603, X7R, 10% Capacitor, 4.7 uF 16V, Radial Electrolytic, B Case	IPC SM-782 STD. - Panasonic - ECJ- Any -	603 SMD/ELB	
8	C7,C13,C80,C85,C93,C103,C113,C117	1uF	Capacitor, 1 uF, 16V, Case A Tantalum	Panasonic - ECS-T1CY105R	CASEB	PCS3105CT-ND
4	C9,C38,C99,C100	47pF	Capacitor, 47 pF, 0603, NPO, 5%	Panasonic - ECU-V1H470JCG -	603	
1	C11	.0022uF	Capacitor, .0022uF, 0603, NPO 5%	-	603	
1	C15	2.2uF	Capacitor, 2.2 uF, 16V, Case B, Tantalum	-	CASEB	
10	C12,C16,C19,C25,C41,C50,C73,C74,C94,C120	.001uF	Capacitor, 0.001 uF, 0603 X7R 10%	Panasonic - ECU-V1H102JCX -	603	
0	C17	N/U	Capacitor, Generic, 0603 SMD	-	603	
1	C18,c42	10uF	Capacitor, Case A, Tantalum	-	EIA-A	
19	C20,C23,C35,C39,C47,C48,C49,C63,C65,C67,C68,C114,C119,C121,C122,C128,C140,C141,C146	0.01uF	Capacitor, 0.01 uF, 0603 X7R 10%	Panasonic - ECJ-2VB1E103K -	603	
4	C21,C152,C153,C154	10uF	Capacitor, 10 uF, 16V, Case B, Tantalum	-	CASEB	
4	C22,C26,C143,C151	8.2pF	Capacitor, 8.2 pF, 0603, NPO 5%	-	603	
3	C24,C69,C150	2pF	Capacitor, 2 pF, 0603, NPO 5%	-	603	
5	C28,C31,C32,C147,C148	100uF	Low ESR Capacitor, 100 uF 16V, Radial Electrolytic, D Case	Any -	SMD/ELD	
1	C34	0.22uF	Capacitor, .22uF 16V CERAMIC Y5V 0603	Panasonic - ECJ-1VF1C224Z	603	PCC1790CT-ND
1	C56	12pF	Capacitor, Generic, 0603 SMD	-	603	
3	C40,C57,C123	15pF	Capacitor, Generic, 0603 SMD	-	603	
1	C53	18pF	Capacitor, Generic, 0603 SMD	-	603	
3	C43,C107,C127	6.5-30pF	Capacitor, Capacitor, 6.5-30pF SMT	Sprague Goodman-GKG30066-07 -	SMTRIM1	
3	C45,C129,C131	33pF	Capacitor, Generic, 0603 SMD	-	603	
3	C55,C66,C70	47pF	Capacitor, Generic, 0603 SMD	-	603	
1	C54	27pF	Capacitor, 0603, X7R 10%	Panasonic - -	603	
4	C58,C59,C61,C79	0.47uF	Capacitor, 0.47uF, 0805, Z5U	IPC SM-782 STD. -	805W	
1	C71	4.7uF	Capacitor, 4.7 uF, 16V, Case A Tantalum	-	EIA-A	
0	C72	N/U	Capacitor, 0603, NPO 5%	-	603	
1	C78	10uF	Capacitor, 10 uF 16V, Radial Electrolytic, B Case	Any -	SMD/ELB	
8	C44,C52,C82,C83,C84,C132,C134,C139	100pF	Capacitor, 100pF, 0603, NPO, 5%	IPC SM-782 STD. -	603	
2	C102,C136	680pF	Capacitor, 680 pF, 0603, NPO 5%	-	603	
3	C88,C109,C138	22pF	Capacitor, 22 pF, 0603, NPO 5%	-	603	
3	C108,C125,C145	220pF	Capacitor, 220 pF, 0603, NPO 5%	-	603	
1	C90	10uF	Capacitor, 10 uF, 16V, Case B Tantalum	-	EIA-B	
3	C97,C126,C137	4.5-20pF	Capacitor, Capacitor, 4.5-20pF SMT	Sprague Goodman-GKG20066-07 -	SMTRIM1	
2	C98,C116	2.2pF	Capacitor, 2.2 pF, 0603, NPO 5%	-	603	
1	C105	470pF	Capacitor, 470pF, 25V, 0603, X7R, 10%	IPC SM-782 STD. - Panasonic -	603	
1	C87	390pF	Capacitor, 390 pF, 0603, NPO 5%	-	603	
0	C130	N/U	Capacitor, pF, 0603, NPO 5%	-	603	
0	C125	N/U	Capacitor, pF, 0603, NPO 5%	-	603	
0	C51	N/U	Capacitor, pF, 0603, NPO 5%	-	603	
0	C111	N/U	Capacitor, 0603, NPO 5%	-	603	
0	C124	N/U	Capacitor, 0603, NPO 5%	-	603	
0	C142	N/U	Capacitor, 0603, NPO 5%	-	603	
1	C133	2.0-6.0pF	Capacitor, Capacitor, 2.0-6.0pF SMT	Sprague Goodman-GKG26R066-07	SMTRIM1	
0	C137	N/U	Capacitor, Capacitor, SMT	Sprague Goodman-	SMTRIM1	
4	D1,D2,D3,D5	MMBD914	Diode, HIGH CONDUCTANCE DIODE	FAIRCHILD - MMBD914 OR 1N4148	SOT-23	
1	D4	SMV1214-001	Diode, Varactor	Alpha Semi -	SDMOV	
2	D7,D8	SMV1213-001	Alpha Semi SMV1213-001 - SUPPLIED BY LTC	-	SDMOV	
2	D9,D10	DL4001MSCT	Diode, 1N4001 SMD, MECF	MICRO COMMERCIAL COMPONENT	MLF4825	
2	D11,D12	SMP1302-001	Diode, Pin Diode (SOT-23)	Alpha Industries, Inc.	SOT-23	
2	F1,F2	10.7 MHz	IC, Filter, Ceramic 10.7 MHz, SMT	Murata, SFECV10.7MH-A-TC -	CFRES3H	
1	J1	Calibration Mode	Conn, 2 Pin Jumper block sorting connector .1 cen	-	SIP-2P	
1	J2	PPWN122FJFN	Connector, Dual 2mm Right Angle Recept	Sullins	HEADER-24PIN	S2204-12-ND
1	J3	CP-102AH-ND	CHARGER CONN, 2.1 x 5.5mm DC POWER JACK	CUI STACK - PJ-102AH	DCPWRJACK-PJ102A	
1	J4,J5	SJ-3525N	EARPHONE Jack, 3.5mm Audio Jack-Stereo	CUI Stack - SJ-3525N	JYJACK	CP-3525N-ND
1	J6	SJ-2503A	CONN, 2.5MM STEREO JACK PANEL MNT	CUI Inc. - Digi-Key CP-2503A-ND	JACK-2.5MMSA	
1	L1,L8	100nH	Inductor, UPRIGHT WITH CORE	Toko 294SN-T1009Z	IND/TOKO5K	
1	L3	100uH	Inductor, 100uH, 1008 Package, 5%	-	1008	
1	L4	47nH	Inductor, 1008 Package, 5%	-	1008	
2	L5,L6	33nH	Inductor, 1008 Package, 5%	-	1008	
3	L7,L12,L14,L15	470nH	Inductor, UPRIGHT INDUCTOR WITH CORE	TOKO - 294SN-T1013Z	IND/TOKO5K	
2	L9,L10	3.3uH	Inductor, 3.3 uH 1008, 5%	-	1008	
1	L11	220nH	Inductor, 220nH 1008, 5%	Panasonic - ELJ-NCR22JF -	1008	
1	L13	100nH	Inductor, 100 nH 1008, 5%	Panasonic - ELJ-NCR10JF	1008	
5	Q1,Q6,Q7,Q12,Q14	FMMT3904CT	GENERAL PURPOSE NPN SILICON TRANSISTOR	ZETEX - FMMT3904CT	SOT-23_CSB	
4	Q2,Q4,Q11,Q18	NE85633	Transistor- NPN	NEC -	SOT-33	
2	Q3,Q10	NE94433	Transistor- NPN	NEC -	SOT-33	

5	Q13,Q16,Q17,Q20,Q22	2N7002	Fet, N-Channel Mosfet	International Rectifier - 2N7002	ST23		
2	Q8,Q21	FMMT717CT	Transistor- PNP	ZETEX	SOT23		
2	Q9,Q15	MMBT3906LT1	GENERAL PURPOSE PNP SILICON TRANSISTOR	MOTOROLA - MMBT3906LT1	SOT-23_CSB		
1	Q19	MMBTH10LT1	VHF/UHF NPN SILICON TRANSISTOR	MOTOROLA - MMBTH10LT1		SOT23	
1	R78	1	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
4	R19,R113,R120,R128	10	Resistor, 603	-	603		
1	R75	4.7 1/2W	Resistor, 1/2 Watt ,5% Axial .5 Inch thru hole	Any -	R1/2WB		
1	R114	33	Resistor, 0603, 5%	-	603		
1	R91	47	Resistor, 0603, 5%	-	603		
7	R13,R26,R46,R60,R62,R67,R98	100	Resistor, 100, 0603, 5%	-	603		
1	R111	220	Resistor, 0603, 5%	-	603		
1	R79	243 1%	Resistor, 1/8 Watt ,1% 0603 SMD	Any -	603		
1	R112	330	Resistor, 0805, 5%	-	805		
2	R21,R25	470	Resistor, 603	-	603		
5	R17,R48,R54,R66,R71	1K	Resistor, 0603, 5%	-	603		
1	R80	1.1K 1%	Resistor, 1/8 Watt ,1% 0603 SMD	Any -	603		
1	R118	1.5K	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
6	R32,R40,R45,R106,R108,R121	2.2K	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
	R16,R37,R42,R43,R44,R51,R63,R64,						
12	R65,R87,R109,R116	3.3K	Resistor, 3.3K, 0603, 5%	-	603		
4	R24,R50,R53,R110	4.7K	Resistor, 603	-	603		
1	R7	4.7K	4.7k or 47k Resistor, 0603, 5%	-	603		
1	R52	6.8K	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
	R9,R10,R14,R15,R28,R30,R33,R49,R						
28	68,R69,R72,R73,R74,R76,R77,R81,R	10K	Resistor, 1/8 Watt ,5%Resistor, 10K, 0603, 5%	-	603		
4	84,R95,R100,R101,R104,R107,R115,	20K	Resistor, 1/8 Watt ,5% 0603SMD	Any -	603		
4	R119,R122,R123,R124,R130,R131	22K	Resistor,	Any -	603		
4	R4,R70,R99,R103	33K	Resistor, 1/8 Watt ,5% 0603 SMD	-	603		
1	R18,R20,R22,R93	47K	Resistor, 47K, 0603, 5%	-	603		
1	R61	68K	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
5	R3,R12,R23,R56,R58						
1	R88						
	R1,R8,R11,R27,R31,R34,R38,R39,R4						
19	1,R55,R85,R89,R90,R96,R102,R105,	100K	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
1	R117,R125,R126	120K	Resistor, 1/8 Watt ,5% 0805 SMD	Any -	603		
1	R86	220K	Resistor, 220K, 0603, 5%Resistor, 220K, 0805, 5%	-	603		
1	R94	470K	Resistor, 470K, 0603, 5%	-	603		
3	R5,R6,R97	499K 1%	Resistor, 1/8 Watt ,1% 0603 SMD	Any -	603		
1	R35	820K	Resistor, 1/8 Watt ,5% 0603 SMD	-	603		
1	R59	1M 1%	Resistor, 1/8 Watt ,1% 0603 SMD	Any -	603		
7	R2,R36,R47,R57,R82,R83,R127	2M	Resistor, 1/8 Watt ,5% 0603 SMD	Any -	603		
1	R29						
0	R92	N/U	Resistor, 0603, 5%	-	603		
1	S1	TL1105JAF250Q	Switch, TACT RIGHT ANGLE 250gf	E-SWITCH	SW-TACT-RAA	EG1864-ND	
1	U1	LM2951CM	MICROPOWER VOLTAGE REGULATOR	NATIONAL SEMICONDUCTOR	SO8NB		
1	U2	LM4864M	IC, 725 mW Audio Power Amplifier	National Semiconductor - LM4864M	SO8NB		
1	U3	74HC04	IC, HEX Inverter	TEXAS INSTRUMENTS - 74HC04	SO14NB		
3	U4,U7,U15	LMV358	DUAL DIFFERENTIAL INPUT OPERATIONAL AMPLIFI	MOTOROLA - LMV358	SO8NB		
1	U5	93S46B/SN	IC, 93C46 - SQ-8 Package	Microchip - 93S46B/SN	SO8NB		
2	U6,U13	LMX2306	IC,550 MHz Low Power Freq Synthesizer	National Semiconductor - LMX2306	TSSOP16_65P		
1	U8	TC7S04F	IC, SINGLE INVERTER	TOSHIBA - TC7S04F	SOT-23-5M		
1	U9	PIC16LC924-04/L	IC, 8 BIT CMOS Microcontroller with LCD Driver	Microchip			
1	U9A	68Pin Socket	68 PIN PLCC PACKAGE SMT	Mill Max		DigiKey- ed80033-ND	
1	U11	MCP41010	IC, Single Digital Potentiometer with SPI Interface	MicroChip - MCP41010	SO8NB		
1	U12	TC4S66F(TE85L)	IC SWITCH ANALOG 4066B SMV-5	Toshiba	SOT-23-5M	TC4S66FCT-ND	
1	U14	SSM2165-2	IC,	Analog Devices - SSM2165-2	SO8NB		
1	U16	SA639DH	Low voltage Mixer FM IF System	Philips Semiconductors - SA639DH	TSSOP-24_65P		
1	U18	ADE-1	LO Power Frequency Mixer	Mini Circuits - ADE-1		SO6-3	
3	U10,U20,U21	uPC2746TB	IC, Bipolar Analog Wideband Amplifier	NEC - uPC2746TB	SOT-363		
1	U22	LM317T	IC, 5 VOLT, POSITIVE VOLTAGE REGULATOR; ADJ	NATIONAL SEMICONDUCTOR - LM317T	TO-220A		
1	VR1	1K	POT 1.0K OHM 3MM SEALED	- Panasonic, EVM-7JSX30B13	TRIM3MM		
1	X2	4.0 Mhz	Xtal, 4.0Mhz , HC-49U, 20pF Load, SMD	ECS-40-20-5P -	HC-49USMD CASE CSM-7		
1	Y1	1Mhz	Xtal, 1 MHz Ceramic Resonator	Murata, CSBLA1000J -	XTAL3HV		
1	XT2	48 Mhz	Xtal, 48Mhz , HC-49U, 20pF Load, SMD	ECS-480-20-5P-TR	HC-49USMD CXTALV49US		