

CFXPT-90 Parts Lists

value	Designator	Footprint
0.01u F	C-01	0402
0.1u F	C-02	0603
100p F	C-03	0402
0.1u F	C-04	0603
1000p F	C-05	0201
0.01u F	C-06	0402
1000p F	C-07	0201
10u F, 6.3V	C-08	0805
1000p F	C-09	0201
1000p F	C-10	0201
0.1u F	C-11	0603
1000p F	C-12	0201
330p F, NPO, 880Hz	C-13	0603
0.1u F	C-14	0603
1000p F	C-15	0201
none	C-16	0201
1000p F	C-17	0201
1p F	C-18	0201
7p F	C-19	0201
5p F	C-20	0201
5p F	C-21	0201
220p F	C-22	0603
3900p F	C-23	0603
1u F	C-24	0805
1000p F	C-25	0201
1000p F	C-26	0201
100p F	C-27	0201
1000pF	C-28	0201
47p F	C-29	0201
1000p F	C-30	0201
56p F	C-31	0201
1000p F	C-32	0201
6p F	C-33	0201
5p F	C-34	0201
1000p F	C-35	0201
1000p F	C-36	0201
6p F	C-37	0201
33p F	C-38	0201
0.01u F	C-39	0402
1000p F	C-40	0201
82p F	C-41	0402
22p F	C-42	0201
5p F	C-43	0201
5p F	C-44	0201
100 pF	C-45	0201
1000p F	C-46	0201
1000p F	C-47	0201
0p F	C-48	0201
10u F, 6.3V	C-49	0805
1000p F	C-50	0201
1p F	C-51	0201
10uF, 10V	C-52	0805
100p F	C-53	0201
0.01u F	C-54	0402
10u F, 6.3V	C-55	0805
10u F	C-56	0805
0.1u F	C-57	0603
0.056u F	C-58	0805
6p F	C-59	0201
100p F	C-60	0201
0p F	C-61	0201
4p F	C-62	0201
1000p F	C-63	0201
1000p F	C-64	0201

value	Designator	Footprint
MA27V0700	D-01	SSS-mini
S2AADICT	D-02	Diode-SMA
47n H	L-03	1008
56n H	L-04	0805
56n H	L-05	0805
56n H	L-06	0805
33n H	L-07	0805
12n H	L-08	0805
12n H	L-09	0805
100n H	L-10	0805
NE681M13	Q-01	CEL-M13
NE681M13	Q-02	CEL-M13
NE681M13	Q-03	CEL-M13
NE68819	Q-04	CEL-19
NE664M04	Q-05	CEL-M04
18K OH	R-01	0201
10K OH	R-02	0201
1M OH	R-03	0201
1M OH	R-04	0201
10M OH	R-05	0402
10K OH	R-06	0201
1K OH	R-07	0201
10 OH	R-08	0201
150 OH	R-09	0201
1.5K OH	R-10	0201
330 OH	R-11	0201
10 OH	R-12	0201
33K OH	R-13	0201
1.0K OH	R-14	0201
100K OH	R-15	0201
6.8K OH	R-16	0201
680 OH	R-17	0201
10K OH	R-18	0201
10K OH	R-19	0201
27K OH	R-20	0201
10 OH	R-21	0201
1K OH	R-22	0201
1M OH	R-23	0201
10K OH	R-24	0201
1K OH	R-25	0201
22K OH	R-26	0201
56K OH	R-27	0201
150 OH	R-28	0201
10K OH	R-29	0201
56K OH	R-32	0201
10K OH	R-33	0201
10K OH	R-34	0201
CM-1600	SW-01	COMUS-1600
CM1600	SW-02	COMUS-1600
ORD-213	SW-03	magnetic-sw
ORD-213	SW-04	magnetic-sw
LP3987-2.5V	U-01	NS-TLA05-LP3987
8051F305	U-02	MLP-11-B-8051F30X-1
TC7SL04FU	U-03	SSOP-5-P-0.65-TC7SC04FU
LMX2470	U-04	NS-LMX2470
LP3987-2.5V	U-05	NS-TLA05-LP3987
JN015	VC-01	VOLTRONICS-JN
10K OH	VR-01	POT-P2W
TTS-18-19.2Mhz	XTAL-01	TEW-TTS18

CFXPT-90

List of Active devices and functions.

Designator	Parts #	Function
Q-01	Q-NE681M13	Oscillator
Q-02	Q-NE681M13	buffer amplifier
Q-03	Q-NE681M13	pre-amplifier
Q-04	Q-NE68819	driver amplifier
Q-05	Q-NE664M04	final amplifier
U-01	U-LP3987ITLX-2.5V	voltage regulator
U-02	U-C8051F305	CPU
U-03	U-TC7SL04FU	inverter
U-04	U-LMX2470	PLL synthesizer
U-05	U-LP3987ITLX-2.5V	voltage regulator
XTAL-01	X-TTS18-19.2MHz	crystal oscillator TCXO 0.5 ppm

CFXPT-90 FACTORY TUNE UP PROCEDURE PRIOR TO POTTING

1. Download test firmware. This changes the CFXPT-90 frequency to 216.000MHz.
2. Adjust trimmer pot VR-01 to set the VCO frequency to 216.000MHz (+ or - 10Hz).
3. With the frequency at 216.000MHz, align VC-1 so the VCO test voltage is 0.3v (+ or - 0.1V).
4. Check power output to make sure it is 17.0dBm to 19.5dBm.
5. Check that all harmonics or spurious signals are at least 50dB down from main carrier.
6. Download test firmware to change the transmitting frequency to 222.000MHz
7. Check that the VCO frequency is 222.000MHz (+ or - 10Hz).
8. Check that the VCO test point is less than 1.7v.
9. Check that the power output is 17.0dBm to 19.5dBm.
10. Check that all harmonics or spurious signals are at least 50dB down from main carrier.