

50 Ohm "T" Attenuator Values

Atten	Series Element	Shunt Element
3 dB	8.2 Ohm	150 Ohm
6 dB	16 Ohm	68 Ohm
10 dB	27 Ohm	36 Ohm
20 dB	39 Ohm	10 Ohm

Component Value at 35.5 MHz

R1	36K
R4	33K
R2	16 OHM
R3	3K
C3	180 PF
C1	150 PF
C4	1500 PF
C2	27 NF
L1	1 LH
L2	10 LH

Measurement of Vp-p at output of Mixer Out and PC Out at 21.5 MHz into 50 ohms with 5 VDC applied to U12 pin 12.

Mixer Out: 8.0 Vp-p
PC Out: 9.7 Vp-p

Normal Operating Currents in above condition:

+24 VDC Supply: 0.21 A
-24 VDC Supply: 0.03 A
+10 VDC Supply: 0.32 A

Changes: The following components are added to the basic design to improve the response.

1. R34, a 100 Ohm resistor in series with the phase shifter input to isolate the output from the capacitance of the feed through.
2. The attenuator at the output of the buffer feeding the voltage variable attenuator is shared (not used) in some configurations.
3. C50, C51, C52 are 0.1uF bypass capacitors on the power supply side of L2, R5, R7.
4. The +15A and +15B supplies to the SMA-202's are cut from the PCB and fed to a separate feed through for an external 10V power supply via JF1.
5. R33, a 130 ohm buffer resistor was added at the output of the crystal oscillator to buffer the oscillator from the input of the Q2, Q3 buffers.

