



## Tuning Using a Spectrum Analyzer and Tracking Generator

1. Set the spectrum analyzer and tracking generator for the frequency band required to tune the isolator. Set the tracking generator power level for 0 dBm. Using an N(F-F) through adapter, reference the spectrum analyzer for 0 dBm (this will allow for more accurate measurement of the isolator performance).
2. If available on the spectrum analyzer, set markers at the band center and edges.
3. Connect the tracking generator to the input port of the isolator and the spectrum analyzer to the isolator output port (refer to the isolator diagram above).
4. Adjust C1 and C2 for minimum loss (maximum signal).
5. Connect the analyzer to the isolator input port and the tracking generator to the isolator output port.
6. Adjust C3 for best isolation (minimum signal).
7. Remove the load from the load port and connect the analyzer to the isolator load port. Attach the load, which was taken from the load port, to the isolator input port.
8. Adjust C2 for minimum loss (maximum signal).
9. Place the load back on the load port and connect the tracking generator to the input port of the isolator and the analyzer to the isolator output port. Record the insertion loss and make sure it is within the specifications (see the specifications chart).
10. Connect the analyzer to the isolator input port and the tracking generator to the isolator output port. Record the isolation and make sure it is within the specifications.

## Isolator Specification Chart

Band Range (MHz)	Insertion Loss (dB)	Isolation (dB)	I/P Return Loss (dB)	O/P Return Loss (dB)	Bandwidth (MHz)
132-174	0.30	25 (35)	20 (30)	20 (30)	3
406-512	0.28	25 (35)	20 (30)	20 (30)	9
806-960	0.25	25 (35)	20 (30)	20 (30)	15

Values in parenthesis are center frequency specifications. The values not in parenthesis are the values that should be obtained over the bandwidth shown in the last column.