

## **TWNC-7608-1**

### **NOTCH CAVITY**



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The Telewave TWNC-7608-1 is an 8" diameter,  $\frac{1}{4}$ -wavelength notch cavity with an adjustable coupling loop. Notch cavities are typically used together with Pass or Pass/Reject cavities to eliminate a particular frequency. Notch cavities have very low loss outside the notch band. Telewave can also "tilt" the notch response to move a notch very close to a pass frequency without adversely affecting the pass response.

TWNC-7608 cavities cover 763-869 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, which can be easily changed to improve

selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, a dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider notch when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ . Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined

from  $\frac{1}{4}$ -inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

# TWNC-7608-1

TYPICAL SELECTIVITY CHARACTERISTICS

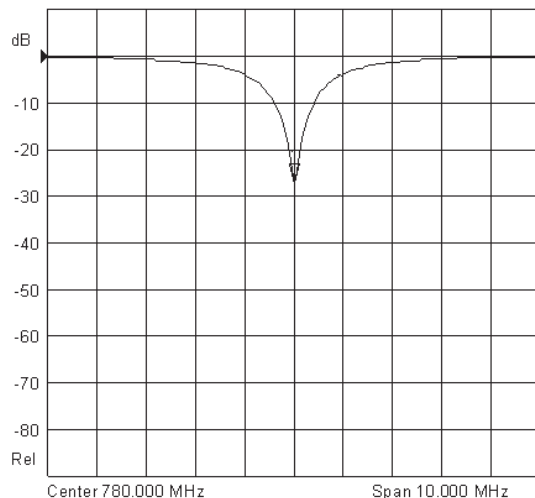


Figure 1

SPECIFICATIONS	
Tuning frequency range	763-869 MHz
Insertion loss (max)	0.2 dB
Attenuation at notch frequency	See figure 1
Cavity dimensions (Diam. x H) in. (cm)	8 x 12 (20.3 x 30.5)
Maximum dimensions with tuners extended in. (cm)	8 x 16 (20.3 x 40.6)
Net weight lb. (kg)	4 (1.8)
Shipping weight lb. (kg)	6 (2.7)
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max)	350 watts
Cavity electrical length	1/4 wavelength
Temperature range	-30°C to +70°C
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Connectors	N female
Finish	Gray acrylic enamel

**NOTE:** When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.