The Telewave TWPC-7908-1 and 7908-2 are 8” diameter, ⅛-wavelength, high “Q” bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-7908 cavities cover 776-825 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 retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 7908-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband 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 frequency is temperature stable from -30°C to +70°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 ¼-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, depending on insertion loss.

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.
COMMON SPECIFICATIONS

Tuning frequency range 776-825 MHz
Nominal impedance 50 ohms
VSWR at resonance (max) 1.5:1
Input power (max) vs. insertion loss 0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range -30°C to +70°C
Cavity electrical length ¼ wavelength
Cavity size (Diam. x H) in. (cm) 8 x 11.875 (20.3 x 30.2)
Outer conductor, end plates 6061-T6 aluminum
Inner conductor, coupling loops Silver plated copper
Tuning rod Invar
Contactors, fingerstock Beryllium copper
Connectors N or UHF female (opt.)
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.