

## **TPRC-1405-1,2**

### **PASS/REJECT CAVITY**



**TPRC-1405-1**



**TPRC-1405-2**

The Telewave 5" Pass-Reject Cavities TPRC-1405-1 and TPRC-1405-2 are available in various configurations to meet your exacting filtering needs. When closer spacing is required, a 10" cavity is available for a higher "Q". Pass-Reject cavities are designed to reject a narrow band of frequencies, and are often used in conjunction with pass or notch cavities in complex filtering designs.

#### **TUNING RANGE**

Telewave Notch Cavities TPRC-1405-1 and TPRC-1405-2 are shipped tuned and tested to a single frequency specified by the customer. If field tuning is required, the positive locking mechanism makes tuning to another frequency simple. Cavities are tuned standard at 50 ohms Impedance.

Frequency stability is critical in high-Q cavities, and the Telewave TPRC-1405 is engineered to close tolerances with a precision machined compensator and threaded Invar rod. Frequency stability is maintained from -30° C to +70° C, with high power capability up to 350 watts.

#### **RUGGED CONSTRUCTION**

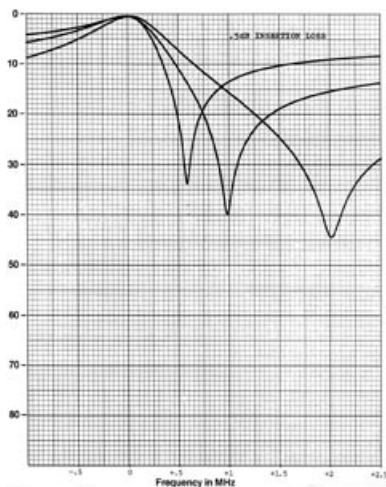
Heavy duty materials are used throughout the cavity to insure top performance and long life. The top plate is machined from 1/4" aluminum, and heliarc welded to the aluminum outer conductor. An acrylic enamel finish is applied to prevent corrosion. The use of similar metals and alodined aluminium prevents galvanic corrosion. Silver plated tuners and beryllium copper finger stock assure a long life and Higher "Q." Mounting rails are provided for all multiple-cavity filters.

#### **ADJUSTABLE SELECTIVITY**

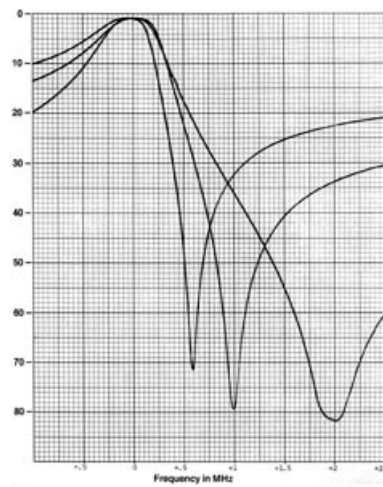
The TPRC-1405-1 & TPRC-1405-2 are quarter-wavelength cavities with an adjustable coupling loop and tuning capacitor. Insertion loss can be easily set from less than 0.5 dB to 2 dB or more with corresponding increases in selectivity. This allows for optimum settings of insertion loss and close frequency rejection. For severe RF environments, the TPRC-1405-2 dual cavity filter further increases "Q" to provide greater selectivity.

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# TPRC-1405-1,2



TPRC-1405-1 SINGLE CAVITY



TPRC-1405-2 DUAL CAVITY

## ELECTRICAL DATA

	TPRC-1405-1	TPRC-1405-2
Tuning Range	118-148 MHz	118-148 MHz
Insertion Loss (Adjustable)	0.15 to 2.0 dB	0.5 to 4.0 dB
Attenuation:	See Fig. 1	See Fig. 2
Nominal Impedance:	50 Ohms	50 Ohms
VSWR at Resonance (max)	1.5:1	1.5:1
Input Power (max) with insertion loss at:		
0.5 dB	350 Watts	350 Watts
1.0 dB	250 Watts	250 Watts
2.0 dB	150 Watts	150 Watts
Temperature Range	-30°C to +70°C	-30°C to +70°C

## MECHANICAL DATA

Materials:	TPRC-1405-1	TPRC-1405-2
Outer Conductor	6061-T6 Aluminum	6061-T6 Aluminum
Inner Conductor	Silver plated copper	Silver plated copper
Tuning Rod	Invar	Invar
Contactors, fingerstock	Beryllium copper	Beryllium copper
End Plates	6061-T6 Aluminum	6061-T6 Aluminum
Coupling Loops	Silver plated copper	Silver plated copper
Dimensions in (cm)	5" dia. x 30" L (13 x 76)	5" dia. x 30" L (13 x 76)
(individual cavity)		
Max. outside dim. in	5" x 35"	5.25" x 19" x 35"
(cm)	(13 x 89)	(13 x 48 x 89)
(with tuning rod extended)		
Connector Terminations:	N or UHF female	N or UHF female
Finish	Acrylic Enamel	Acrylic Enamel
Net Weight lb (kg)	6 (2.7)	12.5 (5.7)
Shipping Weight lb (kg)	9 (4.1)	15.5 (7)

WHEN ORDERING BE SURE TO SPECIFY EXACT FREQUENCY AND MODEL NUMBER.  
Contact the factory if additional information or assistance is required.

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