

## TPRD-4544, 4744 PASS / REJECT DUPLEXER

The Telewave TPRD-4544/4744 Base Station Duplexers provide high performance with an innovative design. By using two TPRC-4504 or 4704 Pass / Reject cavities in the transmitter and receiver path, these duplexers provide maximum TX to RX protection in the most severe RF environments.

The design of these duplexers provides a bandpass characteristic with minimum insertion loss, while also providing maximum TX to RX protection. Adjustable coupling optimizes the required attenuation for ideal RX performance. All cavity inputs are electrically shorted to ground for maximum static and noise protection.

RG-214 Mil-Spec cable is used for all interconnections to ensure long life, and lowest insertion loss with maximum power handling capability. Heavy-duty materials are used in construction of these duplexers, including silver-plated tuners and beryllium copper fingerstock contactors, assuring high "Q" performance with no problems due to dissimilar metals. Tuning is simple and remains stable from -30°C to +70°C, thanks to the threaded Invar rod.

All duplexers are tuned and tested with customer-specified frequencies prior to shipping. No further adjustments should be required.

The positive locking mechanism allows for simple field tuning if frequency changes are required.

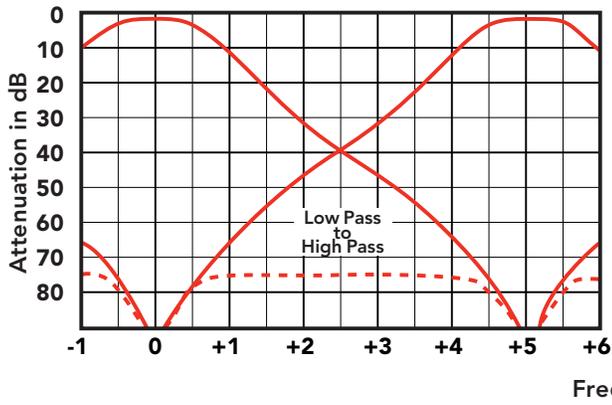


TPRD-4544/4744 duplexers mount on a 19" standard rack, with panel height of 5.25". Power handling is 250 watts. Receiver desense protection is at least 90 dB, and TX sideband suppression is at least 75 dB.

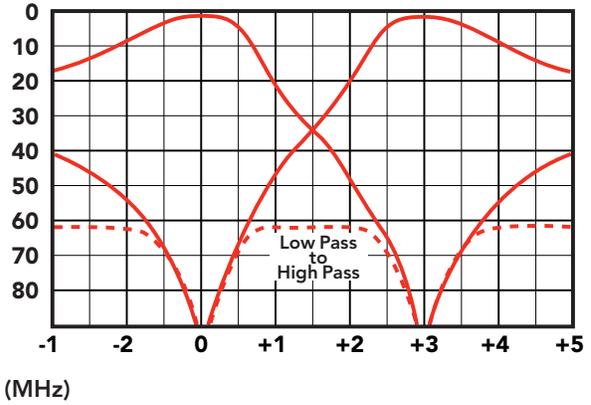
With TX to RX spacing of 3 MHz or more, this duplexer can also combine two transmitters into one antenna, or feed two receivers. For spacing less than 3 MHz, please contact Telewave for assistance.

# TPRD-4544, 4744

TPRD-4544 RESPONSE  
AT 5 MHz SEPARATION



TPRD-4744 RESPONSE  
AT 3 MHz SEPARATION



SPECIFICATIONS	TPRD-4544	TPRD-4744
Frequency range	400-470 MHz	470-512 MHz
TX / RX separation (min)	5 MHz	3 MHz
<b>ELECTRICAL SPECIFICATIONS</b>		
Maximum input power	250 watts	
Insertion loss (TX & RX to Antenna)	1.0 dB	
TX noise suppression at RX frequency	90 dB	
RX attenuation at TX frequency	90 dB	
Isolation TX to RX (min)	5 MHz separation	75 dB
	3 MHz separation	60 dB
VSWR (max)	1.5:1	
Temperature range	-30°C to +70°C	
<b>MECHANICAL SPECIFICATIONS</b>		
Number of cavities	(4) - 4" Dia. x 8" L	
Dimensions (HWD) in. (cm)	5.25 x 19 x 12 (13.3 x 48 x 30.5)	
Mounting	19" Panel	
Connector termination	N Female	
Finish	Gray acrylic enamel	
Net weight lb. (kg)	10 (4.5)	
Shipping weight lb. (kg)	15 (6.8)	

**NOTE:** Exact transmitter and receiver frequencies must be specified when ordering.