

## T-4530 / T-4560 FERRITE ISOLATORS

Telewave Single and Dual Ferrite Isolators prevent intermodulation, and protect transmitters from high VSWR or mistuned filtering devices by providing a constant 50 ohm impedance. All Telewave isolators are manufactured and tested in our own plant to the highest quality standards. These isolators handle up to 150 watts of power, with several different load options. All Telewave isolators include one or two removeable 35 watt loads in the basic configuration. Typical tuning range is up to  $\pm 5$  MHz from the original center frequency, and typical isolation is 35 dB for single, and 70 dB for dual.

*NOTE: Isolators have limited bandwidth and tuning range. Each isolator is manufactured for a specific range and tuned to a specific frequency. Please specify the exact desired operating frequency and special load requirements with the order.*

### BENEFITS

Under adverse conditions, the isolator performs several critical functions:

#### Broken Antenna, Damaged Cable, High VSWR

All of these conditions will cause large amounts of power to be reflected down the transmission line toward the transmitter. The circulatory property of the isolator will direct this energy to the load port, and protect the transmitter. The load on the isolator must be capable of handling full transmitter power. Age, water invasion, and incorrect cable length will also cause impedance changes. The tuned ports of the isolator provide a constant 50 ohm impedance for the transmitter to avoid overheating and oscillation.



T-4530 SINGLE ISOLATOR



CAVITY-MOUNT ISOLATOR



T-4560 DUAL ISOLATOR

#### Intermodulation

When RF energy from a strong nearby signal source enters a transmitter via the antenna, mixing with the primary transmitter frequency often occurs, resulting in the radiation of new, undesired signals. The isolator antenna port reflects out-of-band energy back to the antenna. In-band energy enters the isolator, and is circulated to the output load. No energy from nearby transmitters enters the protected transmitter from the antenna, and intermodulation can be eliminated.

SPECIFICATIONS			T-4530	T-4560
Frequency band	400-512 MHz	Isolator type	Single	Dual
Tuning range (typ.)	$\pm 5$ MHz	Isolation (typ. / min)	35 dB / 30 dB	70 dB / 60 dB
Input power	150 watts	Insertion loss (typ.)	0.4 dB	0.7 dB
VSWR (typ.)	1.25:1	Load(s) included	(1) 35 W	(2) 35 W
Impedance	50 ohms	Dimensions (incl. loads) in.	4.5 x 4 x 2	6.5 x 4.5 x 2
Connectors	N Female	cm	11.5 x 10 x 5	16.5 x 11.5 x 5
Temperature range	-30°C to +60°C	Weight lb. (kg)	3 (1.4)	6 (2.7)