Telewave Introduces Notch Cavity Filters That Eliminate Unwanted Frequencies with Low Insertion Loss

San Jose, California — June 19, 2017— Telewave Inc., a leading provider of premium quality domestic and international radio and wireless systems equipment, announces high power and reliable Single and Dual Notch Cavities, TWNC-1510-1 and TWNC-1510-2, for band-reject applications from 148 MHz to 174 MHz, as part of Telewave's expansive bandpass and band-reject cavity filter family. Factory tunable to serve the land mobile, fixed radio, satellite, public safety, marine radio, railway, narrowband FM, and weather station frequencies in North America, these notch cavity filters ensure rejection of unwanted frequencies around critical passbands without degrading the passband signals.

The TWNC-1510 single and dual Notch Cavities are 50 Ohm cavities with either N-type or UHF female RF ports. These cavities feature VSWR ratings of 1.5:1 across the entire 148 MHz to 174 MHz tuning frequency range, and to 350 Watts of RF input power. Single cavity filter attenuations of nearly -20 dB are available, with dual cavities capable of nearly -40 dB of attenuation. Telewave Notch Cavities can also be combined in multi-cavity assemblies for wider notch bandwidth, with mounting rails included. All Telewave Notch Cavities are factory tuned to customer specifications, and should not require additional adjustments.

Telewave's Notch Cavities are often used alongside Pass or Pass/Reject Cavities to eliminate a specific undesirable frequency. To facilitate this, the TWNC-1510 series of Notch Cavities is designed to exhibit very low loss outside of the notch band, which limits any degradation to desired signal transmission. Depending upon customer needs, Telewave is even able to adjust the Notch Cavity response very close to a passband frequency without additionally attenuating passband signals. A positive locking mechanism is included to enable quick field re-tuning if frequency plan changes occur, which prevents obsolescence and costly equipment replacement or factory servicing. Furthermore, the frequency response of these Notch Cavities can be optimized for any operating environment by calibrating the selectivity through an adjustable coupling.

The TWNC-1510 series are precision designed 10" diameter, ¼-wavelength Notch Cavities with several high quality manufacturing features to ensure long life and high performance in a wide range of environments. These Notch Cavities incorporate specially machined compensator and invar rods to ensure frequency stability over a wide operating temperature range. Hence, the pass and reject frequencies are temperature stable from -30°C to +70°C. To enhance the strength and conductivity of the cavity body, the cavity top plates are machined from ¼-inch thick aluminum and are heliarc welded to the cavity body at the high current point. These Notch Cavities are capable of handling up to 350 Watts of input power, depending upon the customer specified insertion loss requirements.

Environmental resilience is assured with these cavities through the avoidance of dissimilar metal contacts and the use of alodined aluminum to prevent galvanic corrosion. Further enhancing the corrosion resistance and product lifetime, the TWNC-1510 Notch Cavities employ silver plated tuners and beryllium copper finger stock components. This design strategy and these materials provide low loss contacts that are non-corrosive and extremely reliable. Further mechanical stability is provided through heavy duty construction and rigid foam dielectric inserts that provide support for the tuner assembly during vertical or horizontal mounting.

More information about the Telewave TWNC-1510-1 and TWNC-1510-2 148 MHz to 174 MHz Single and Dual Notch Cavities is available at: TWNC-1510-1,2 Notch Cavities

For more information on Telewave Inc.'s Cavity Filters covering 30 MHz to 960 MHz, click the following: Telewave Cavity Filters