What can possibly be new with bias tees? This seemingly simple product has been used forever to inject DC currents or voltages in RF circuits without affecting the RF signal through the main transmission path. In today’s growing wireless marketplace, however, the need for these simple devices seems to be everywhere. They find uses in remote base station systems, repeater installations and tower-top amplifiers to mention just a few areas. Hence, this relatively simple device must be able to be used with many different interfaces and in many different locations and environments, and handle high levels of RF power.

Meca bias tees and their DC block counterparts offer a unique design construction that provides maximum flexibility at any port. The same model can be specified with any connector configuration on any port and still comply to the IP65 rating against direct exposure to outdoor elements (weatherproof). They are available in 7/16 DIN, SMA, N, BNC and TNC connector configurations with power ratings to 300 W (3 kW peak) and maximum DC levels of 100 VDC and 7 amps. In addition, they are now being supplied as RoHS compliant products, so as to meet many of the no-lead requirements currently being imposed.

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The current family of Meca bias tees covers wireless band applications from 500 to 2500 MHz and features typical insertion loss of 0.25 dB (0.5 max), isolation of 30 dB (25 dB min) and typical input and output VSWRs of 1.25 (1.40 max). Figure 1 displays measured insertion loss vs. frequency, Figure 2 input and output return loss and Figure 3 isolation vs. frequency.

Additional product specifications on Meca RoHS compliant bias tees may be found on the company's web site. Bias tees are currently available to ship from stock two weeks after receipt of order.