OVERVIEW

The AGILE NOTCH FILTER (ANF) is a high performance, frequency agile notch filter technology designed to establish a new level of performance for systems requiring very low insertion loss, fast tuning speeds and deep notch attenuation while operating with high-power RF transmitters or high sensitivity receivers. ANF is not only compatible with legacy communications equipment, but also is particularly well suited for applications using modern, frequency agile communications. ANF provides an advanced 16-bit digital tuning control interface for superior tuning resolution and enables hot RF switching for high-power applications up to 1 KW transmitting power, across the specified bandwidth.
/// BENEFITS

Electronic Warfare

In the presence of high power RF noise, friendly communications can be impacted along with those of opposing forces. ANF enables a new level of RF systems performance with very low reflected power and low insertion loss, while its high notch attenuation and fast tuning speed enable modern communications equipment to operate with minimal degradation.

Intelligence, Surveillance, and Reconnaissance

Today’s RF environment provides a range of signals for exploitation, along with significant RF interference from friendly and opposing forces. The passive design of ANF provides a bi-directional solution for electronic intelligence, surveillance, and reconnaissance applications to protect sensitive receivers from friendly communications, or from opposing countermeasures.

Legacy Systems Enhancement

Older broadband active RF systems have had limited application on the modern battlefield due to their negative impact on friendly agile communications. Consider that by adding a ANF to the legacy RF systems, they can be brought back into use, with minimal cost and improved performance.

Other applications include:

• Shipboard RF communications
• Land/Air based systems
• Commercial RF wireless communications
• Homeland Security and First Responder communications systems

/// FEATURES

• Passband range – factory configurable, 10 MHz to 4000 MHz (contact us for higher frequency requirements)
• Power handling – out-of-band: up to 1000 Watts; in-band: up to 50 Watts
• Tuning speed – 1.0 µSec
• Notch depth – factory configurable, up to > 100 dB
• 3 dB notch width – 5% of center frequency
• 30 dB notch width – 1% or less of center frequency
• Low VSWR – <1.4:1
• Insertion loss – design dependent, 0.1 to 1.3 dB (typical 0.5 dB)
• Multiple simultaneous notches
• RF connectors: SMA, N-type or other depending on RF power and system installation requirements
• Designed to meet MIL-STD-810G and MIL-STD-461