

Negative slope miniature fully hermetic RF gain equalizer

- Fully hermetic $<1 \times 10^{-8}$ cc He/sec
- Frequency range .05 to 20 GHz
- Miniature coaxial packaging
- SMA or SMP (GPO™) connectors
- Broadband or Narrowband frequency response
- Frequency response tailored to your application
- Low VSWR and insertion loss
- Phase and amplitude tracking
- Extremely rugged, superior temperature range
- Meets MIL-E-5400 and MIL-E-16400 environments
- Screening available to MIL-STD-883 and MIL-STD-202
- MIL-Q-9858 and MIL-I-45208 Compliant



General description

Typical RF transmission lines attenuate the signal in an uneven manner: the attenuation increases as the operating frequency increases. This can degrade the performance of a broadband system where constant signal attenuation over a wide frequency band is desirable.

The Meggitt Safety Systems' design team introduces a unique solution to overcome this system performance issue: The Negative Slope Hermetic RF Gain Equalizer.

The equalizers are passive microwave components with stable performance over a wide temperature range. When combined with our high temperature SiO₂ coaxial cable assemblies, equalizers offer the best solution where performance over a wide range of frequency and environmental conditions is essential.

We offers two options for integrating our equalizer product line into a system:

1. Equalizers can be integrated within the coaxial cable assemblies without any additional connectors. The equalizer can fit in the back of the connector at the cable/connector junction.

2. Equalizers can be packaged as a stand-alone unit using customer-specified connectors.

Both options can be designed and fabricated to operate over a frequency range from .05 to 20 GHz with a customer-specified negative loss slope.

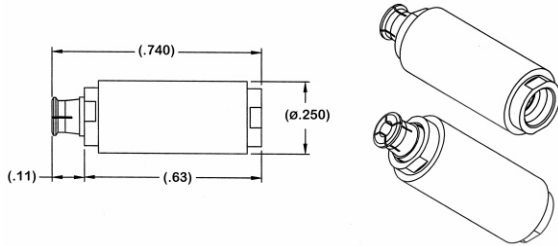
Meggitt has equalizers deployed on several platforms for military, airborne, and ground-based applications. Our equalizers utilize thick film technology and offer low VSWR and Insertion loss. Loss ripple is ± 0.2 dB up to 12 GHz and ± 0.5 dB up to 20 GHz.

Applications

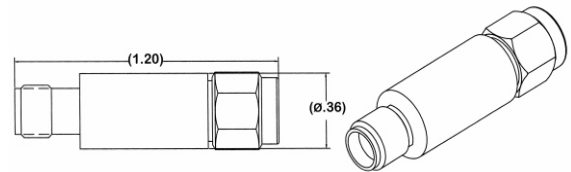
- High performance aircraft
- Radar systems
- EW and ECM systems
- Space and airborne systems
- System component links

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SMP equalizer package

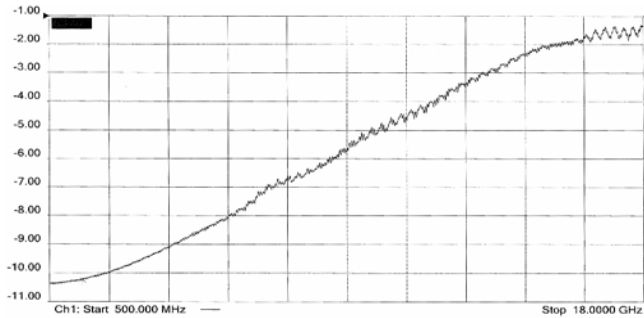


SMA equalizer package

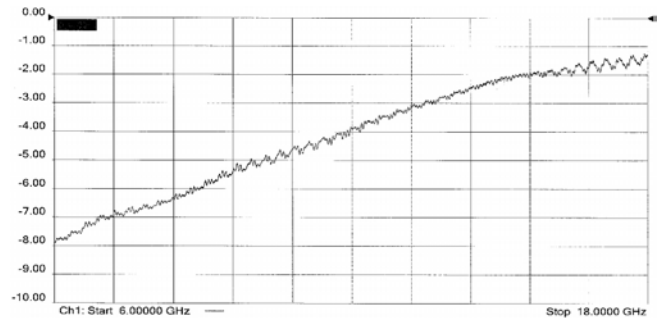


Typical performance data

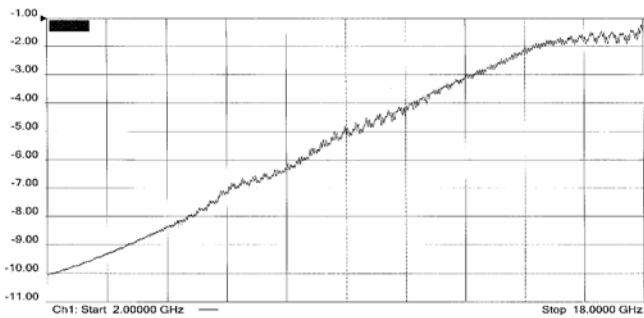
Insertion loss : 0.5 – 18 GHz



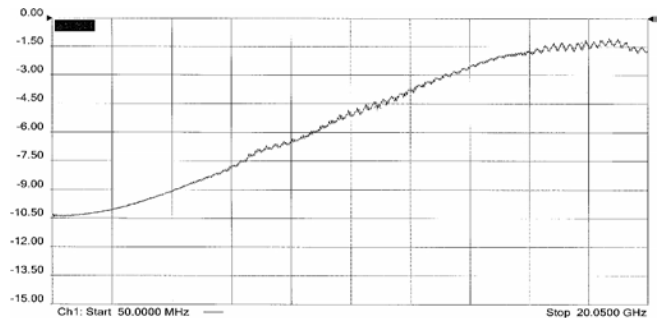
Insertion loss : 6 – 18 GHz



Insertion loss : 2 – 18 GHz



Insertion loss : 0.05 – 20 GHz



Electrical performance

- 0.05 to 20 GHz (customer-specified)
- Low VSWR and insertion loss
- Narrow-band and wide-band designs
- Loss ripple ± 0.2 dB (12GHz); ± 0.5 dB (20 GHz)

Meggitt Safety Systems is a Meggitt group company. Headquartered in the United Kingdom, Meggitt PLC is an international group operating in North America, Europe and Asia. Known for its specialized extreme environment engineering, Meggitt is a world leader in the aerospace, defense and electronics industries.

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