HFE
Microwave Blocks

Technical Specifications

RTT-ATT Programmable Attenuator

0.1–20 GHz and 0.1–40 GHz

Rev. 1.1 – Nov. 2012

High Frequency
Engineering

Unit Description

The RTT-ATT series is a modern programmable attenuator using the latest MMIC technology, featuring a wide frequency coverage and several options. It has been conceived for laboratory application such Semiconductor Testing, Radar Targets Emulators, Radar Pulse Modulators, Service and all field where a precise RF attenuation control is needed.

RTT-ATT can be ordered in two version : DC to 20 GHz or DC to 40 GHz, with attenuation ranges as high as 40 dB or 80 dB depending on the option, and can be delivered with a complete Scattering Matrix Characterization.

An extremely small phase shift over attenuation make this instrument the ideal choice for applications where it is mandatory to control this parameters (D.F., EW, etc.)

The instrument is controllable by an RS232 interface or RS485 as well. The unit is hosted inside a 3U case with EMI front and rear panels. An optional Pulse Modulation Input can be fitted in the rear panel, in order to allow the user to pulse directly the amplitude control with an external TTL signal[1].

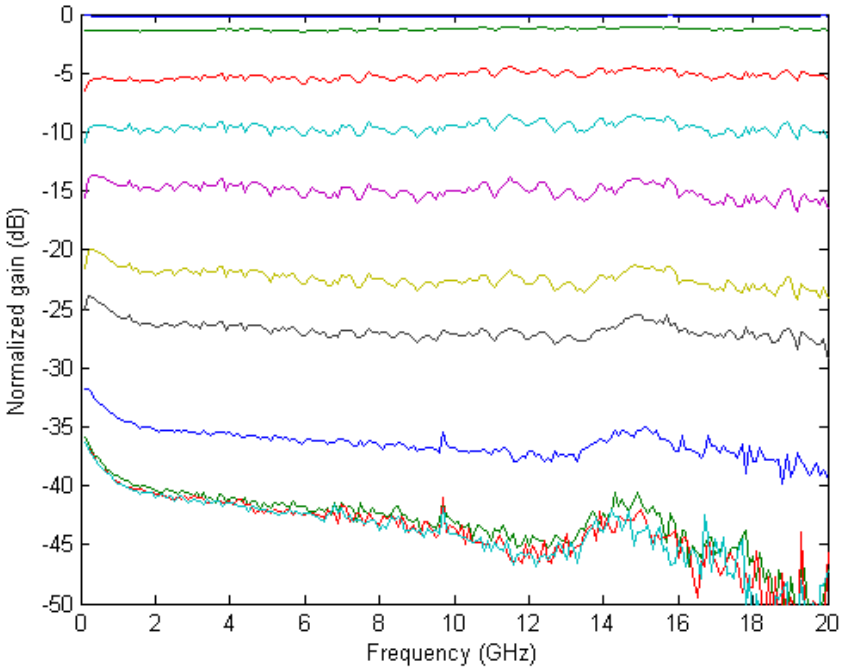

Figure 1: Typical RTT-ATT normalized attenuation (Opt. 10-040).

[1]Please contact the factory to get more information regarding your pulse mask reproducibility

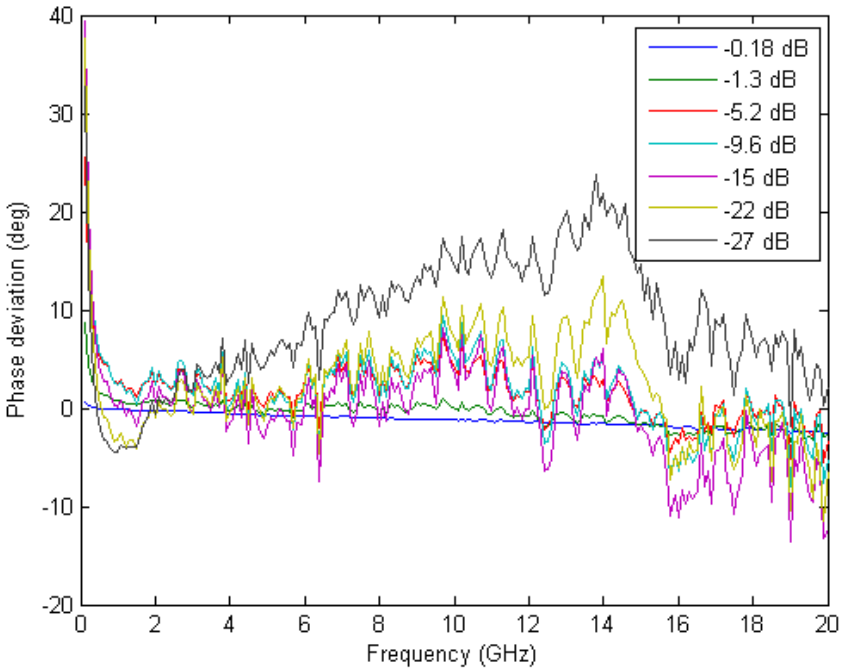

Figure 2: Typical RTT-ATT normalized phase shift vs. attenuation setting (Opt. 10-040).

Ordering Codes

RTT-ATT-*ff*-*aaa*-*cc*-*ppp*

ff Frequency range, two digit code:
10 = 0.1–20 GHz (Opt. 10)
13 = 0.1–40 GHz (Opt. 13)

aaa Attenuation range, three digit code:
040 = up to 40 dB (Opt. 040)
080 = up to 80 dB (Opt. 080)

Examples:
RTT-ATT-10-040: 20 GHz and 40 dB (max) model.
RTT-ATT-13-080: 40 GHz and 80 dB (max) model.

Specification Summary

Power Supply	$V = 90 - 260$ VAC $f = 47 - 63$ Hz $P = 40$ W max VDE socket, use a fuse of 1 A T, 250 V
Frequency Range	According to the Options
Opt. 10	0.1–20 GHz (3.5 mm female connectors)
Opt. 13	0.1–40 GHz (K female connectors)
Maximum Input Power Level	+10 dBm (at all connectors)
Typical Attenuation Range	According to the Options
Opt. 040	40 dB up to 20 GHz, 30 dB to 30 GHz, 25 dB to 40 GHz
Opt. 080	80 dB to 20 GHz, 60 dB to 30 GHz, 50 dB to 40 GHz
Typical Resolution	1 dB or better
Opt. 040	0.05 dB up to 10 dB attenuation
Opt. 080	0.1 dB up to 10 dB attenuation
Pulse modulation	Optional
Opt. PMI	Provides TTL pulse modulation with BNC connector on rear panel
Dimensions	250 x 140 x 300 mm (W x H x D)

The equipment is designed to be used only by qualified personnel. Use of the equipment in a manner not specified in the User Manual may impair the protection provided by the equipment. There are no user-serviceable parts inside the equipment, and any warranty will be rendered void if the seals on any covers are broken.

This products is not approved for use in hazardous atmospheres or medical applications. If the equipment is to be used in a safety-related application, *e.g.* avionics or military applications, the suitability of the product must be assessed and approved for the use by competent person.

The unit is certified CE and FCC.

High Frequency
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