

TECHNICAL SPECIFICATIONS

HFE **Microwave Blocks**

Technical Specifications

RTT-PHS Programmable Phase Shifter

DC–18 GHz and DC–50 GHz



Rev. 1.1 – Nov. 2012

Unit Description

The RTT-PHS series is a modern programmable Phase Shifter based on mechanical phase shifters. Two versions are available, covering different frequency ranges.

The version DC–18 GHz (usable to 20 GHz) has a delay range of 160 ps, leading about 60° per GHz of phase shift. This version can be fitted with additional phase shift depending on the options.

The version DC–50 GHz has a delay range of 100 ps, leading about 35° per GHz of phase shift. Both versions have 180000 steps resolution.

The RTT-PHS series has been conceived for laboratory application such Semiconductor Testing, Radar Targets Emulators, Antenna Array, Direction Finders development, EW and all R&D applications requiring accurate and high resolution phase shifters.

RTT-ATT can be optionally delivered with a complete Scattering Matrix Characterization.

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.

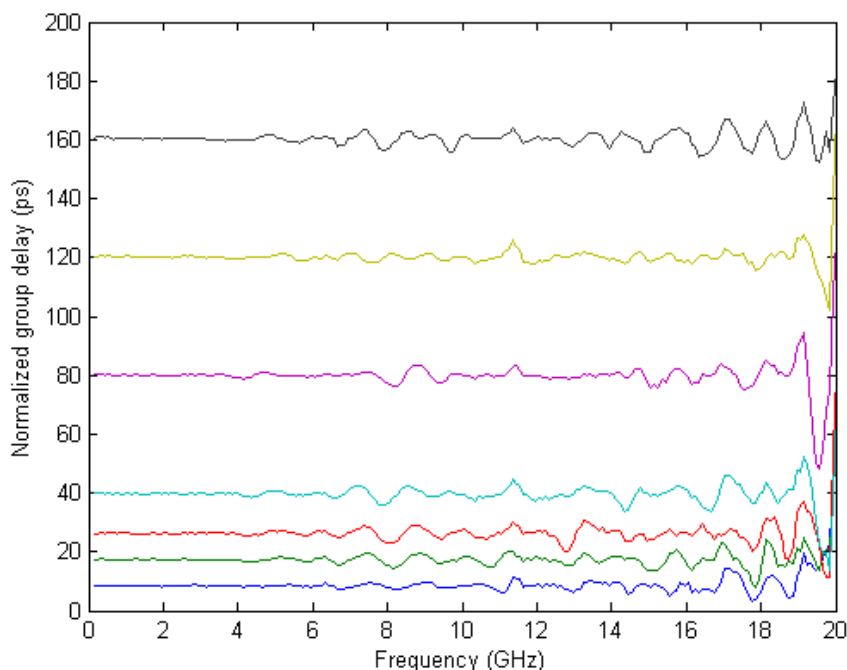


Figure 1: Typical RTT-PHS normalized group delay (Opt. 160).

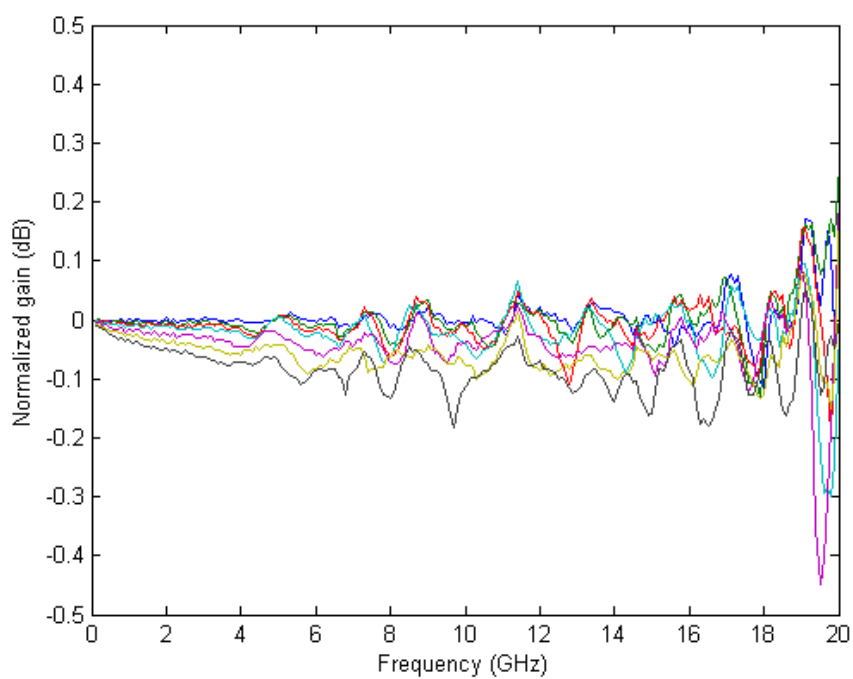


Figure 2: Typical RTT-PHS normalized attenuation/gain variation vs. phase shifting setting (Opt. 160).

Ordering Codes

RTT-PHS-*ddd*

ddd Delay range, three digit code:

100 = 100 ps, DC–50 GHz frequency range (Opt. 100)

160 = 160 ps, DC–18 GHz frequency range (Opt. 160)

320 = 320 ps, DC–18 GHz frequency range (Opt. 320)

480 = 480 ps, DC–18 GHz frequency range (Opt. 480)

Examples:

RTT-PHS-320: DC–18 GHz model, 320 ps delay range.

RTT-PHS-100: DC–50 GHz model, 100 ps delay range.

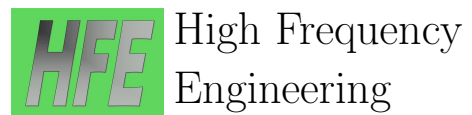
Specification Summary

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. 100	DC-50 GHz (2.4 mm female connectors)
Opt. 160, 320, 480	DC-18 GHz, usable up to 20 GHz (3.5 mm female connectors)
Maximum Input Power Level	+10 dBm (at all connectors)
Typical Delay Range	According to the Options
Opt. 100	100 ps
Opt. 160	160 ps
Opt. 320	320 ps
Opt. 480	480 ps
Typical Resolution	0.1 ps or better
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.



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