

TECHNICAL SPECIFICATIONS

HFE **Microwave Blocks**

Technical Specifications

RTT-FIL Programmable YIG Filter



Rev. 1.1 – Nov. 2012

Unit Description

The RTT-FIL series is a programmable YIG filter configurable in several frequency range and options. It has been conceived for laboratory application such Semiconductor Testing, RF preselectors, precise EMI measurements, IMD testing and all applications requiring tunable filters over octaves and multi octaves range.

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. The equipment can be fully characterized with S parameters matrix.

	Opt. 0540	Opt. 20180	Opt. 20260	Opt 30400	Opt 30500
Freq. range	0.5–4 GHz	2–18 GHz	2–26 GHz	3–40 GHz	3–50 GHz
Resolution	100 kHz	100 kHz	500 kHz	500 kHz	500 kHz
Bandwidth	15 MHz	30 MHz	30 MHz	30 MHz	30 MHz
(Typical, 3dB)				+ f/GHz	+ f/GHz
Insertion loss	< 10 dB	< 10 dB	< 10 dB	< 10 dB	< 10 dB
Limiting level	-5 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Connectors	3.5mm	3.5mm	3.5mm	2.4mm	2.4mm
	female	female	female	female	female

Table 1: RTT-FIL series models.

Additionally, the filters can be equipped with low-noise and high-gain amplifiers in order to compensate the YIG insertion loss. Amplifiers can be inserted in front of the YIG filter and/or after it. Please consult HFE for gain availability.

Ordering Codes

RTT-FIL-*ffff*-*gggg*

ffff Frequency range, four or five digit code:

0540 = 0.5–4 GHz (Opt. 0540)

20180 = 2–18 GHz (Opt. 20180)

20260 = 2–26 GHz (Opt. 20260)

30400 = 3–40 GHz (Opt. 30400)

30500 = 3–50 GHz (Opt. 30500)

gggg Gain configuration:

(blank) = no internal gain

(custom code) = added gain according to customer's specifications,
please inquire with HFE the available options.

Examples:

RTT-FIL-20180: 2–18 GHz model.

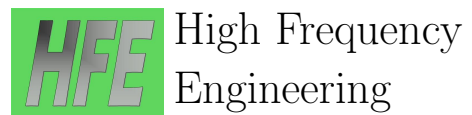
Specification Summary

Power Supply	$V = 90 - 260 \text{ VAC}$ $f = 47 - 63 \text{ Hz}$ $P = 40 \text{ W max}$ VDE socket, use a fuse of 1 A T, 250 V
Frequency Range	According to the Options
Opt. 0540	0.5–4 GHz (3.5 mm female connectors)
Opt. 20180	2–18 GHz (3.5 mm female connectors)
Opt. 20260	2–26 GHz (3.5 mm female connectors)
Opt. 30400	3–40 GHz (2.4 mm female connectors)
Opt. 30500	3–50 GHz (2.4 mm female connectors)
Maximum Input Power Level	According to the Options
Opt. 0540	-5 dBm
Opt. 20180	+10 dBm
Opt. 20260	+10 dBm
Opt. 30400	+10 dBm
Opt. 30500	+10 dBm
Typical Insertion Loss	According to the Options
No gain added	10 dB
With internal gain	consult HFE
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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