ERZIA

DATASHEET

Band Pass Filter

ERZ-BPF-0540-1000-3.1

Main Features:

- Type: Band Pass Filter (BPF)
- Technology: Suspended Substrate
- Frequency range: 5.4 to 10 GHz
- Insertion Loss: 2.9 dB
- RF connectors (I/O): SMA Female
- Compact aluminum housing
- Hi-reliability and dedicated screening/ environmental tests available under request

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The ERZ-BPF-0540-1000-3.1 is a Suspended Substrate Band Pass filter integrated in a compact, rugged and connectorized module allowing easy integration in a wide range of final applications

Typical applications:

- Industrial / Laboratory
- Satcom / Telecom
- Space / Aerospace

Performance

Parameter	Value			Units
	Min	Typ	Max	
Frequency (passband)	5.4	-	10	GHz
Insertion Loss	-	1.6	2.9	dB
Return Loss	5	10	-	dB
Frequency for 30 dB out of band rejection	4.9	-	10.5	GHz
Frequency for 60 dB out of band rejection	5.1	-	10.8	GHz
CW Power Handling	-	-	10	W
RF Connectors	SMA Female IN/OUT			-

Insertion loss & Return loss

Figure 1 shows insertion loss and return loss measurements as a function of frequency at room temperature (25°C).

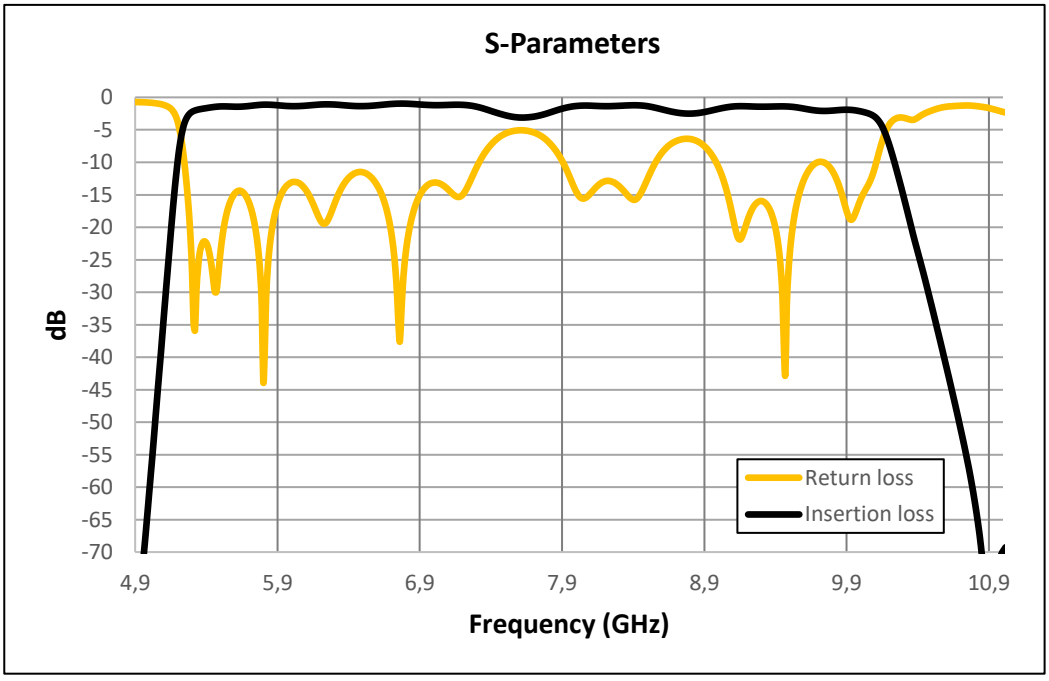

Figure 1:ERZ-BPF-0540-1000-3.1 Insertion & Return loss

Absolute Maximum Ratings

Condition	Value
Maximum Input Power (CW)	40 dBm
Operation temperature (at case)	-40 to 85 °C
Storage temperature	-55 to 125 °C

- Stress above these ratings may cause permanent damage to the device.
- It is final user responsibility to maintain the filter within the specified ranges.

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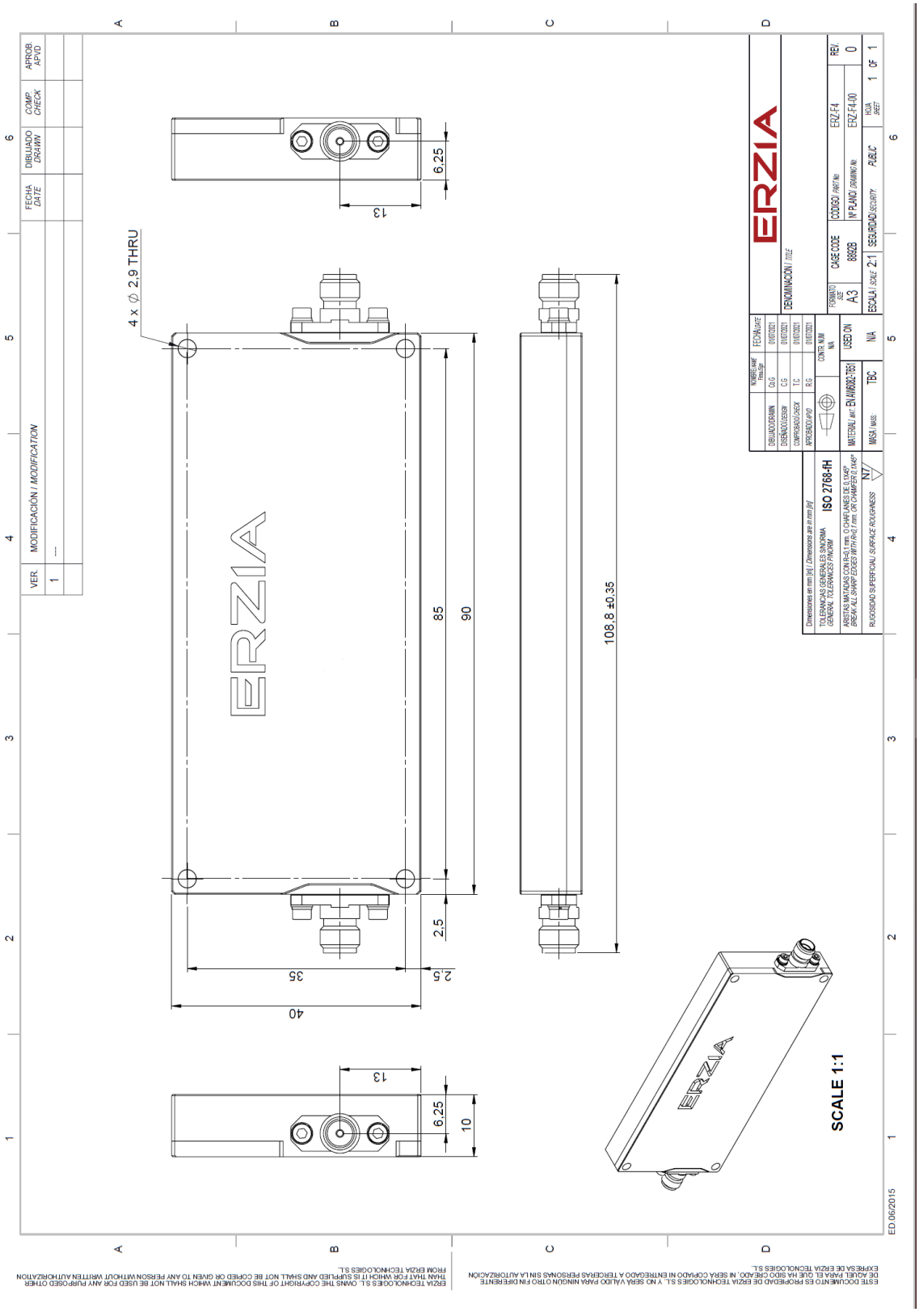
Mechanics and Housing



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Measurements Conditions

All measurements provided in this report were performed at the following conditions:

Condition	Value
Temperature (DUT ON)	25 °C ± 1°C
Humidity	44% ± 10%
DUT Warm up time	30 min
DUT minimum operation time	24 hours
Test equipment warm up time	2 hours
Additional temperature cycles in climatic chamber (DUT OFF)	-40°C to 85°C

Environmental Specifications (By Design)

Operating Temperature:	-45 to +85 °C	(MIL-STD-810F, method 520.2)
Storage Temperature:	-55 to 125 °C	(MIL-STD-810F, method 520.2)
Vibration:	8g rms	(MIL-STD-810F, method 514.5)
Shock:	20g,11ms,saw-tooth	(MIL-STD-810F, method 516.5)
Acceleration:	15g	(MIL-STD-810F, method 513.5)

RoHS & REACH Compliance

This part is compliant with EU 2011/65/UE RoHS (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) and REACH (Registration, Evaluation, Authorization and restriction of Chemical substances) directives.

Documentation and Test Reports

All modules are at least delivered with: Electrical Test Report, Certificate of Conformance, Certificate of Acceptance and Origin. Optionally, units can be environmentally tested (temperature, vibration…).

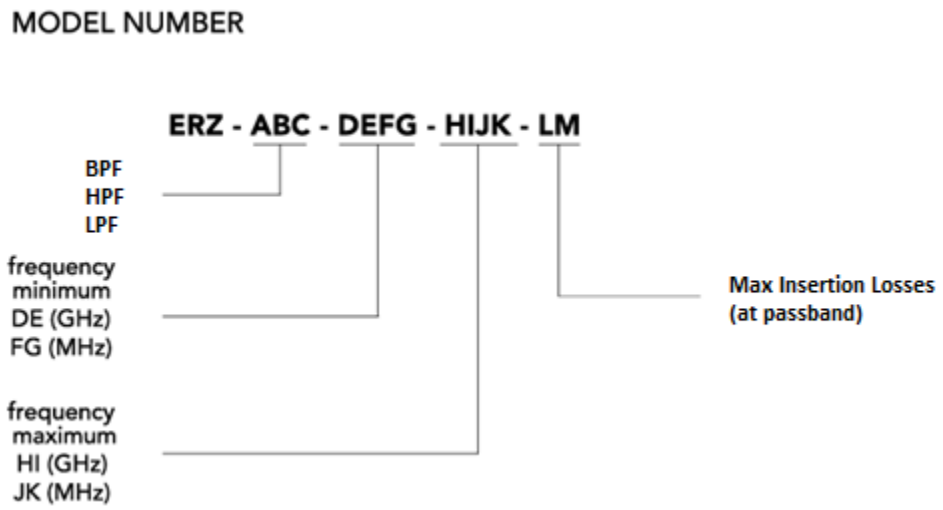
Space / Hi-Rel Usage

Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, or specific hi-reliability usage.

Customization and Extended Performances

ERZIA can fully design or adapt one of the existing RF filter designs according to your specifications. Please contact us for additional information.

Model Number Codification



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