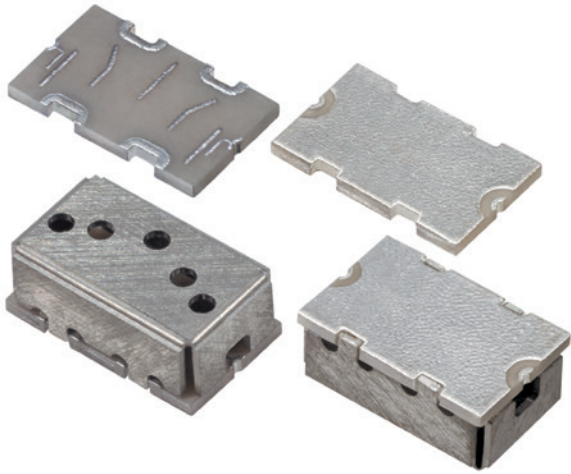


Planar X Series

BOARD LEVEL CERAMIC BASED THICK FILM RF FILTER CAPABILITY



Planar X Series is part of an overarching initiative by Smiths Interconnect that entails the creation of best-in-class planar RF filter solutions designed and tested to support various applications markets.

Planar X Series compliments Smiths Interconnect's broad portfolio of RF/Microwave components with bandpass, bandstop, lowpass and highpass configurations up to 18 GHz (Ku-Band) offering premium performance in a small package. The frequency of operation can be further extended with added material and process capabilities.

Planar X Series leverages Smiths Interconnect's existing thick film process technology on various dielectric substrates which are designed for use in harsh high-reliability environments. The small footprint, light weight and surface mountable configuration allow for high volume pick and place applications and are ideal for SATCOM, Radar and Broadcasting industries. In addition, Smiths Interconnect offers value added high-reliability test options providing assurance in mission critical defense and space applications.

Regardless of the application, our internal processes and procedures help ensure that all filters are fully compliant to customers' specifications.

Best-in-class RF Filter solutions up to 18 GHz designed and tested to support various applications and markets.

Features and Benefits

- Small Footprint – Reduced PCB Footprint
- Light Weight – Reducing overall system mass in critical space applications
- Excellent Rejection Characteristics – Providing best in class RF performance
- Surface Mountable – Ideal solutions for Pick and Place Applications
- Robust Materials – Suitable for Harsh Environment
- Frequency Offerings up to 18 GHz – Suitable for a wide array of applications

Applications

- Transmit/Receive Modules
- Up/Down Converters
- Instrumentation
- Satellite Communications
- Radar
- Broadcast

Technical Capability Characteristics

Filter Design Capabilities

Electrical

Characteristic Impedance	50 ohms
Operating Frequency	Up to 18 GHz
Rejection Criteria	Up to 30 dB over 5% Bandwidth
Input Power CW	Up to 10 Watts

Environmental

Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C
Moisture Sensitivity Level	1 - Unlimited

Mechanical

Configuration	Surface Mount or Wire Bondable Chip Packages
Package Size	Varies based on Electrical Requirements and Dielectric
Substrate Materials	Various Dielectrics Options Available
Conductor Material	Thick Film with Tin/Lead or RoHS Compliant Silver Plating
Shielding Material	Stainless Steel (If required)

Quality Assurance

Sample visual and mechanical inspection - 1.0 AQL per mechanical drawing requirements
Periodic electrical inspection performed for commercial grade products
High reliability tested products are available

Marking

Unit Marking	Available if required
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Packaging

Standard Packaging	Waffle Pack or Tape and Reel
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Additional Test Capabilities

Smiths Interconnect can provide a wide array of add-on test services to suit market and program needs. Below is a list of standard available test options. Please consult factory for individual program needs.

Per MIL-PRF-55342

Outgassing (space level only)	Thermal Shock
Visual and Mechanical	Power Conditioning (space level only)
Precap Visual Inspection	Low Temperature Operation
Solderability	Short Time Overload
Solder Mounting Integrity	High Temperature Exposure
Bondable Mounting Integrity	Moisture Resistance
Wire Bonding Integrity	Life Testing
Resistance to Solvents	Resistance to Soldering Heat
Marking Legibility Test	Resistance to Bonding Exposure

Per MIL-STD-883

Barometric Pressure, Reduced (Altitude Operation)	Moisture Resistance
Insulation Resistance	Salt At

How To Order

Specify Model Number: **XPFX-XXXX/XXX-M**

	X P F X	X X X X	X X X	M
	1	2	3	4
1 Series Name	X P F X	X - Number of Sections PF - Printed Filter X - Special Design if required		
2 Frequency	X X X X	XXXX - Center Frequency in MHz		
3 Bandwidth	X X X	XXX - Bandwidth in MHz		
4 Options	M	Surface Mount		

Global Support

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