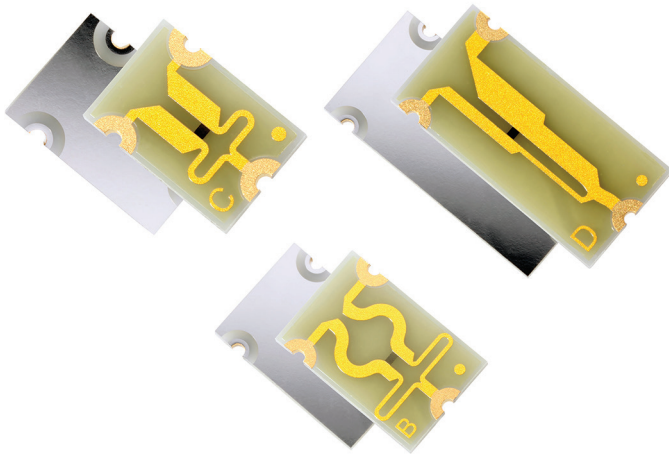


Wilkinson Power Divider

DC-40 GHZ



Smiths Interconnect offers a wide array of surface mount high Wilkinson power dividers optimized to split and distribute and input signal. Various configuration options including various high frequency band and customizable input and output ports are available to support multiple markets and applications.

The 2- and 4- way Wilkinson Power Divider solutions up to 40 GHz in a low profile, surface mount package. These power dividers are available in Alumina substrate, silver plated and thin film process technology. These devices are designed for demanding applications where excellent RF response and power handling are required.

The compact size makes these power dividers ideal for anywhere board space is a premium and performance is critical. Each divider has excellent broadband response for splitting or combining.

The Wilkinson Power Divider high frequency series can be qualified for space and defense applications, eliminating the need for customer's in house qualification. It can be supplied with all the necessary test and qualification data to ensure flight compliance

Wilkinson Power Dividers are designed for demanding applications where excellent broadband response and power handling are required

Features and Benefits

- Configurable small size design approach providing optimized solutions
- Excellent broadband response
- Frequency offering up to 40 GHz solutions and supporting a wide array of markets and applications
- Proven thin film process technology ensuring high performance in harsh environments
- Size, weight, and power optimized for each unique design

Applications

- Power Amplifiers
- Phased Array Radar
- Satellites
- Instrumentation
- Antenna Array Feeds
- Internet of Things (IoT)

Technical Characteristics

Divider Capabilities	WPD02-1525EBF	WPD02-2535ECF	WPD02-1525UDF
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Electrical

Nominal Impedance	50 Ω	50 Ω	50 Ω
Frequency Range	15 - 25 GHz	25 - 35 GHz	15 - 25 GHz
Division	2	2	2
Division Loss / Attenuation	-3 dB Typical	-3 dB Typical	-3.0 dB Typical
Insertion Loss	-0.5 dB Max 15 - 22 GHz -0.75 dB Max 22 - 25 GHz	-0.5 dB Max 25 - 32 GHz -0.75 dB Max 32 - 35 GHz	-0.5 dB Max 15 - 22 GHz -0.5 dB max. 22 - 25 GHz
Isolation	-20.0 dB 15 - 22 GHz -15.0 dB 22 - 25 GHz	-20.0 dB 25 - 32 GHz -15.0 dB Max 32 - 35 GHz	-18.0 dB 15 - 22 GHz -15.0 dB 22 - 25 GHz
VSWR	1.30:1 Max	1.30:1 Typical	1.30:1 Max
Amplitude Balance	± 0.2 dB 17 - 22 GHz ± 0.2 dB 15 - 25 GHz	± 0.2 dB 27 - 32 GHz ± 0.2 dB 25 - 35 GHz	± 0.25 dB 17 - 22 GHz ± 0.25 dB 15 - 25 GHz
Phase Balance	$\pm 3^\circ$ 17 - 22 GHz $\pm 8^\circ$ 15 - 25 GHz	$\pm 3^\circ$ 27 - 32 GHz $\pm 8^\circ$ 25 - 35 GHz	$\pm 8^\circ$ 15 - 25 GHz
Power handling	1 Watt CW	1 Watt CW	1 Watt CW

Environmental

Operating Temperature	-55°C to +150°C
Storage Temperature	-65°C to +150°C
Moisture Sensitivity Level	MSL 1 - Unlimited

Mechanical

Configuration	Surface Mount
Substrate Material	Alumina (Al)
Terminal Material	Thin Film, Nickel Barrier, Solderable Silver Plating
Ground Plane Material	Thin Film, Nickel Barrier, Solderable Silver Plating
Resistive Element	Thin Film Tantalum Nitride

Marking

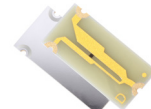
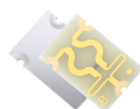
Unit Marking	B and pin 1 dot	C and pin 1 dot	D and pin 1 dot
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Quality Assurance

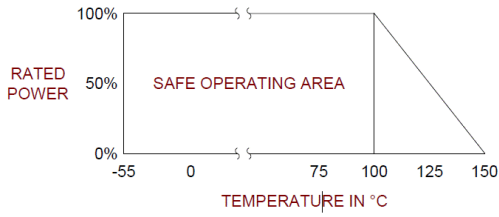
Sample visual and mechanical inspection - 1.0 AQL per mechanical drawing requirements. Periodic electrical inspection performed for commercial grade products. High reliability tested products are available.
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Packaging

Standard Packaging	Waffle Pack or Tape and Reel
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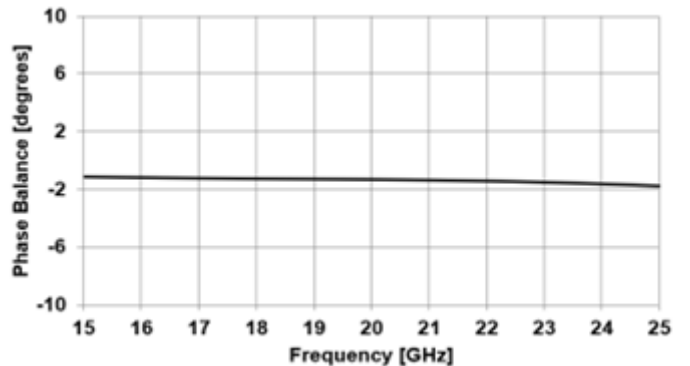
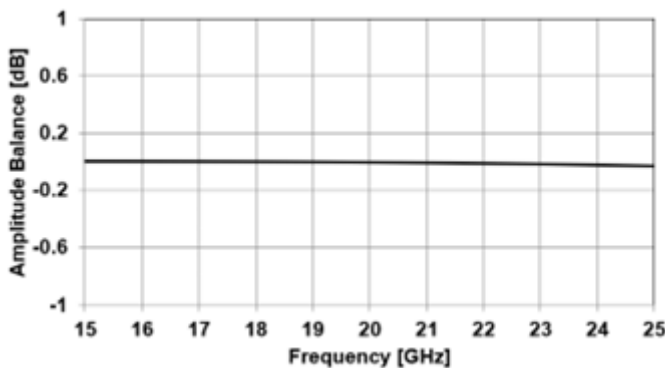
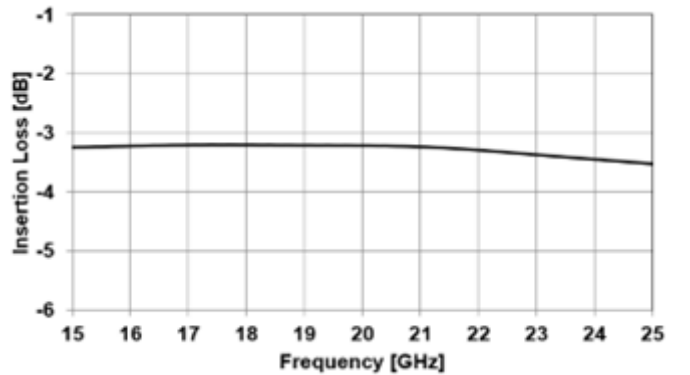
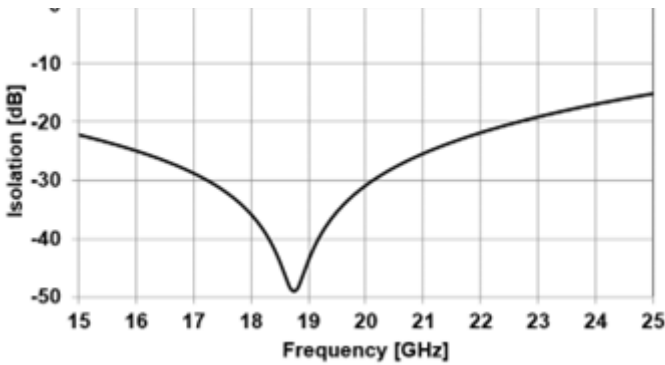
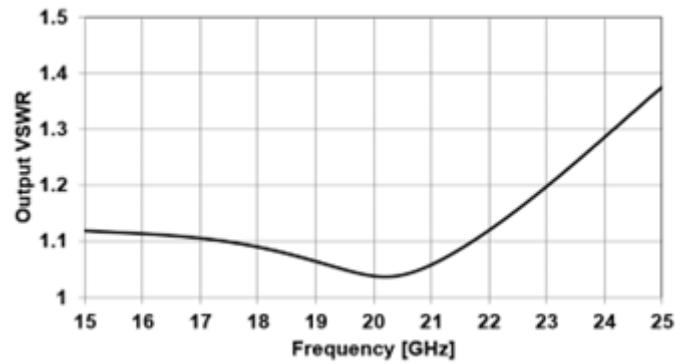
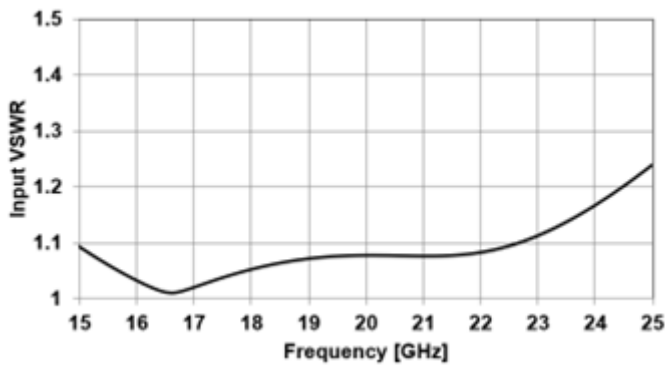


Power Derating Curve



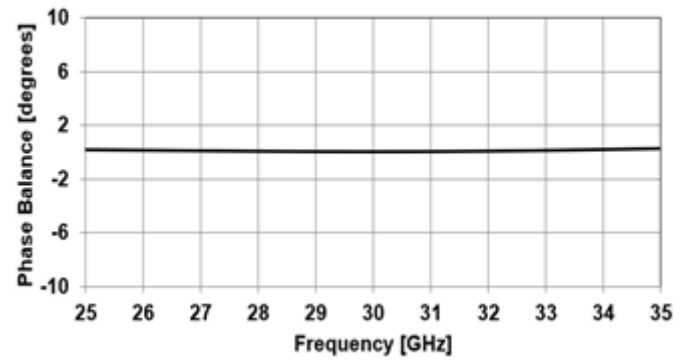
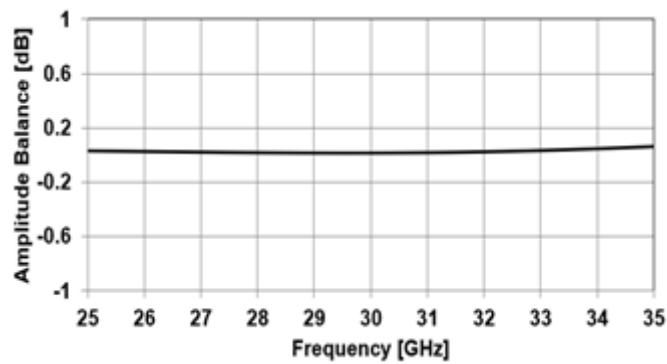
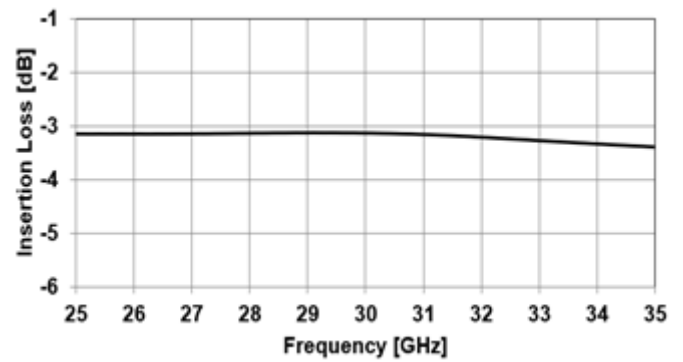
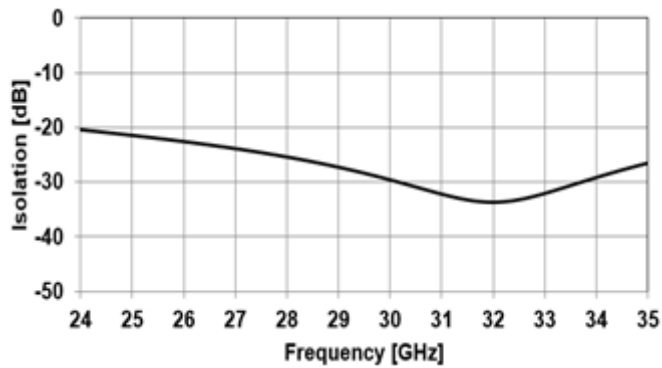
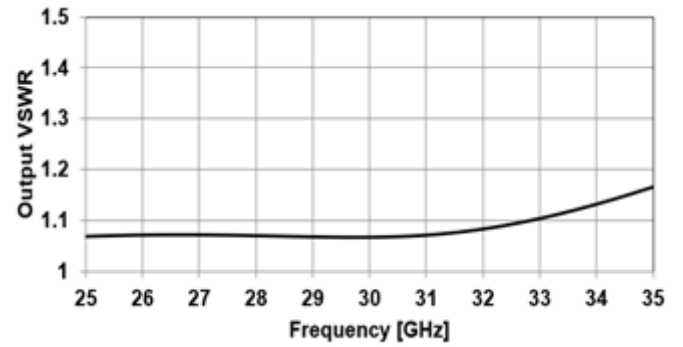
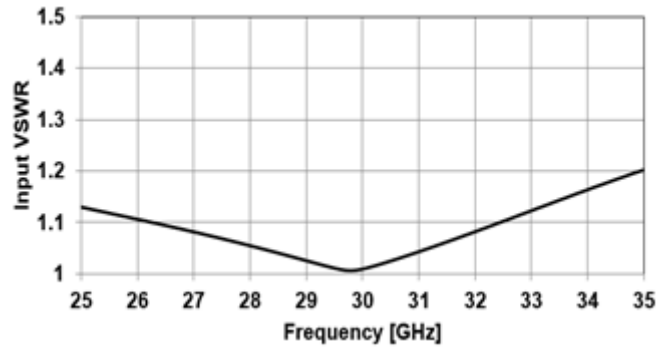
Typical Data

WPD02-1525EBF



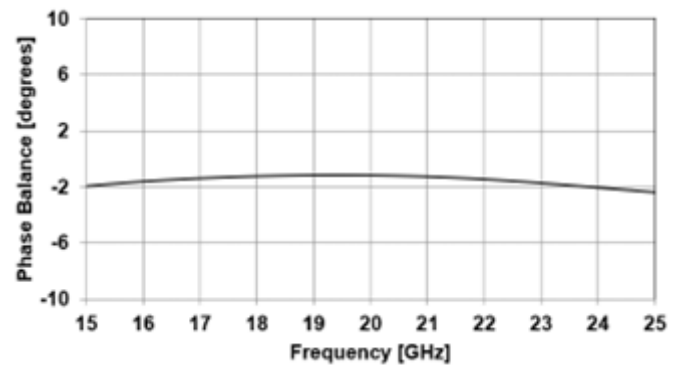
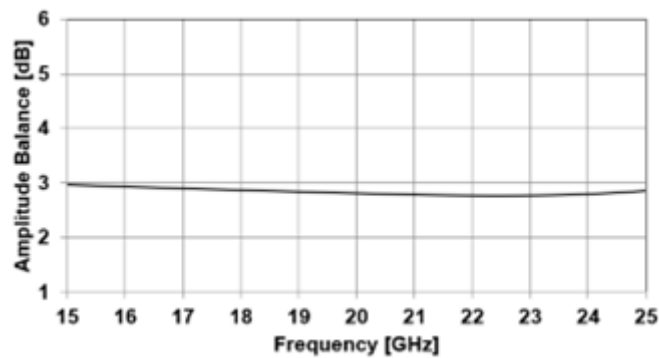
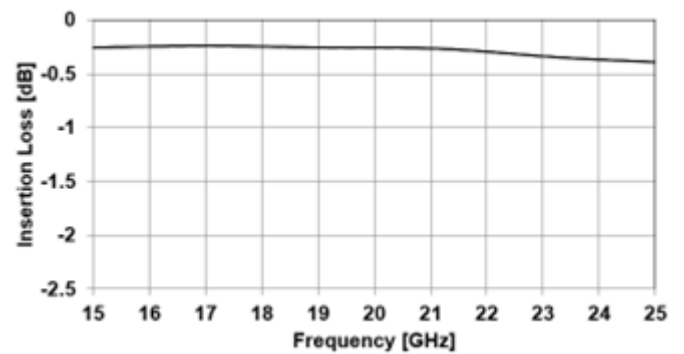
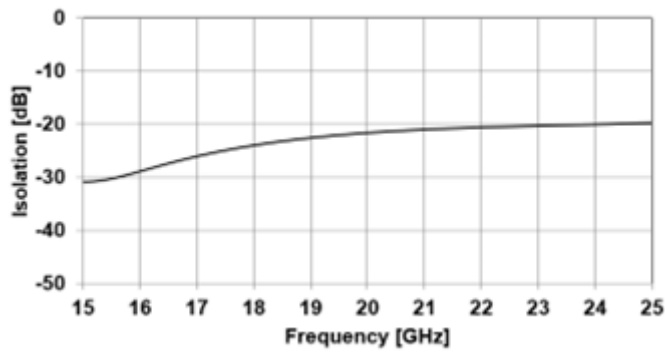
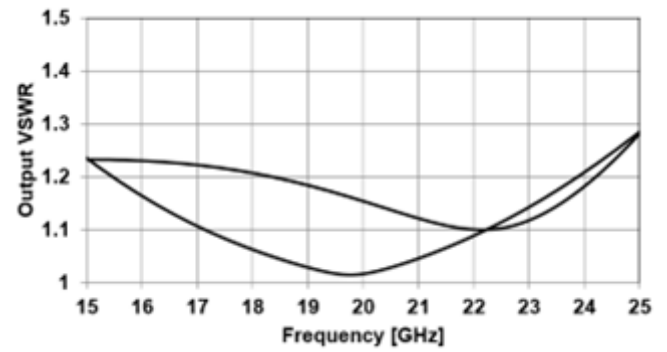
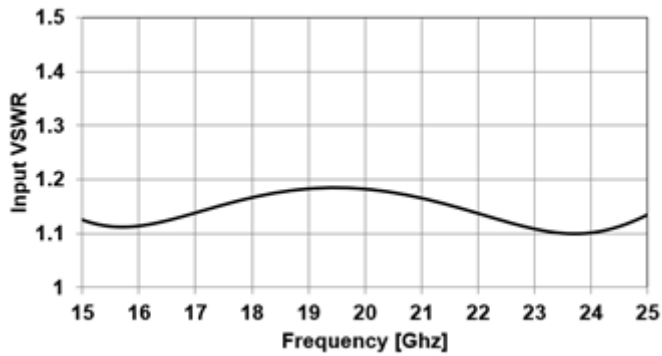
Typical Data

WPD02-2535ECF



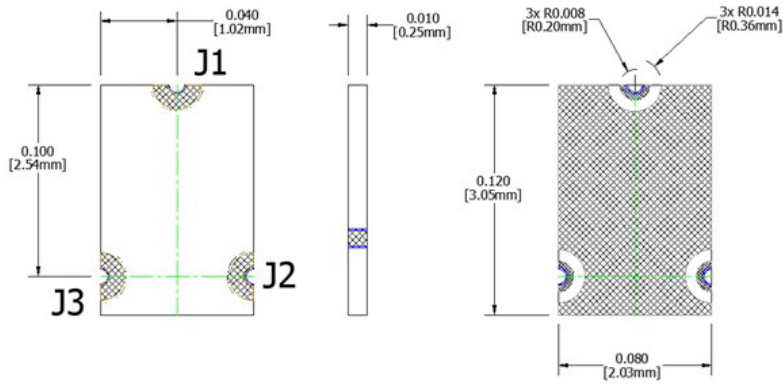
Typical Data

WPD02-1525UDF

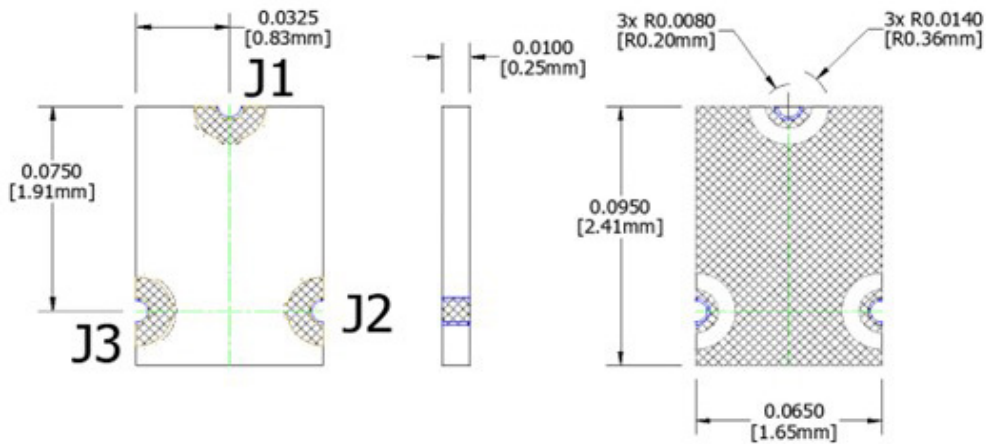


Mechanical

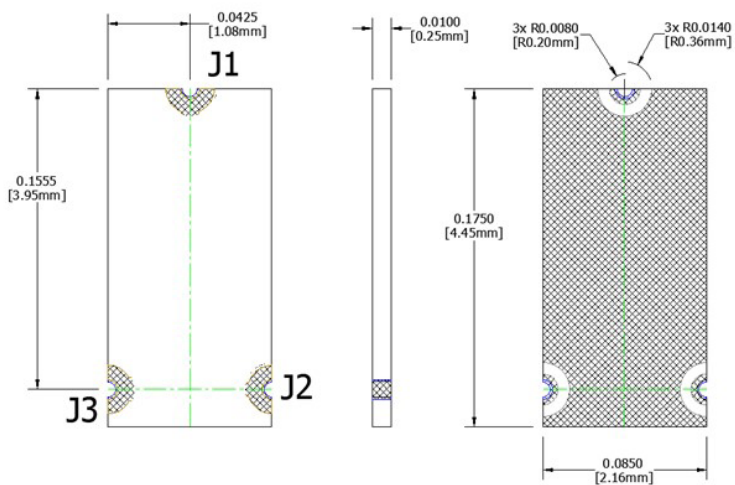
WPD02-1525EBF



WPD02-2535ECF



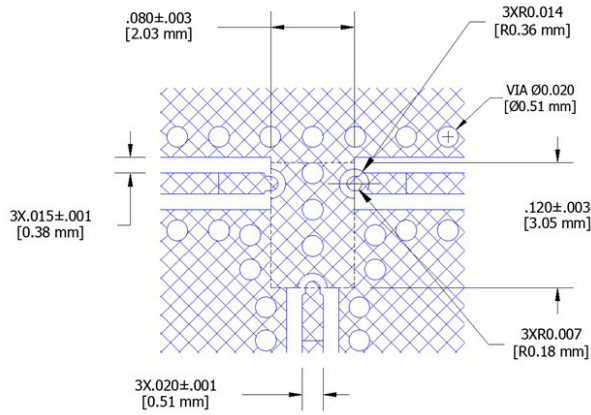
WPD02-1525UDF



Unless otherwise specified, tolerance: X.XXX = ± 0.01 " X.XXX = ± 0.001 "

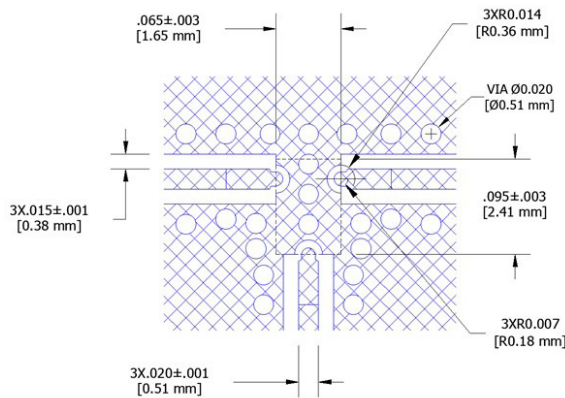
Suggested Mounting Footprint

WPD02-1525EBF



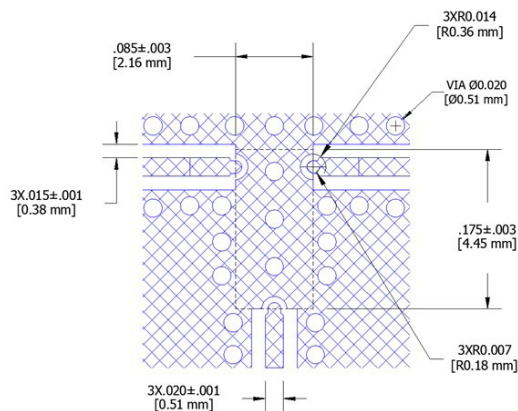
Metric dimensions for Reference only.
Transmission line dimensions based on a Rogers 6035HTC substrate, 0.010" thick, 1/2oz, copper both sides.

WPD02-2535ECF



Metric dimensions for Reference only.
Transmission line dimensions based on a Rogers 6035HTC substrate, 0.010" thick, 1/2oz, copper both sides.

WPD02-1525UDF



Metric dimensions for Reference only.
Transmission line dimensions based on a Rogers 6035HTC substrate, 0.010" thick, 1/2oz, copper both sides.

How To Order

Specify Model Number: **WPDXX-XXXXXXF**

	W P D	X X	X X	X X	X	X	F
	1	2	3	4	5	6	7
1 Series Name	W P D Series						
2 Divide Type	0 2	2 Way	0 3	3 Way	0 4	4 Way	
3 Minimum Frequency	X X	GHz					
4 Maximum Frequency	X X	GHz					
5 Splitter Type	X	E = equal split, U=Unequal split					
6 Marking Designation	X	X = B, C, or D					
7 Terminal Finish	F	RoHS Compliant					

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