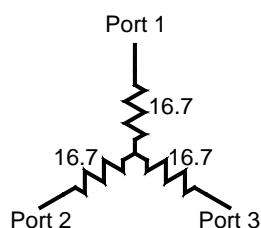


# 6 dB Power Divider, 50 GHz

## PSPL5350 Datasheet



The PSPL5350 6 dB Power Divider provides excellent amplitude and phase performance power division from DC to frequencies over 40 GHz. The outputs are nominally attenuated by 6 dB. All ports are impedance matched to 50Ω when both outputs are terminated in 50Ω. Power dividers are built using a three-resistor network. The resistors have 1% tolerances, resulting in precise 50Ω impedance matches at any port. This divider is engineered to provide excellent amplitude and phase symmetry throughout the operating range, regardless of port selection. Maximum division symmetry is obtained when port 1 is used as input, with ports 2 and 3 providing the divided signal output.

### Specifications

Parameter	Value
Risetime	8 ps, typical
Insertion Loss BW (-1.5 dB)	DC to >40 GHz
Insertion Loss, DC	6.02 ± 0.08 dB max, DC
Insertion Loss, AC	<6.5 dB, 0 – 5 GHz <7.0 dB, 5 – 15 GHz <7.5 dB, 15 – 40 GHz 5.8<IL<7.8 dB, 0 – 40 GHz, guaranteed 7.2 dB, typical at 50 GHz, 2.44mm connectors
Insertion Loss Asymmetry	0.05dB max, DC <0.25 dB, 0 – 20 GHz <0.40 dB, 20 – 40 GHz
Phase Tracking [1]	<4 deg, 0 – 20 GHz <10 deg, 20 – 40 GHz
Delay	100 ps, typical
Input Impedance, DC	50 ± 0.5 Ω max
Return Loss	>30 dB, 0 – 1 GHz >17 dB, 1 – 15 GHz >12.5 dB, 15 – 40 GHz
Max Input Power, avg	2.5 Watts, CW
Temperature Range	-55 to 90 °C @ 2.5 W, operating case temperature

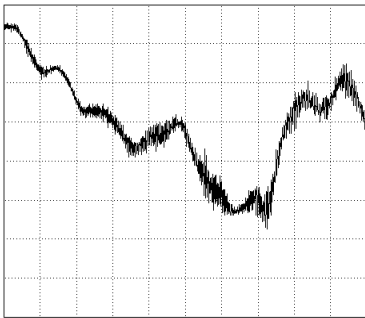
Parameter	Value
	linearly derated to 0 W @ 110°C
Warranty	One Year

**Note:** All parameters listed are typical unless max/min guaranteed limits are provided. The DC specs are based upon resistor tolerances and only when used with 50 Ω source and terminations.

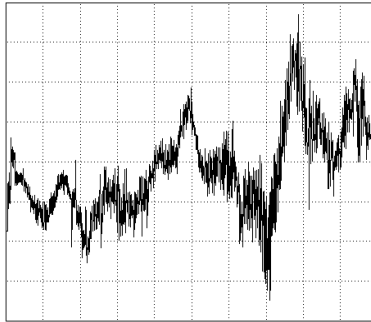
### Typical Performance

Frequency responses from 40 MHz to 20 GHz, linear sweep at 4 GHz/div

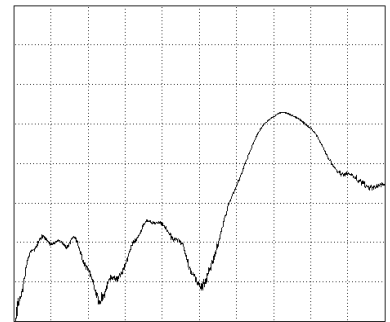
Insertion Loss,  $S_{21}$   
0.2 dB/div



Group Delay,  $S_{21}$   
2 ps/div

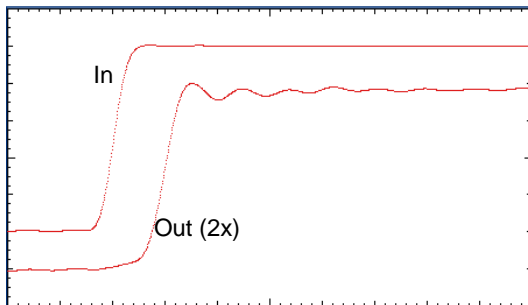


Return Loss,  $S_{11}$   
5 dB/div



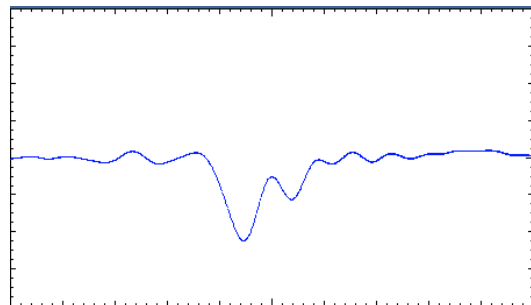
Transmission Responses, 210 ps/div

$S_{21}$  or  $S_{31}$  Transmission Responses to 10 ps risetime step into port 1.

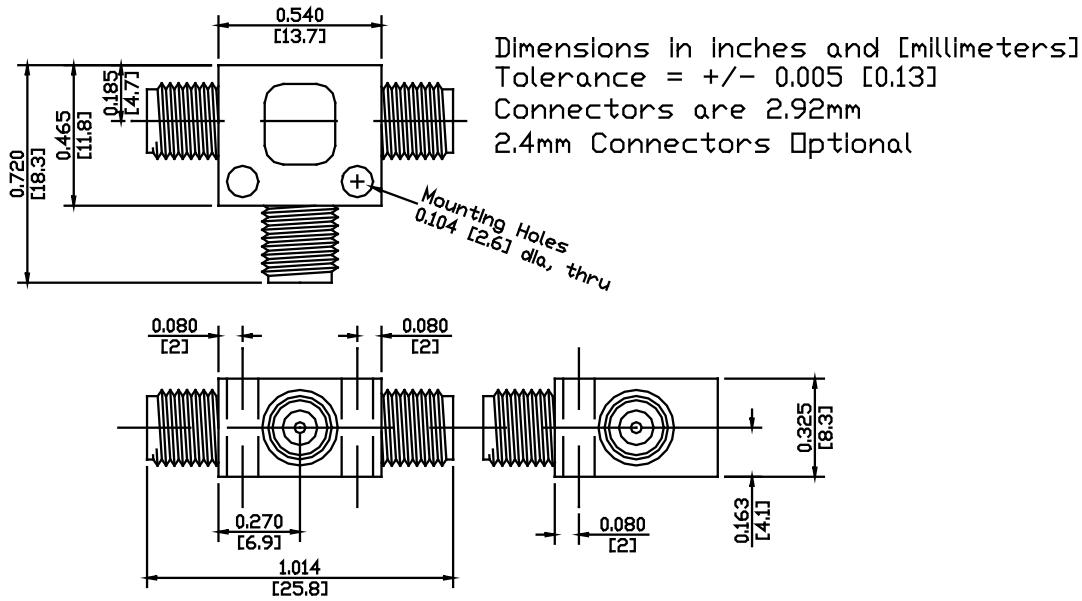


Input TDR Response, 2.5% rho/div, 50 ps/div

$S_{11}$  Input TDR Response to 25 ps risetime TDR pulse



## PSPL5350 Mechanical dimensions



## Ordering information

Model	Description
PSPL5350	POWER DIVIDER, 6DB, 50 GHz

## Options

- opt. 240JJJ Female 2.4mm connectors
- opt. 292JJJ Female 2.92mm connectors

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