

Data Sheet

SHF PDV18 A



18 GHz Power Divider



Description

The SHF PDV18 A is a RoHS compliant passive 2-way power divider broadband from DC to 18 GHz. With its resistive design it divides the input voltage equally to the two other ports, thus resulting in an insertion loss of 6 dB from the input to one of the output ports (neglecting the inherent loss).

The SHF PDV18 A can also be used in reverse direction as a power combiner.

Features

- Small and lightweight
- Low loss and low reflection
- Bi-directional (can be used as divider or combiner)

Specifications

Parameter	Unit	Symbol	Min	Typ	Max	Conditions
Frequency range	f	GHz	DC		18	
Insertion loss	IL	dB	5.8	6	7.2 7.5	DC f < 10 GHz 10 GHz < f < 18 GHz
Input return loss	RL	dB			19 16.5	<10 GHz <18 GHz
Power handling	P _{max}	W			1	DC
Amplitude Balance	dB				±0.2 ±0.4 ±0.5	Amplitude balance ¹ between output ports. f < 4 GHz 4 GHz < f < 10 GHz 10 GHz < f < 18 GHz
Phase Balance		deg		±2	±5	Phase balance ² between output ports.
Input impedance	R _L	Ω		50		
Rise time	t _r	ps			16	10...90%
Operating temperature		°C	-55		85	
Input connector						SMA male
Output connectors						SMA female
Weight		g		25		

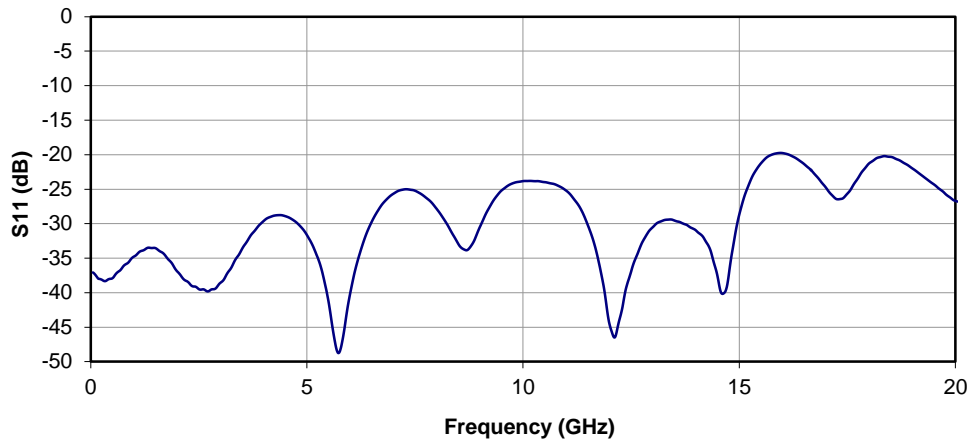
¹ The amplitude balance is defined as the amplitude difference in dB of the output signals at port 2 and 3. It is calculated as: $|S_{31}|_{dB} - |S_{21}|_{dB}$.

² The amplitude balance is defined as the amplitude difference in dB of the output signals at port 2 and 3. It is calculated as: $|S_{31}|_{dB} - |S_{21}|_{dB}$.

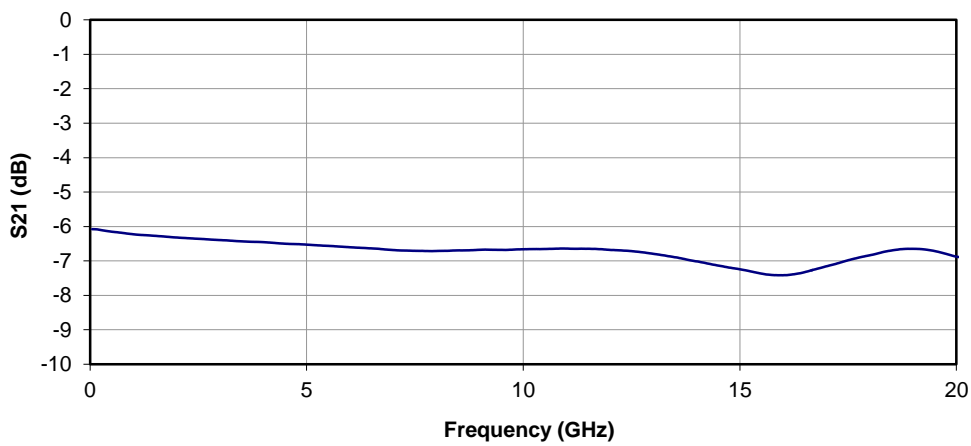


Typical S-Parameters

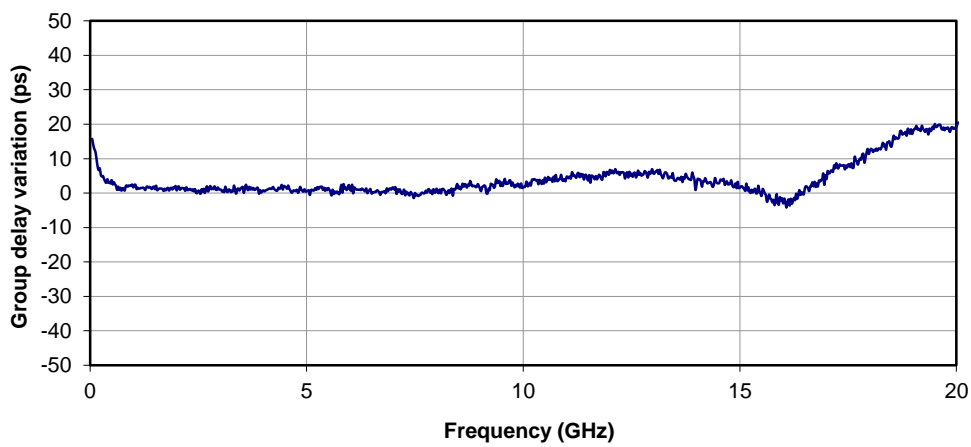
Input Return Loss



Insertion Loss



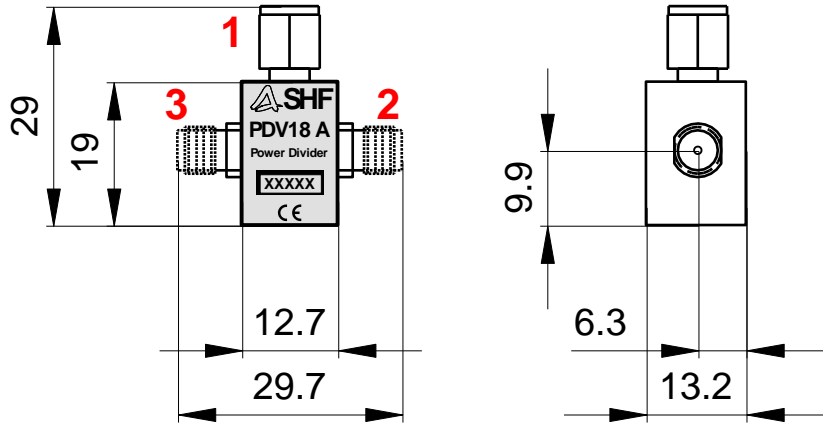
Group Delay



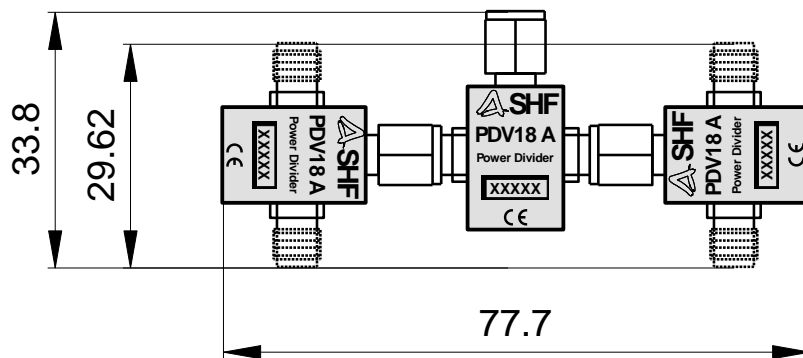
Aperture = 25 MHz



Mechanical Drawing



2 output ports



4 output ports

All dimensions in mm



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