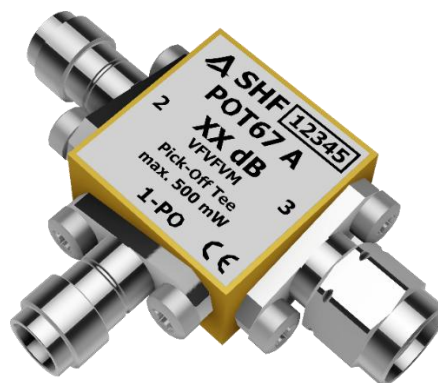


## Data Sheet SHF POT67 A



### 67 GHz Pick-Off Tee



## Description

The SHF POT67 A is a compact, high-performance, impedance-matched, resistive pick-off tee with a bandwidth exceeding 67 GHz.

Fully customizable 1.85 mm connector configurations as well as between series (1.0 mm ↔ 1.85 mm) configurations are available to meet individual requirements of the customer and to avoid additional adapters in the setup.

Dedicated mounting holes on the back side allow secure installation on a mounting plate for stable system integration.

Two different pick-off coupling values (12 dB, 20 dB) are available within the same series (POT67 A | xx dB).

## Applications

- Signal coupling and monitoring (tapping)
- Injection of signals or noise
- Pick-off for prescalers or clock-data recovery

## Features

- Small and lightweight
- Flat insertion loss, low reflection

## Configurations

- VFVFVM
- Other configurations on request

## Product Code Example

- SHF POT67 A | 20 dB | VFVFVM  
*Brand: SHF*  
*Type: 67 GHz Pick-Off Tee*  
*Revision: A*  
*Typ. Pick-Off Value: 20 dB*  
*Connector Configuration:  
Port 1 - 1.85 mm female  
Port 2 - 1.85 mm female  
Port 3 - 1.85 mm male*



## Specifications<sup>1</sup>

Parameter	Unit	Symbol	Min	Typ	Max	Conditions
<b>Absolute Maximum Ratings</b>						
Power handling	W	$P_{in,max}$			0.5	
<b>Mechanical Characteristics</b>						
Operating temperature	°C	$T_{case}$	10		50	
Connectors						1.0 mm
Dimensions	mm				42.6 30.3 9	Width Length Height
Weight	g			17.5		

Parameter	Unit	Symbol	Min	Typ	Max	Conditions
<b>Electrical Characteristics (at 25°C case temperature, unless otherwise specified)</b>						
Maximum Operating Frequency	GHz	$f_{max}$	67			
Minimum Operating Frequency		$f_{min}$			DC	
Input Impedance	$\Omega$			50		

SHF POT67 A   12 dB						
Insertion loss (Thru line)	dB	$IL_{thru}$			5	$f < 10$ GHz
					5.8	$10$ GHz $< f < 40$ GHz
					6	$40$ GHz $< f < 67$ GHz
Insertion loss (Pick-off)	dB	$IL_{po}$		12	13	$f < 20$ GHz
					13.5	$20$ GHz $< f < 40$ GHz
					14	$40$ GHz $< f < 67$ GHz
Return loss (Ports 2 and 3 - input/output)	dB	$RL_{thru}$	15			$f < 20$ GHz
			11			$20$ GHz $< f < 40$ GHz
			10			$40$ GHz $< f < 50$ GHz
			9			$50$ GHz $< f < 67$ GHz
Return loss (Port 1 - Pick-off)		$RL_{po}$	15			$f < 20$ GHz
			11			$20$ GHz $< f < 40$ GHz
			10			$40$ GHz $< f < 50$ GHz
			9			$50$ GHz $< f < 67$ GHz

<sup>1</sup> These specifications are valid for the VFVFM configuration.

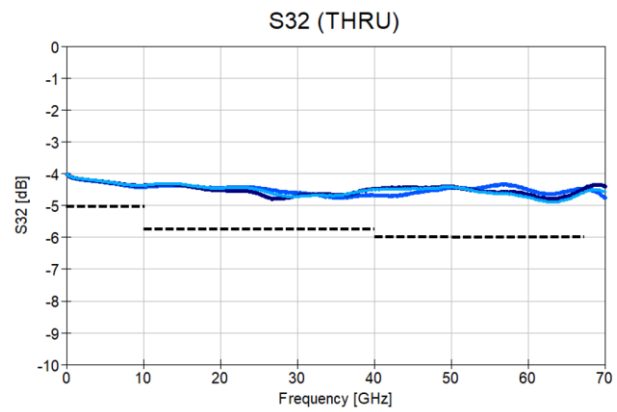
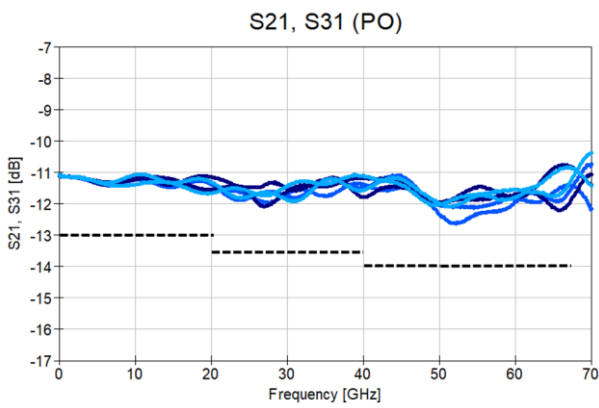
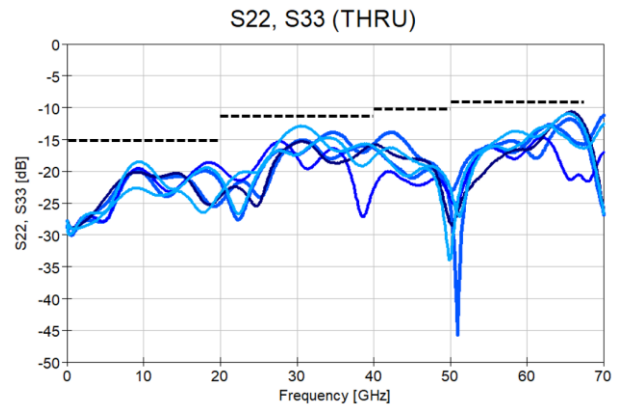
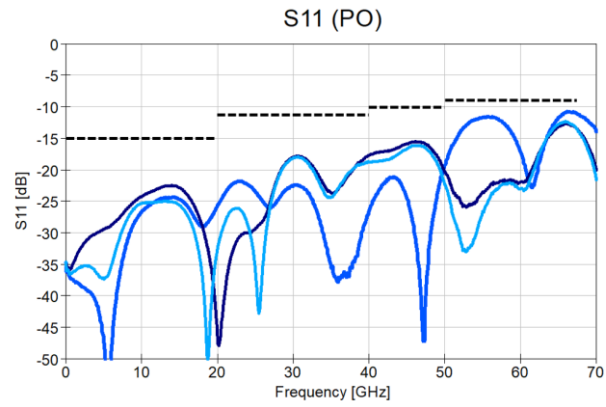


Parameter	Unit	Symbol	Min	Typ	Max	Conditions
<b>SHF POT67 A   20 dB</b>						
Insertion loss (Thru line)	dB	IL <sub>thru</sub>			3	f < 10 GHz
					3.8	10 GHz < f < 40 GHz
					4	40 GHz < f < 67 GHz
Insertion loss (Pick-off)	dB	IL <sub>po</sub>		20	21	f < 20 GHz
					21.5	20 GHz < f < 40 GHz
					22	40 GHz < f < 67 GHz
Return loss (Ports 2 and 3 - input/output)	dB	RL <sub>thru</sub>	15			f < 20 GHz
			11			20 GHz < f < 40 GHz
			10			40 GHz < f < 50 GHz
			9			50 GHz < f < 67 GHz
Return loss (Port 1 - Pick-off)		RL <sub>po</sub>	15			f < 20 GHz
			11			20 GHz < f < 40 GHz
			10			40 GHz < f < 50 GHz
			9			50 GHz < f < 67 GHz



## Typical S-Parameters<sup>2</sup>

SHF POT67 A | 12 dBm

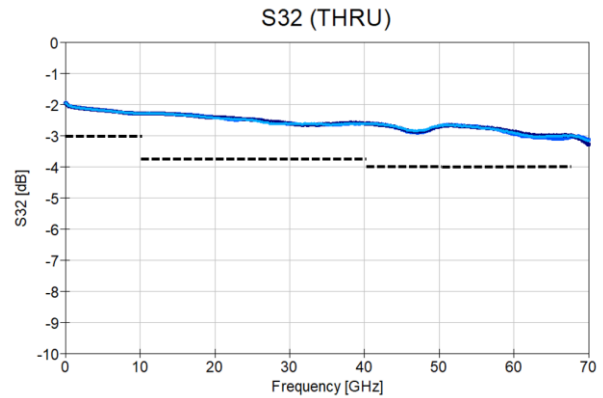
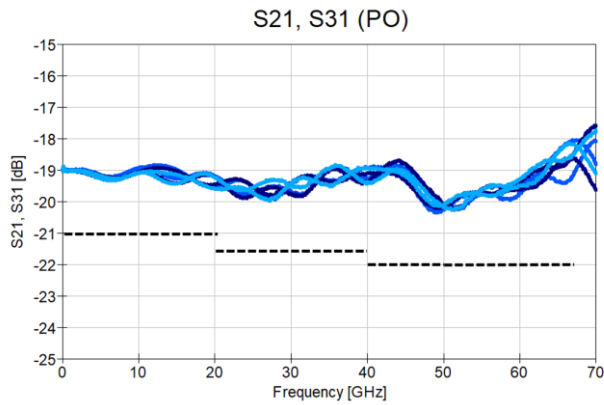
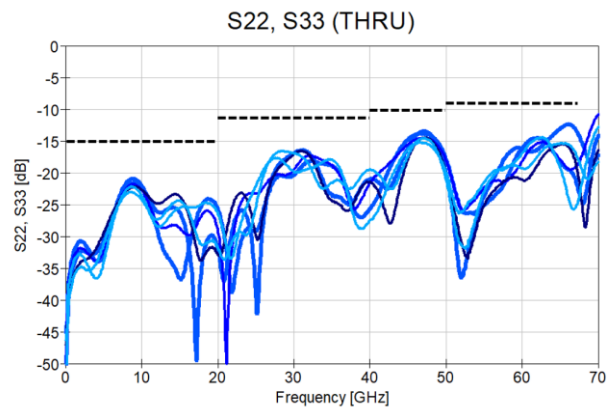
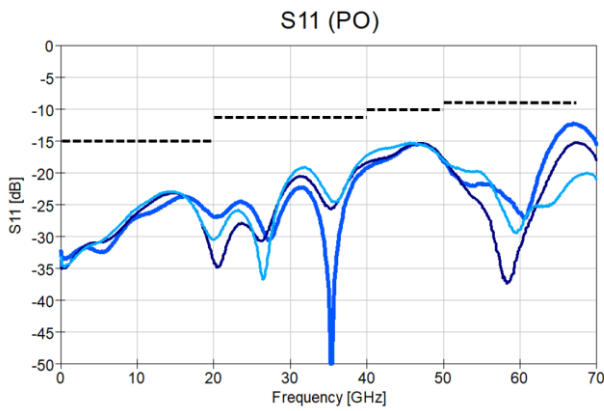


- **Blue solid lines: Measurements (three SHF POT67 A | 12 dB)**
- **Black dashed lines: Specifications**

<sup>2</sup> These typical S-Parameters are valid for the VFVFM configuration.



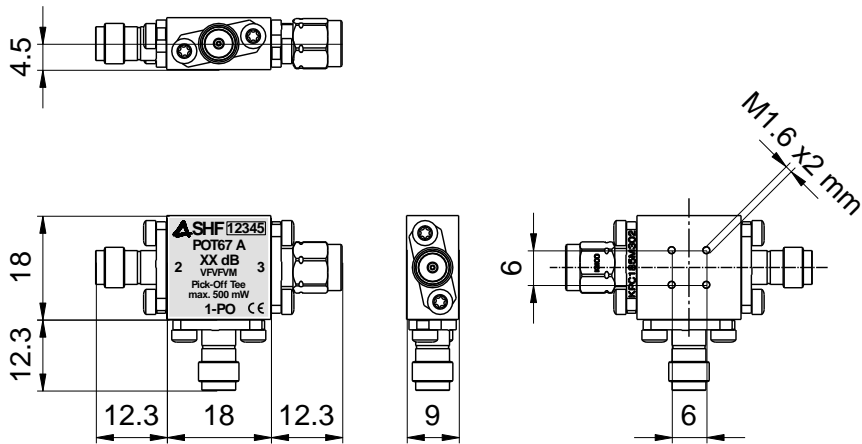
### SHF POT67 A | 20 dB



- **Blue solid lines: Measurements (three SHF POT67 A | 20 dB)**
- **Black dashed lines: Specifications**



## Mechanical Drawing



All dimensions in mm



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