

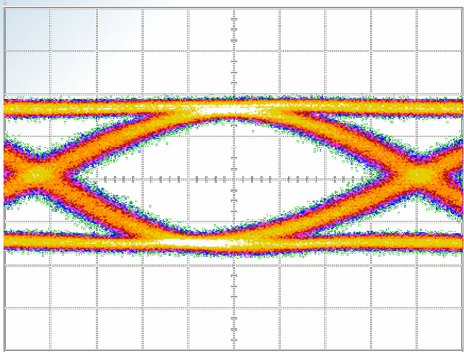


## SHF Communication Technologies AG

Wilhelm-von-Siemens-Str. 23D • 12277 Berlin • Germany

Phone ++49 30 / 772 05 10 • Fax ++49 30 / 753 10 78

E-Mail: [sales@shf.de](mailto:sales@shf.de) • Web: <http://www.shf.de>



# Preliminary Datasheet

## SHF DX45

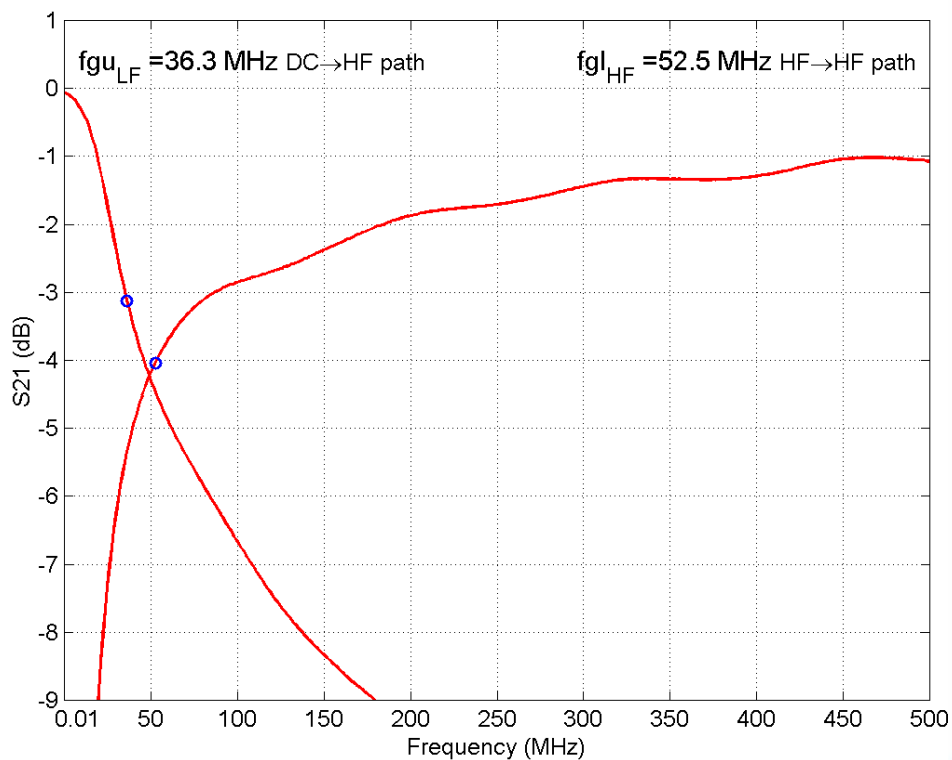
### Diplexer



## Preliminary specifications – SHF DX45

Parameter	Symbol	Unit	Min	Typ	Max	Conditions
Low frequency range -3dB LF in → HF out		MHz	DC		25	upper limit can be specified
High frequency range -3dB HF in → HF out		GHz	0.09		45	lower limit can be specified
Impedance	Z	$\Omega$		50		
Input return loss	$S_{11}$	dB			-15 -10	>500 MHz <22 GHz >22 GHz <45 GHz
Insertion loss	$S_{21}$	dB		-1	-1.5	>500 MHz <45 GHz
Maximum input power	$P_{max}$	dBm			30	
Rise time/Fall time	$t_r/t_f$	ps			5	10...90%
Max. voltage					16	0.4 A
HF in connector						K (2.9 mm)
HF out connector						K (2.9 mm)
LF in connector						SMA
Dimensions						40x13x12.6

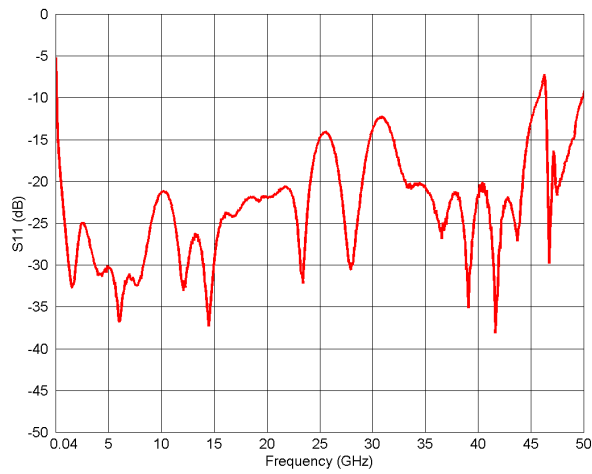
### Low frequency response



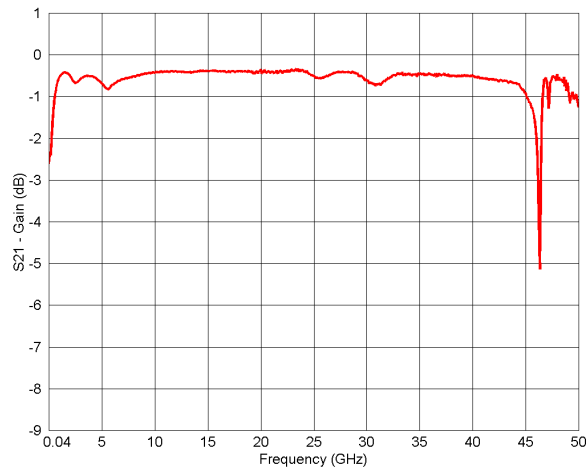
Blue curve (starts at 0dB and falls): response of DC→HF path  
 Green curve (rises to >-1dB): response of HF→HF path



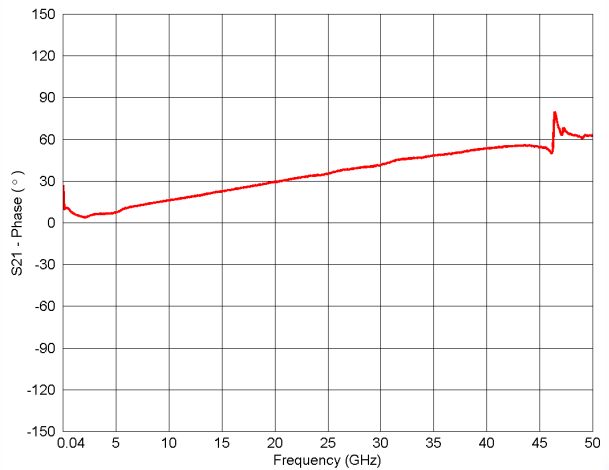
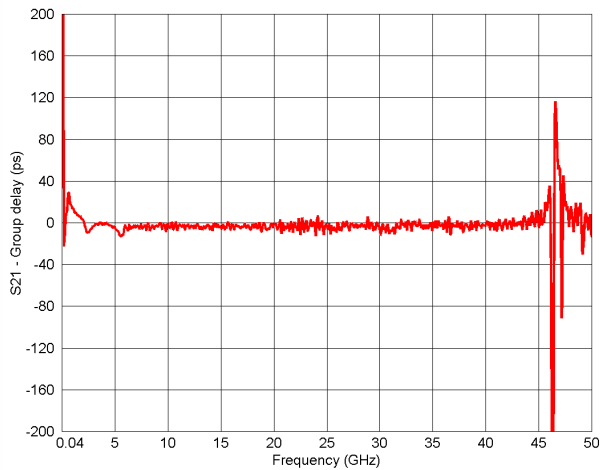
## S-parameters, group delay and phase response



Input return loss



Insertion loss



Aperture of group delay measurement: 100MHz

The spike at ~47GHz is due to moding of the K connectors



## Outline diagram

### ■ Applications

Antenna testing  
Research and  
Development  
Data Transmission

**The following  
combinations of  
connectors are  
available.**

Please specify with  
your order.

