

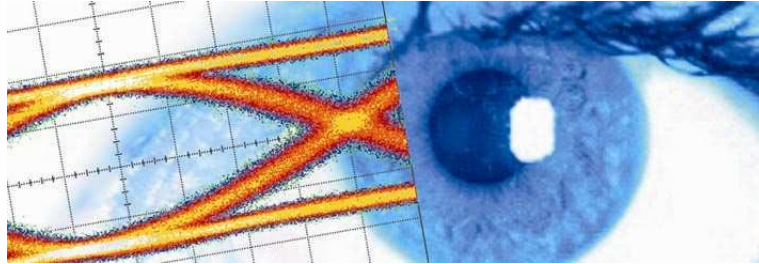


## SHF Communication Technologies AG

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>



# Datasheet

## SHF 2040A

### Frequency Doubler





## Description

The SHF 2040 A is a frequency doubler which converts an input clock signal in the range 19.5...21.75 GHz into a 39...43.5 GHz signal. A built-in filter ensures strong suppression of the fundamental frequency.

## Specifications – SHF 2040A

Parameter	Unit	Min.	Typ.	Max.	Comment
Input frequency	GHz	19.5		21.75	
Output frequency	GHz	39		43.5	
Input power	dBm	0			
Output power	dBm	4			
Suppression of fundamental	dB	30			
Input return loss	dB			-6	
Jitter RMS	fs		250		
Power supply	V mA	8		15 60	
Power consumption	mW		500		
Input connector					SMA female
Output connector					2.9 mm female
Dimensions	mm				50x30x20

## Signal Output Amplitude

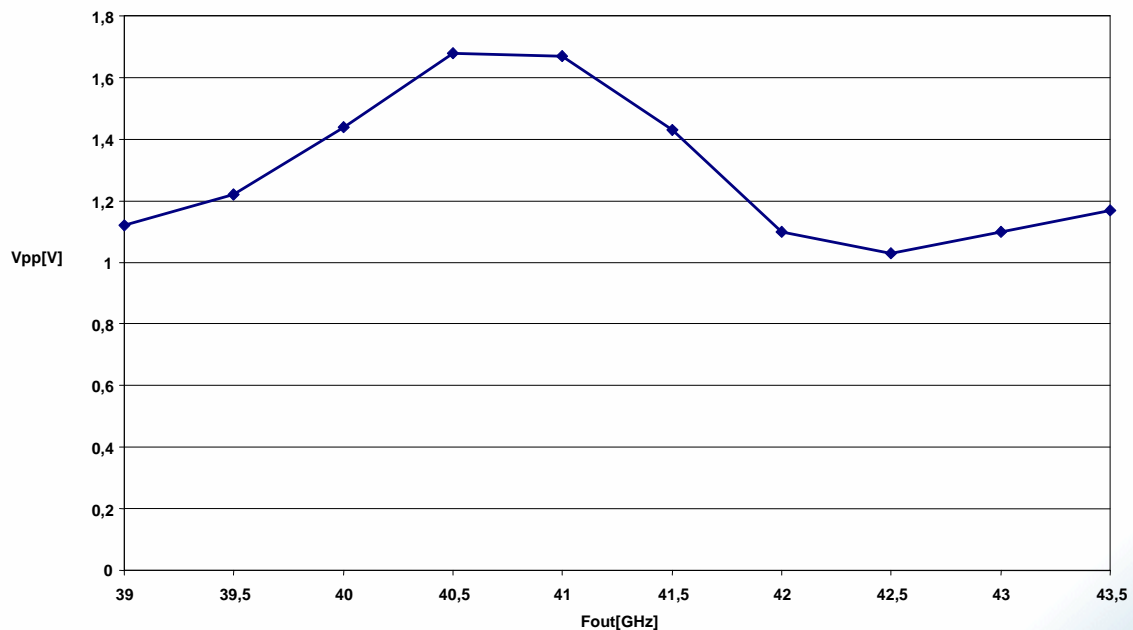
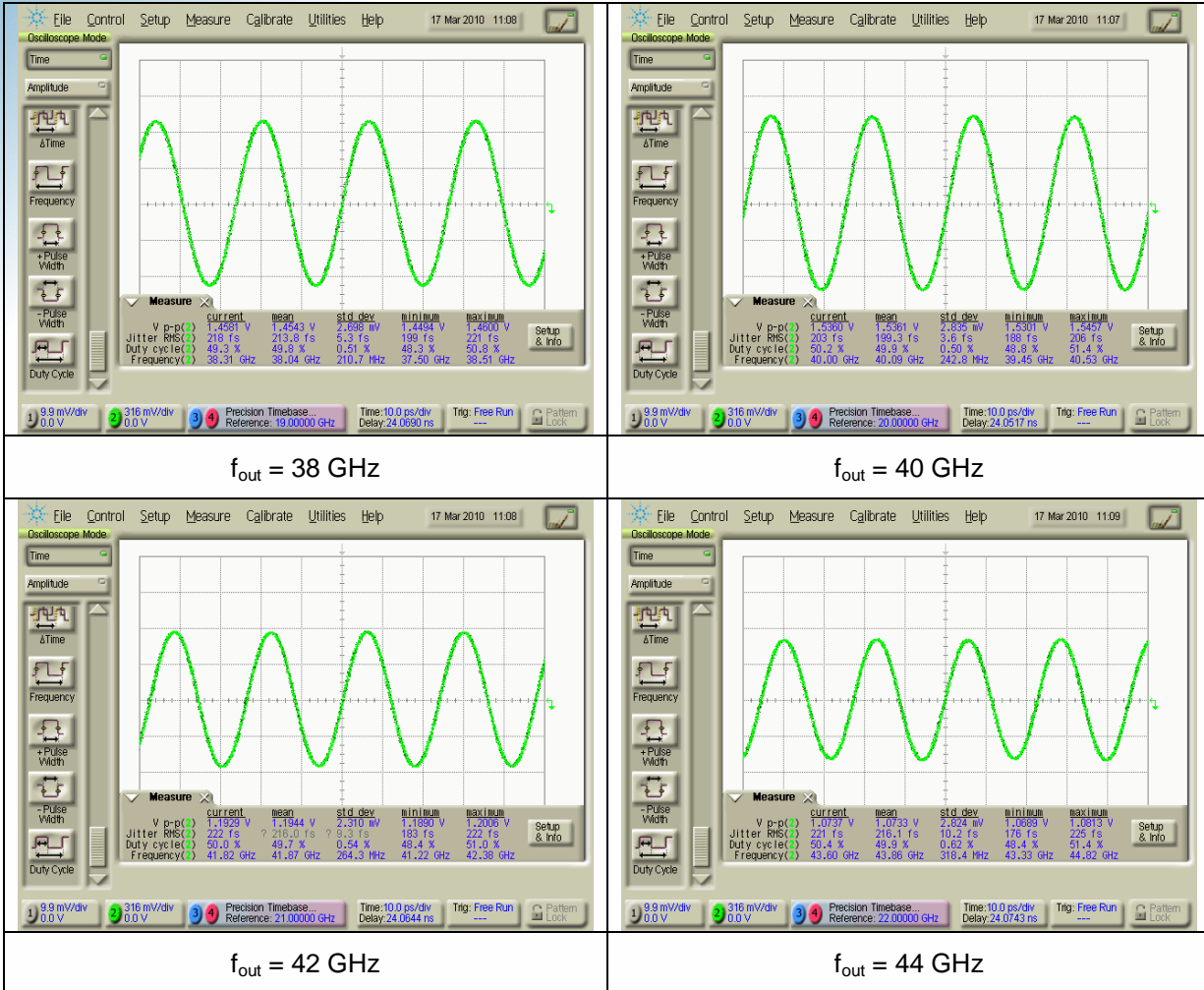


Fig.1: Output amplitude @  $P_{in}=0\text{dBm}$



# Output waveforms

Typical output waveforms measured using Agilent DCA 86100A, sampling module 86118A [70 GHz], precision time base module 861107A, 10 dB attenuator





# Suppression of Fundamental

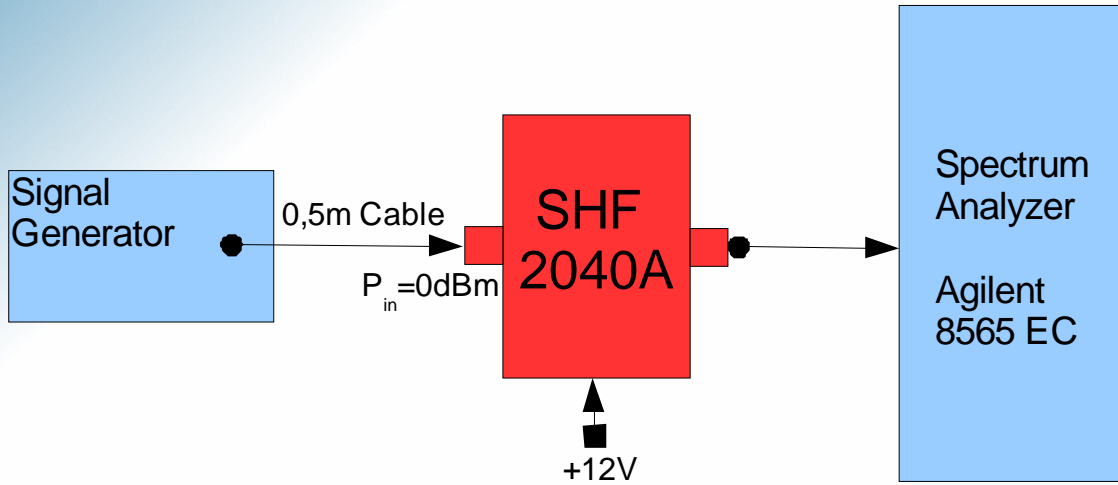


Fig.2: Test setup of measurement

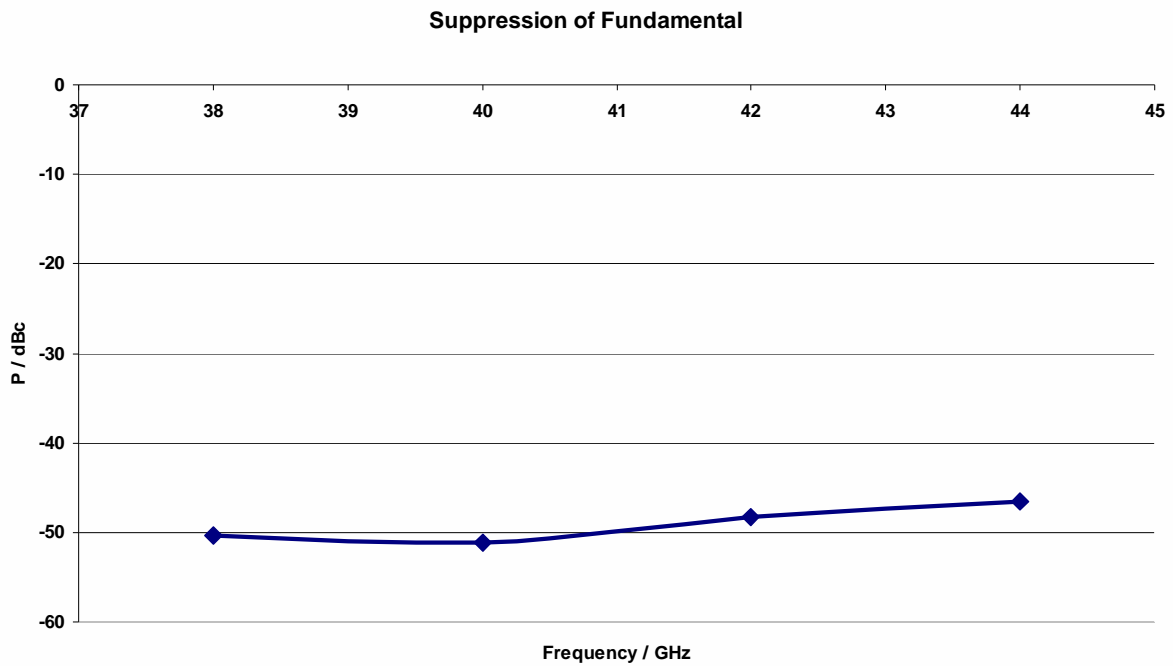
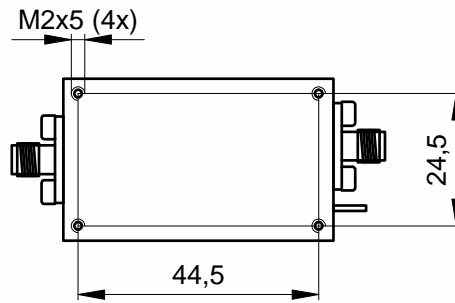
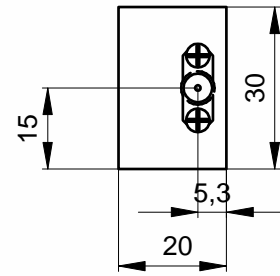
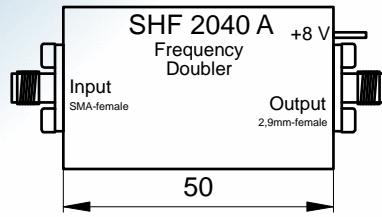
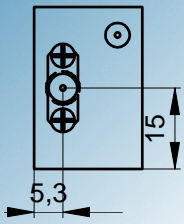


Fig.3: Suppression of fundamental frequency



# Module Outline



All dimensions in mm