

## FBS Series

## 500MHz – 40GHz Divide-By-N Prescaler

### Features

- Input Frequency: 0.5-40GHz
- Output Frequency:  $F_{in}/N$
- Divide Ratio: N (2 to 127)
- Output Power: 0dBm
- Phase Noise: -150dBc/Hz
- DC Power: 5V/240mA
- K-2.92mm Input/SMA Output

### Picture



### Description

FBS-N-40 is a custom build 0.5-40GHz frequency divider with fixed divide ratio of 2 to 127 (N must be specified when ordering). It is designed for PLL applications.

### Electrical Specifications @ +25 °C, $Z_S = Z_L = 50 \Omega$ , DC Supply = +5V

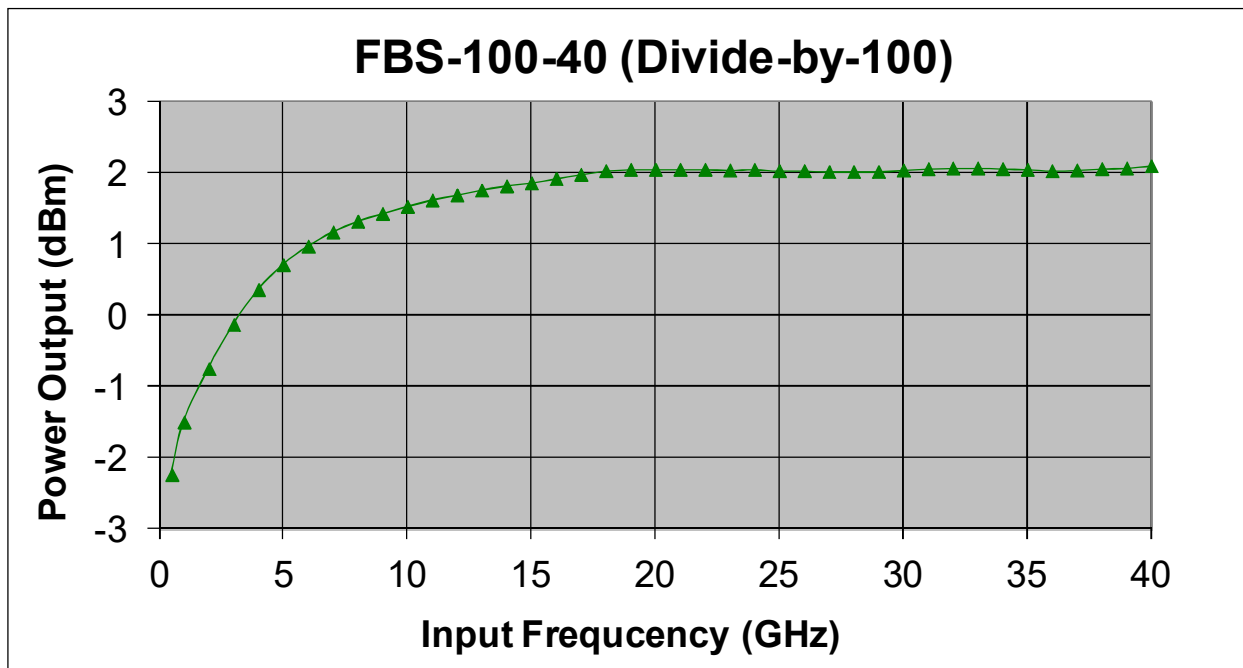
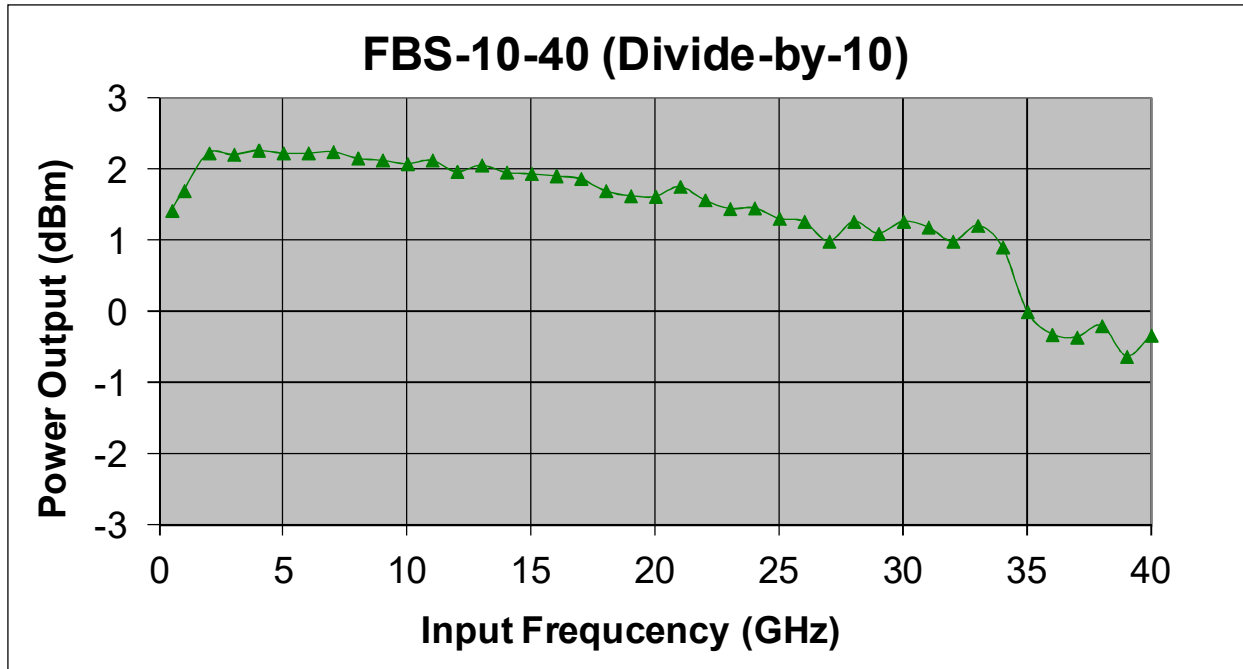
Parameter	Unit	Minimum	Typical	Maximum
Input Frequency Range $F_{in}$	GHz	0.5		40
Output Frequency Range	GHz	$F_{in}/N$		
Fixed Divide Ratio		N (Must be specified between 2 to 127)		
Input Power Range				
f = 0.5 – 1GHz	dBm	+5		+10
f = 1 – 5GHz	dBm	-5		+10
f = 5 – 10GHz	dBm	-10		+10
f = 10 – 35GHz	dBm	-15		+10
f = 35 – 40GHz	dBm	-10		+10
Output Power	dBm	-5	0	
SSB Phase Noise (10KHz Offset)	dBc/Hz	-145	-150	
DC Power Supply	V	4.5	5.0	5.5
Supply Current	mA		240	260

### Order Example: FBS-100-40 (N=100, Divide-by-100)

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Typical Performance @ +25 °C



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### Absolute Maximum Ratings

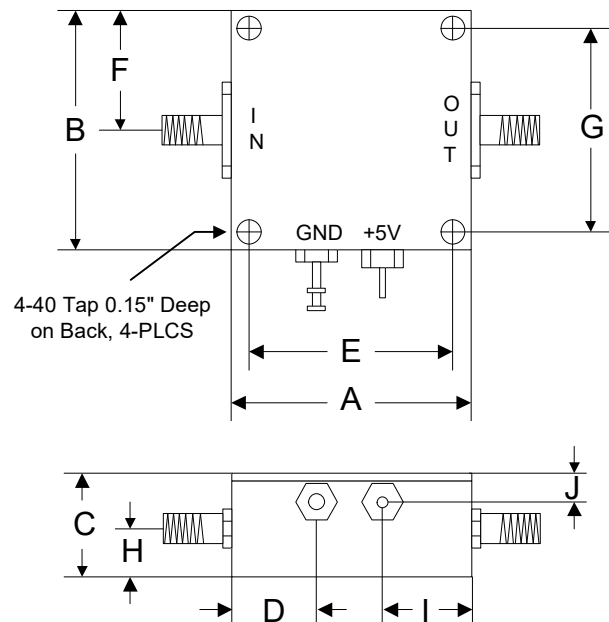
Parameter	Absolute Maximum
RF Input Power	+10dBm
Supply Voltage	+16V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

### ESD Sensitive Material



**WARNING: MUST USE HEAT SINK IF CASE TEMPERATURE EXCEEDS 50 °C**

### Outline



	A	B	C	D	E	F	G	H	I	J
<b>Inch</b>	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
<b>mm</b>	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76