

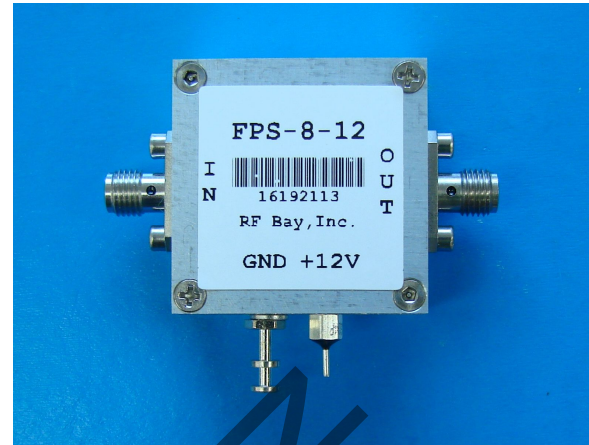
## FPS Series

## 0.1–12GHz Divide-By-8 Prescaler

### Features

- Input Frequency: 0.1-12GHz
- Output Frequency: 0.0125-1.5GHz
- Divide Ratio: 8
- Output Power: -6dBm
- Phase Noise: -150dBc/Hz
- DC Power: 12V
- Internal Voltage Regulator
- Reverse Voltage Protection
- SMA Female Connector

### Picture



### Description

FPS-8-12 is a wideband frequency 0.1 – 12GHz divider with divide ratio of 8.

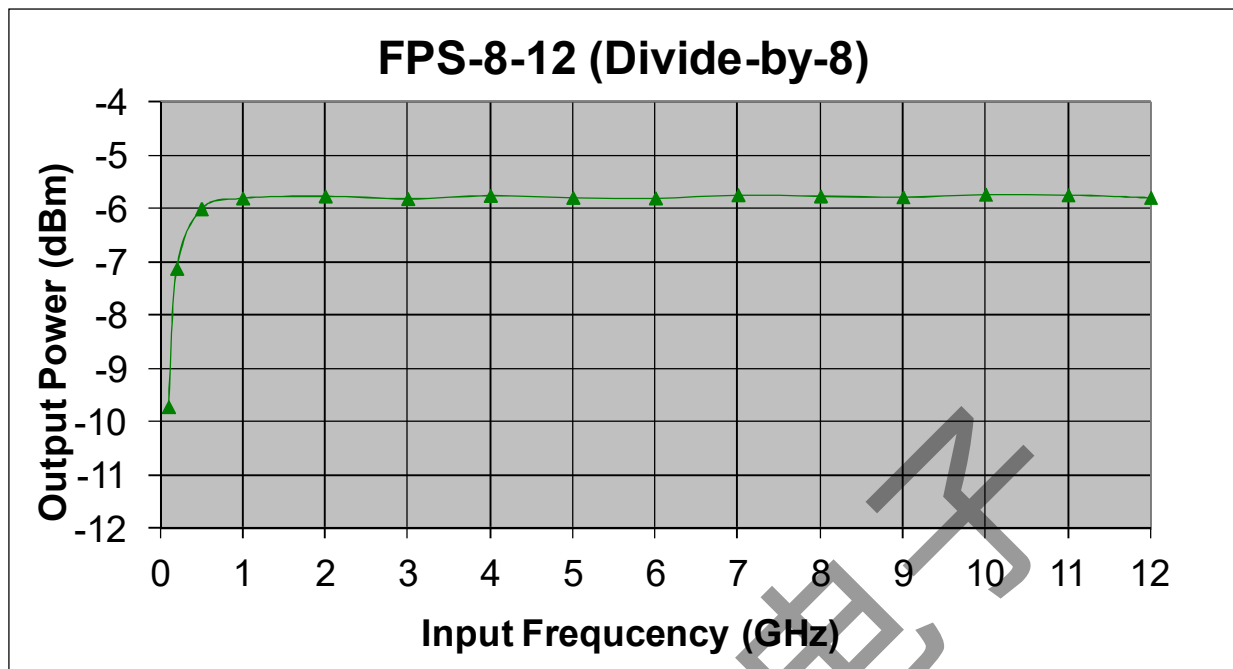
### Electrical Specifications @ +25 °C, $Z_{IN} = Z_{OUT} = 50 \Omega$ , DC Supply = +12V

| Parameter                       | Unit   | Minimum | Typical | Maximum |
|---------------------------------|--------|---------|---------|---------|
| Input Frequency Range           | GHz    | 0.1     |         | 12      |
| Output Frequency Range          | GHz    | 0.0125  |         | 1.5     |
| Fixed Divide Ratio              |        |         | 8       |         |
| Input Power Range               |        |         |         |         |
| f = 0.1GHz – 1GHz               | dBm    | -3      | 0       | +10     |
| f = 1GHz – 7GHz                 | dBm    | -15     | 0       | +10     |
| f = 7GHz – 11GHz                | dBm    | -10     | 0       | +3      |
| f = 11GHz – 12GHz               | dBm    | -5      | 0       | +3      |
| Output Power                    |        |         |         |         |
| f = 0.1GHz – 1GHz               | dBm    | -12     | -9      |         |
| f = 1GHz – 12GHz                | dBm    | -9      | -6      |         |
| SSB Phase Noise (100KHz Offset) | dBc/Hz |         | -150    |         |
| DC Power Supply                 | V      | 9       | 12      | 15      |
| Supply Current                  | mA     |         | 75      | 90      |

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Typical Performance @ +25 °C



Tested with  $P_{in}=0\text{dBm}$

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### Absolute Maximum Ratings

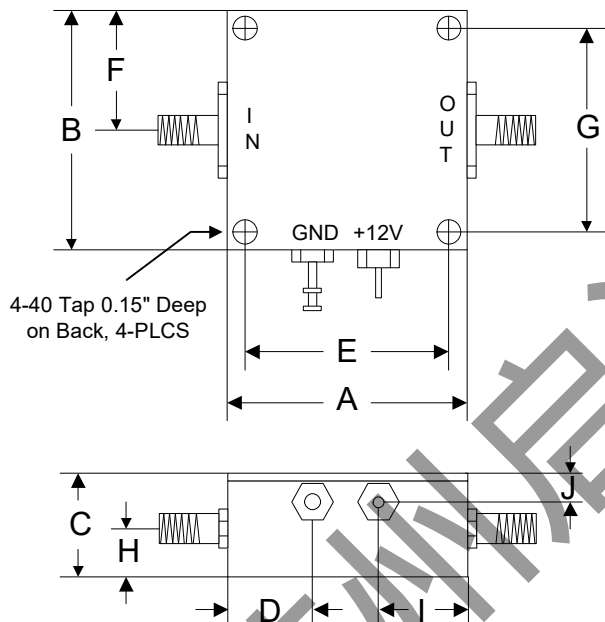
| Parameter             | Absolute Maximum  |
|-----------------------|-------------------|
| RF Input Power        | +13dBm            |
| Supply Voltage        | +16V              |
| Operating Temperature | -40 °C to +85 °C  |
| Storage Temperature   | -55 °C to +125 °C |

### 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     |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inch | 1.250 | 1.250 | 0.563 | 0.450 | 1.000 | 0.625 | 1.000 | 0.250 | 0.500 | 0.187 |
| mm   | 31.75 | 31.75 | 14.29 | 11.43 | 25.40 | 15.88 | 25.40 | 6.35  | 12.70 | 4.76  |