



50 Ohm SMA Frequency Doubler With Input From 4 GHz to 9 GHz  
And Output From 8 GHz to 18 GHz With 10 dB Conversion Loss

Frequency Multipliers Technical Data Sheet

PE8602

**Features**

- x2 Frequency Multiplier
- Wide Frequency Band
- Low Conversion Loss

**Applications**

- Electronic Warfare
- Point-to-Point Radio
- Point-to-Multipoint Radio
- VSAT Radios
- Space Systems
- Test Instrumentation
- Telecommunications

**Description**

Pasternack's PE8602 is a frequency multiplier with a multiplication factor of 2, also known as a frequency doubler. This frequency doubler covers a wide output frequency range of 8 GHz to 18 GHz. Typical performance of this frequency multiplier includes 10 dB conversion loss. The PE8602 frequency multiplier also provides 23 dB minimum fundamental isolation.

**Electrical Specifications** (TA= 25°C)

| Description            | Minimum | Typical | Maximum | Units |
|------------------------|---------|---------|---------|-------|
| Input Frequency Range  | 4       |         | 9       | GHz   |
| Output Frequency Range | 8       |         | 18      | GHz   |
| Impedance              |         | 50      |         | Ohms  |
| Input Power (CW)       | +10     |         | +13     | dBm   |
| Conversion Loss        |         | 10      | 12      | dB    |
| Fundamental Isolation  | 23      | 25      |         | dB    |

Electrical Specification Notes:  
Values at 25°C, sea level.  
Fundamental isolation referenced to input signal.

**Mechanical Specifications**

|                           |                            |
|---------------------------|----------------------------|
| <b>Size</b>               |                            |
| Length                    | 1.55 in [39.37 mm]         |
| Width                     | 0.31 in [7.87 mm]          |
| Height                    | 0.59 in [14.99 mm]         |
| Weight                    | 0.027 lbs [12.25 g]        |
| Body Material and Plating | Passivated Stainless Steel |
| Package Type              | Connectorized              |
| Input Connector           | SMA Female                 |
| Output Connector          | SMA Female                 |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [50 Ohm SMA Frequency Doubler With Input From 4 GHz to 9 GHz And Output From 8 GHz to 18 GHz With 10 dB Conversion Loss PE8602](#)



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### Environmental Specifications

#### Temperature

|                 |                   |
|-----------------|-------------------|
| Operating Range | -55 to +125 deg C |
| Storage Range   | -65 to +150 deg C |

### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

|                 |            |
|-----------------|------------|
| RoHS Compliant  |            |
| REACH Compliant | 12/17/2015 |

### Plotted and Other Data

Notes:

50 Ohm SMA Frequency Doubler With Input From 4 GHz to 9 GHz And Output From 8 GHz to 18 GHz With 10 dB Conversion Loss from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

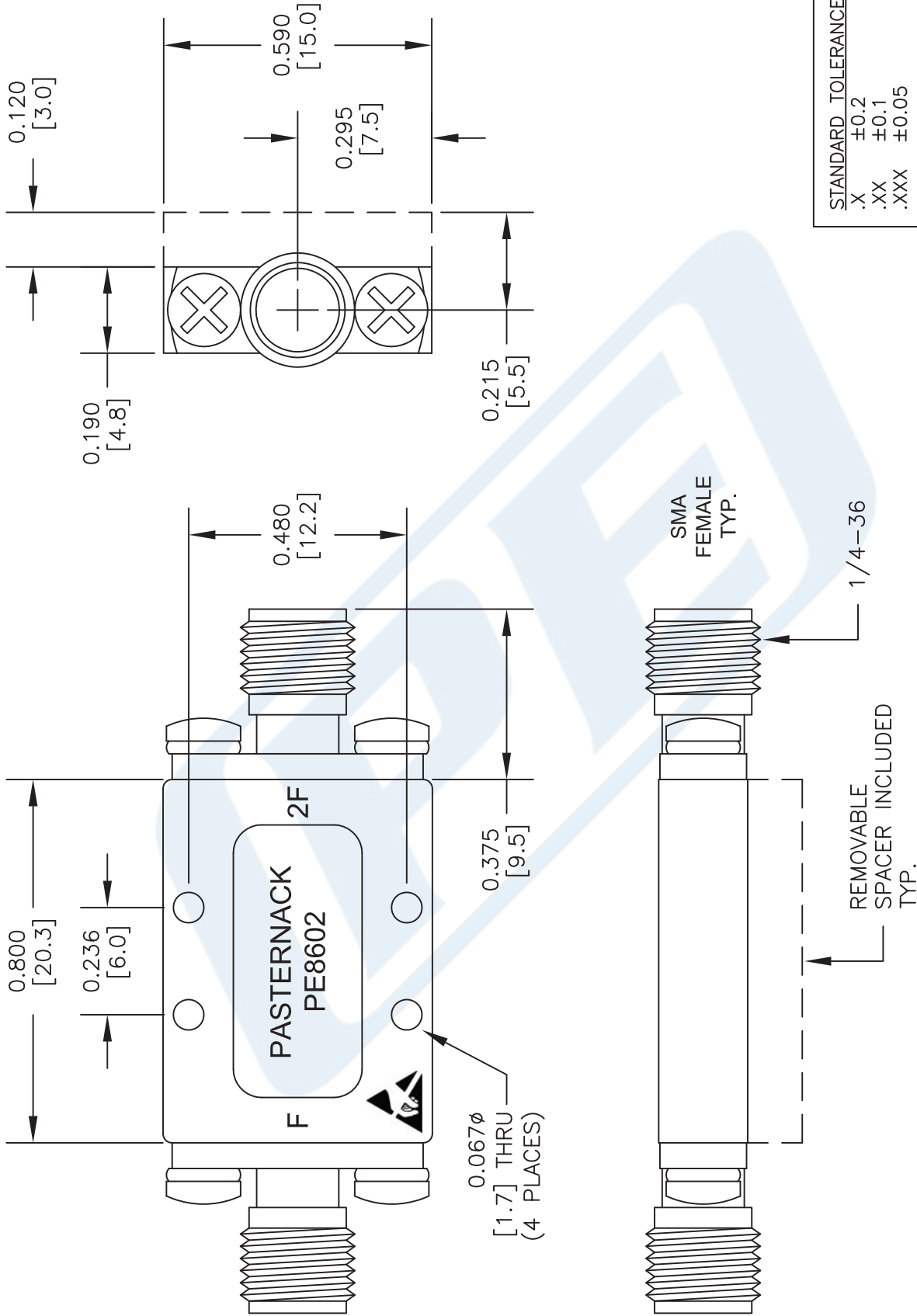
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [50 Ohm SMA Frequency Doubler With Input From 4 GHz to 9 GHz And Output From 8 GHz to 18 GHz With 10 dB Conversion Loss PE8602](https://www.pasternack.com/50-ohm-sma-doubler-input-4000-9000-output-8000-18000-10db-loss-pe8602-p.aspx)

URL: <https://www.pasternack.com/50-ohm-sma-doubler-input-4000-9000-output-8000-18000-10db-loss-pe8602-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE8602 CAD Drawing

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DWG TITLE

**PE8602**

- NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
  2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
  3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

CAD FILE 071216

SCALE N/A

SIZE A

2233

**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE

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