



8 Bit Relay Controlled Programmable Attenuator, 127 dB  
Up to 1,000 MHz, 75 Ohm, 1 dB Steps, +12V, F Female

TECHNICAL DATA SHEET

PE70A8004

The PE70A8004 is a 7 Bit Relay Programmable Attenuator which operates over the frequency range of DC to 1000 MHz. The 75 ohm design has an attenuation range that covers 0 to 127 dB in 1 dB steps. Attenuation steps are 1, 2, 3, 8, 16, 32, and 64 dB. Insertion loss is 2.5 dB typical with a maximum RF input power 1 Watt average. Additional typical performance includes +/- 0.5 dB attenuation accuracy and switching speed of 6 milliseconds. The DC supply is +12 Vdc @ 30 mA per relay (7 relay solder terminals 1 GND solder terminal). The compact and rugged package design supports F female RF input/output connectors and DC connector solder terminals. Operational temperature is -20°C to +85°C.

**Features**

- 7 Bit Relay Programmable Attenuator
- DC to 1000 MHz Frequency Range
- 0-127 dB Attenuation Range
- Step Resolution of 0.5 dB
- Insertion Loss 2.5 dB max
- F Female
- 8 Solder Terminals
- CMOS control

**Applications**

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

**Electrical Specifications** (Values at 25°C, sea level)

| Description                                           | Minimum | Typical | Maximum | Units |
|-------------------------------------------------------|---------|---------|---------|-------|
| Frequency Range                                       | DC      |         | 1,000   | MHz   |
| Mean Attenuation Range                                | 0       |         | 127     | dB    |
| Insertion Loss                                        |         | 2.5     |         | dB    |
| Input VSWR                                            |         |         | 1.5:1   |       |
| Power Rating                                          |         |         | +30     | dBm   |
| Accuracy of Attenuation<br>or 2% whichever is greater |         |         | 0.5     | dB    |
| Step Size                                             | 1       |         |         | dB    |
| Switching Time                                        |         |         | 6       | ms    |
| DC Power Supply @ 30 mA                               |         | 12      |         | Volts |

Electrical Specification Notes:  
1, 2, 4, 8, 16, 32, and 64 dB bit Steps

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [8 Bit Relay Controlled Programmable Attenuator, 127 dB Up to 1,000 MHz, 75 Ohm, 1 dB Steps, +12V, F Female PE70A8004](#)



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### Mechanical Specifications

#### Size

Connector 1  
Connector 2

F Female  
F Female

### Environmental Specifications

#### Temperature

Operating Range

-20 to +85 deg C

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

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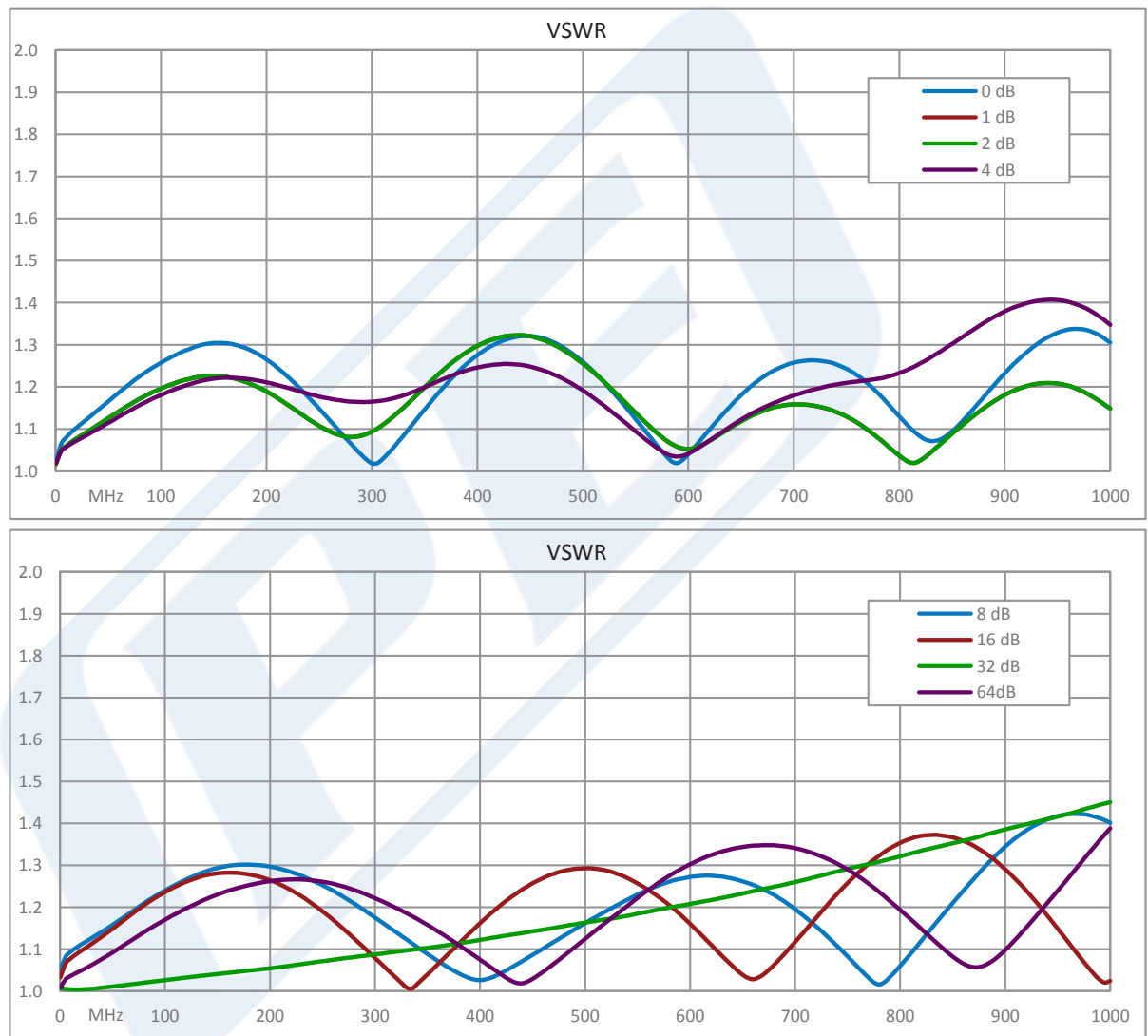


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Performance Data



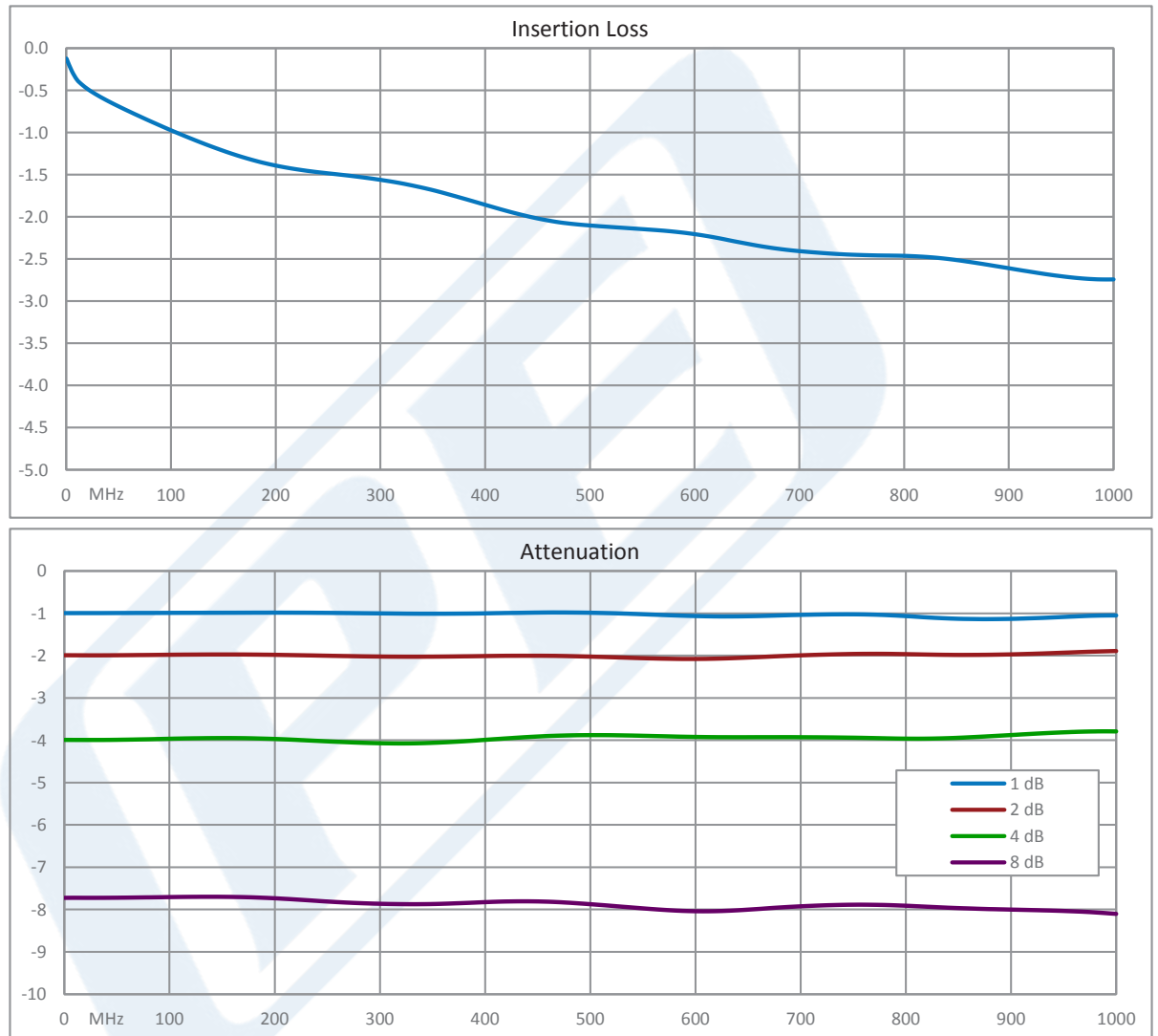
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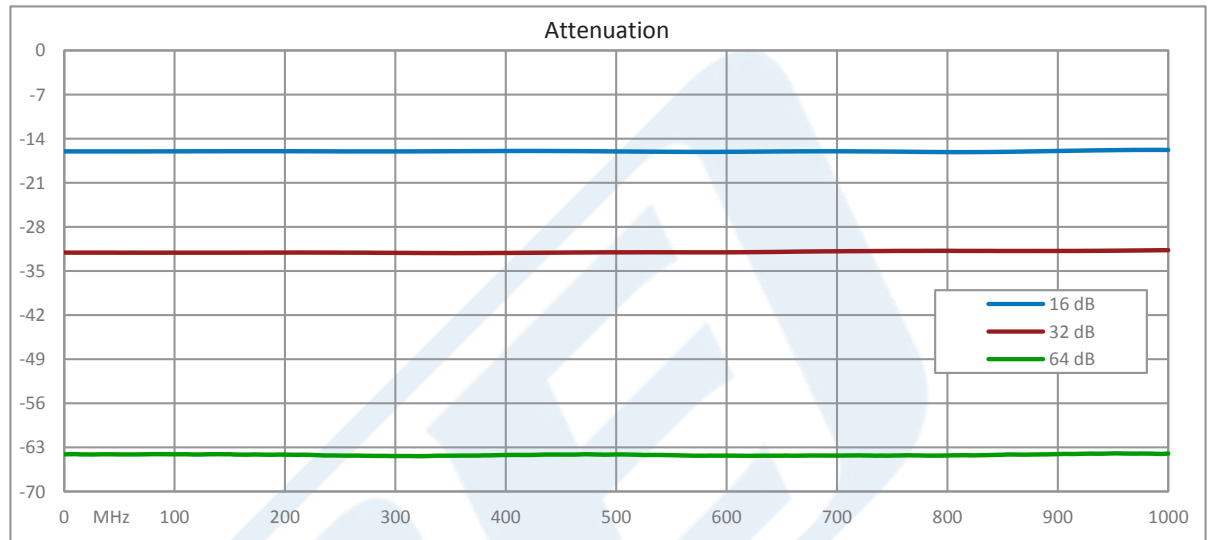
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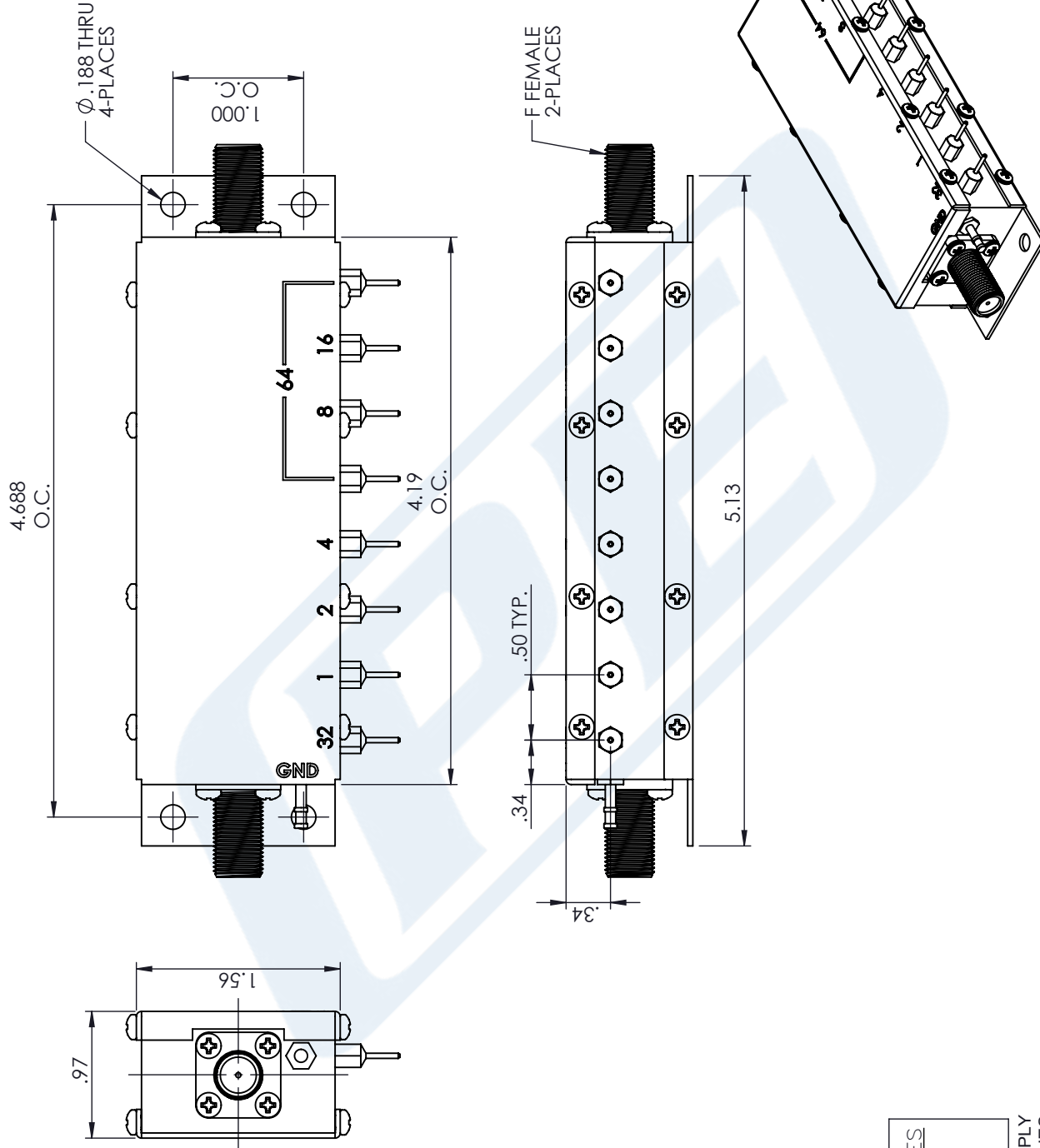
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

# PE70A8004 CAD Drawing

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DWG TITLE

**PE70A8004**

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].

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CAGE CODE 53919

CAD FILE 061217

SCALE N/A

SIZE A

0157