

# DT1618A3 Tunnel Diode Detector

16.0 to 18.0 GHz Negative Polarity, SMA Connector, Bias Detector with 50Ω SMA Male to SMA Female  
 Female Video Out Operating from 16.0 to 18.0 GHz



"A3" pkg. P/N DT1618A3



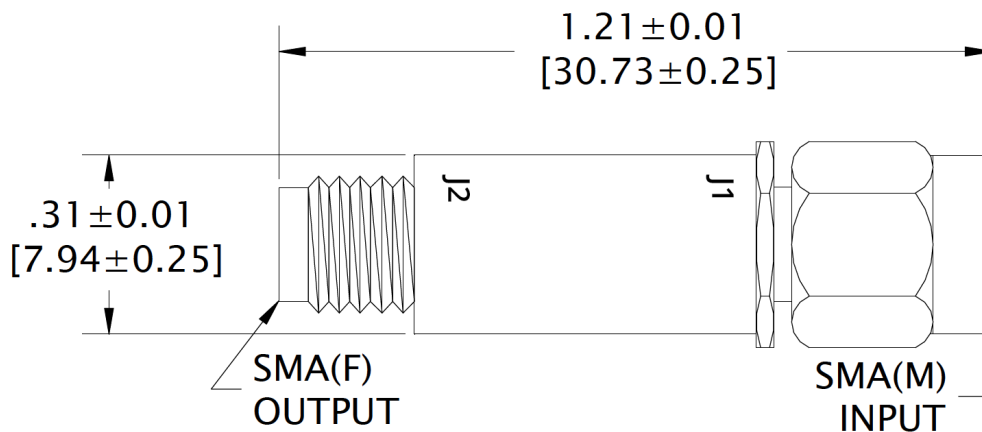
**Product Export Classification**  
 ECCN: EAR 99 (Unless otherwise specified)  
 HTS: 8542330000

| CONFIGURATION             |              |
|---------------------------|--------------|
| Bias Type                 | No Bias      |
| Detector Polarity, Note 3 | Negative [-] |
| Body Style                | Coaxial      |
| RF Input Connector        | SMA [Male]   |
| RF Input Impedance        | 50 Ω         |
| Video Output Connector    | SMA [Female] |
| Detector Type             | Narrow Band  |

**NOTES:**

1. TSS is measured with a video amplifier having at least 50dB gain, <3dB NF and 2 MHz video bandwidth.
2. Typical values are measured at +25°C and are not guaranteed.
3. Negative output polarity is standard. Add P to the end of the model number for positive polarity, ex. DT1618PA3 Pos(+)
4. To select a package, refer to pg. 2 and insert package name, ex. NB. Order P/N D1618NB (polarity + or -)

**A3 Outline Drawing**



**About EclipseMDI**

ECLIPSE Microdevices is located in San Jose, California. ECLIPSE has been developing high performance analog semiconductors for use in wireless radio frequency (RF), microwave, and millimeter wave for commercial and industrial applications. ECLIPSE has formed a strategic alliances - with foundries that features leading state-of-the-art process technologies and with manufacturing facilities for high-volume production of innovative RFIC's.

| PRODUCT FEATURES  |
|---|
| No bias required  |
| Extremely low video output resistance (125 Ω typ)           |
| Extremely fast pulse response (5 nsec risetime typ)         |
| Excellent frequency response                                |
| Excellent dynamic range & loaded voltage output sensitivity |
| Negative Polarity is Standard                               |
| High Reliability Hermetically Sealed Coax                   |
| RoHS Compliant  |

| ELECTRICAL SPECIFICATIONS         |              |
|-----------------------------------|--------------|
| Frequency Range [GHz]             | 16.0 to 18.0 |
| Voltage Sensitivity [mV/mW], typ. | 800          |
| Tss [dB], Note 1, typ.            | -47          |
| VSWR, typ.                        | 3.0:1        |
| Flatness [±dB], typ.              | 0.4          |
| Video Cap [pF], typ.              | 10           |

| MAXIMUM RATINGS                |                  |
|--------------------------------|------------------|
| Max. Input Power [dBm]         | 13               |
| Storage Temperature [deg. °]   | -65° to +125 ° C |
| Operating Temperature [deg. °] | -65° to +115 ° C |
| Specifications @ [° C]         | 25               |

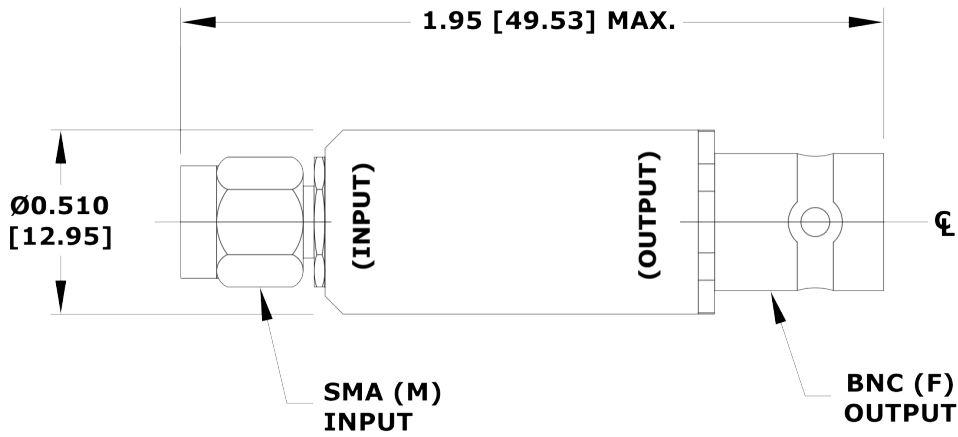


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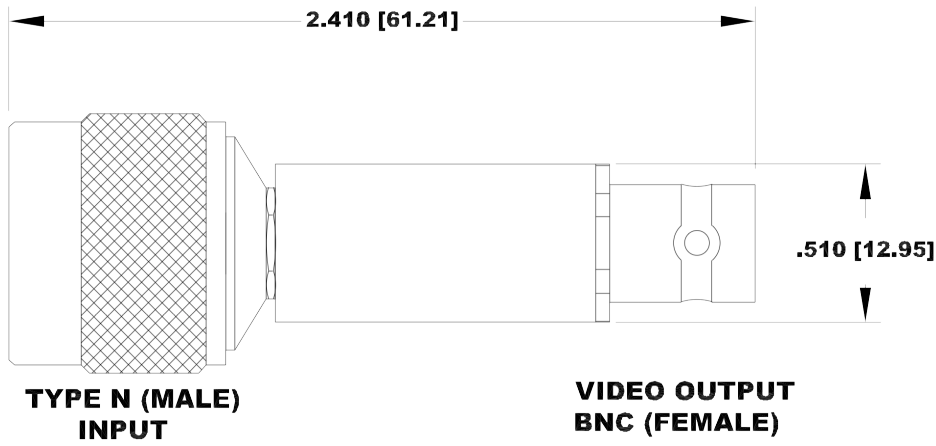
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## Outline Drawings

NB



NC



N

