

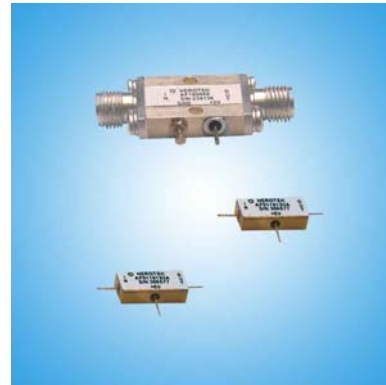


# TUNNEL DIODE DETECTOR WITH INTEGRAL PREAMPLIFIER

1.0 – 18.0 GHz

## FEATURES

- Extended TSS to -60 dBm Minimum
- Subminiature Sizes for Drop-In Applications
- Extremely Low Power Consumption (0.1 Watt Typical)
- Matched Input for Low VSWR (2.0:1 Max)
- Flat Frequency Response (+/- 1 dB Typical)
- High Voltage Sensitivity (K = 10000 mV/mW Min)
- Hermetically Sealed Package for Military Application



## APPLICATIONS

- Direct detection for very weak signals
- Extended radar detection range
- Ideal RF leakage monitoring

## ENVIRONMENTAL RATINGS

Max Input Power.....100mW CW  
 Operating Temperature..... -55°C to +100°C  
 Storage Temperature..... -55°C to +100°C  
 Shock..... 50G, 11 msec  
 Vibration..... 20G, 100 to 2000 Hz

## Specifications: (@ +25°C)

MODEL <sup>1,4</sup>	FREQUENCY RANGE (GHz)	MINIMUM <sup>2</sup> SENSITIVITY K (mV / mW)	MINIMUM <sup>3</sup> TSS (dBm)	MAXIMUM FLATNESS (+ dB)	MAXIMUM VSWR	OUTLINE <sup>5</sup>
DTA182544	1 – 18	10000	-60	1.5	2:1	1A, L3

Note 1: Negative output polarity standard. Add "P" to end of model number for positive output polarity.

Note 2: Sensitivity K for square law range up to -25 dBm input.

Note 3: TSS based on 2 MHz video bandwidth and 2 dB video amplifier.

Note 4: DC bias requirement: +3.2 +/- 0.2 V, 30 mA nominal. (To avoid permanent damage the bias voltage shall not be greater than +3.4 V)

Note 5: Standard package style 1A add letter "L3" to the end of model number for subminiature package.

For Package Outlines see Outline Drawings Page