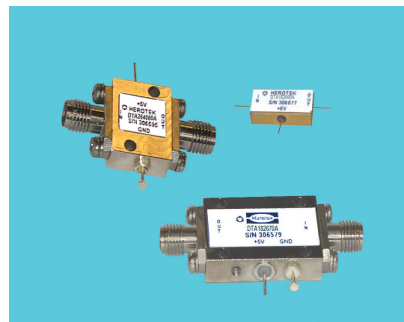


# TUNNEL DIODE DETECTORS WITH PREAMPLIFIERS FOR VERY LOW SIGNALS

1- 40 GHz

## FEATURES:

- o Extended TSS to -60 dBm, -70 dBm or -80 dBm
- o Octave Band or Wide Band up to 40 GHz
- o Very High Voltage Sensitivity of 1000mV/μW (-80 dBm model)
- o Stable and quite low I/f noise figure (output resistance 100-200 ohms typical)
- o Matched Input for Low VSWR (2.0:1 typical)
- o Extremely fast pulse response (1 nsec rise time typical)
- o Flat Frequency Response
- o Hermetically sealed package for military application
- o Removable Connectors for MIC Assembly



## APPLICATIONS:

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

## ENVIRONMENTAL RATINGS:

Max Input Power ..... 100mW CW for 1-18 GHz  
 40mW CW for all other models  
 Operating Temp ..... -55°C to +100°C  
 Storage Temp..... -55°C to +100°C  
 Shock.....50G, 11 msec  
 Vibration ..... 20G, 100 to 2000 Hz

## SPECIFICATIONS (@ +25° C)

MODEL	FREQ RANGE (GHz)	MINIMUM VOLTAGE SENSITIVITY K (mV / μ W)	TYP TSS <sup>2</sup> (dBm)	TYP FLATNESS (+ dB)	MAX INPUT VSWR	NOM DC CURRENT @ +12v (mA)	OUTLINE
DTA1-1860A DTA1-1870A DTA1-1880A	1-18	10 100 1000	-60 -70 -80	1 1.5 2	2 : 1	30 60 100	1D, L3 <sup>4</sup> 1D 2a
DTA182660A DTA182670A DTA182680A	18-26	10 100 1000	-60 -70 -80	1 1.5 2	2 : 1	120 200 300	ID ID 2A
DTA264060A DTA264070A DTA264080A	26-40	10 100 1000	-60 -70 -80	2 2.5 3	2 : 1	150 240 350	1C 2C 2C
DTA184060A DTA184070A DTA184080A	18-40	10 100 1000	-60 -70 -80	2.5 3 3.5	2 : 1	150 240 350	1C 2C 2C

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

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

Note 3: Options available for other bias voltages, i.e. +15, +8 or +5V.

Note 4: Standard Outline is 1D for DTA 1-18 GHz. If L3 outline is desired, add L3 to the end of model number. Note that bias voltage 3.2 +/- 0.2V for L3 option.



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