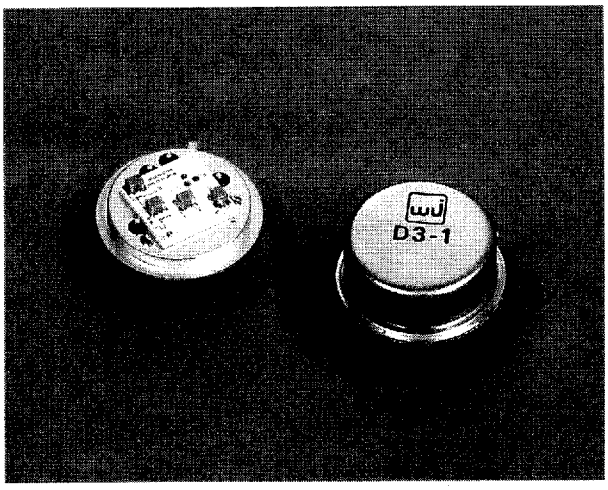
WJ-D3-1/SMD3-1

10 TO 1000 MHz
TO-8 LEVEL DETECTOR

- ◆ 300-OHM INPUT IMPEDANCE
- ◆ RF INPUT, DC OUTPUT
- ◆ ACTIVE INPUT CIRCUITRY



Specifications*

Characteristics	Typical	Guaranteed 0° to +50°	Guaranteed -54° to +85°C
Frequency (Min.)	10 - 1000 MHz	10 - 1000 MHz	10 - 1000 MHz
Detected Voltage[1, 2]	- 50 mV		
Variation Over Frequency[3]	± 2 mV	± 20 mV	
Variation Over Temperature[1, 3]	± 90 mV	± 100 mV	± 110 mV
Output Offset Voltage[1, 4]	230 mV		
Input impedance	300 Ω		
Output Capacitance	2.2 KpF		3.0 KpF
DC Current (Max.) at +15 Volts	10 mA	13 mA	14 mA

Notes:
*Measured in a 50-ohm system at +15.0 Vdc Nominal, 50 uA detector bias and 10 ohm load resistance.
1. Measured at 500 MHz
2. -10 dBm Input Power
3. -30 dBm Input Power
4. No RF Applied

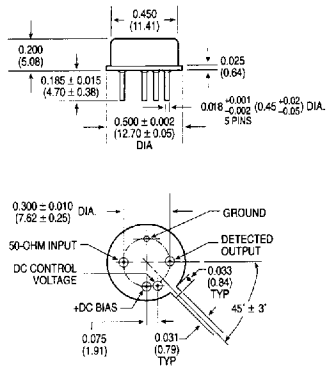
Absolute Maximum Ratings

Storage Temperature ..... -62°C to +125°C
Maximum Case Temperature ..... 125°C
Diode Bias Current ..... 1 mA
Maximum CW Input Power ..... +17 dBm
Maximum Short Term RF Input Power (1 Minute Max.) ..... 100 Milliwatts
"S" Series Burn-In Temperature (Case) ..... 125°C

Weight approximately 2.0 grams (0.07 oz.)

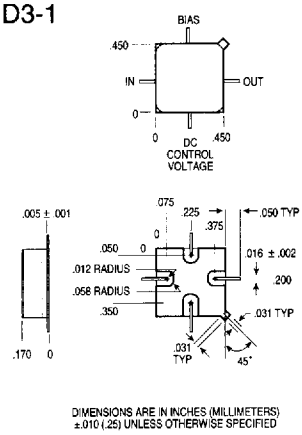
Outline Drawing

D3-1



DIMENSIONS ARE IN INCHES (MILLIMETERS)
± .005 (.13) UNLESS OTHERWISE SPECIFIED

SMD3-1



DIMENSIONS ARE IN INCHES (MILLIMETERS)
± .010 (.25) UNLESS OTHERWISE SPECIFIED

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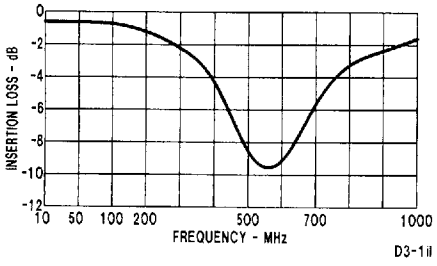
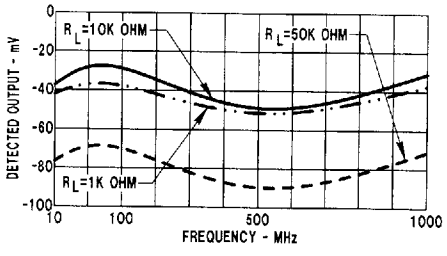
Typical Performance at 25°C

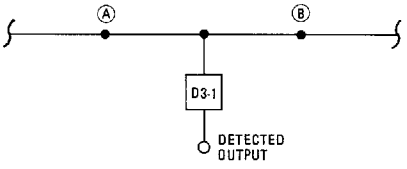
Insertion Loss vs. Frequency①
P_{IN} = -10 dBm (10KΩ Load)



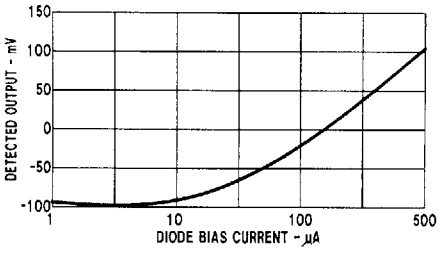
Detected Output vs. Frequency vs. R_L, P_{IN} = -10 dBm



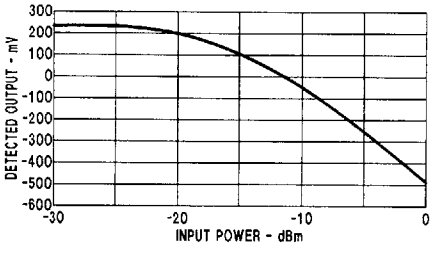
NOTES:
① INSERTION LOSS MEASURED BETWEEN POINTS Ⓐ AND Ⓑ ON A 50Ω TRANSMISSION LINE.



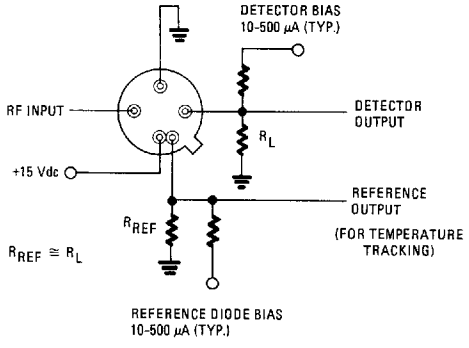
Detected Output vs. Diode Bias Current, F = 500 MHz, P_{IN} = -10 dBm, (10KΩ Load)



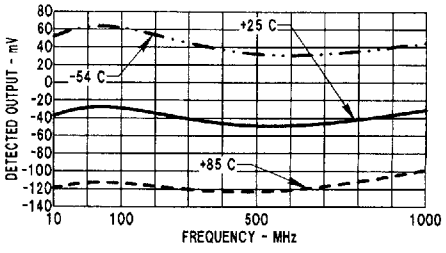
Detected Output vs P_{IN}, F = 500 MHz (10K Ω Load)



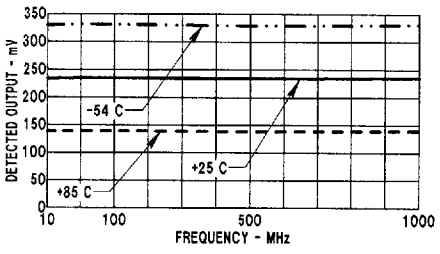
Typical Test Circuit



Detected Output vs. Frequency P_{IN} = -10 dBm (10KΩ Load)



Detected Output vs. Frequency P_{IN} = -30 dBm (10K Ω Load)



6

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