

# ANALOG LEVEL DETECTOR *TMJ9910*

Available as: TMJ9910, 5 Pin TO-8 (T5)  
 TNJ9910, 4 Pin Sq. Surface Mount (SM3)  
 BXJ9910, SMA Connectorized Housing (H6)

## Features

- -120 mV Output for -10 dBm Input Power
- $\pm 1.0$  dB Flatness
- Operating Temp. 0 °C to +50 °C
- Environmental Screening Available

## Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Detected Voltage (mV) f = 500 MHz **	-120	-90 Min.
Flatness (referred to Input)(dB) f = 10 - 1000 MHz **	$\pm 0.7$	$\pm 1.0$ Max.
Variation over Temperature (dB) (referred to input) f=500 MHz**	$\pm 1$	
Tangential Sensitivity(TSS)(dBm) f= 500 MHz, BW <sub>VID</sub> = 1 MHz*	-45	-40 Max.
Input VSWR, 50 Ohm f = 10 - 500 MHz	1.5:1	1.5:1 Max.
Output Offset Voltage (mV) I <sub>D</sub> = I <sub>REF</sub> = 50 $\mu$ A, no RF Drive	$\pm 10$	$\pm 15.0$ Max.
Differential Voltage Tracking(mV)	$\pm 5$	
Output Capacitance (pf)	1000	1300 Max.
Power	Vdc mA	+15 20 Max.

## Absolute Maximum (No Damage) Ratings

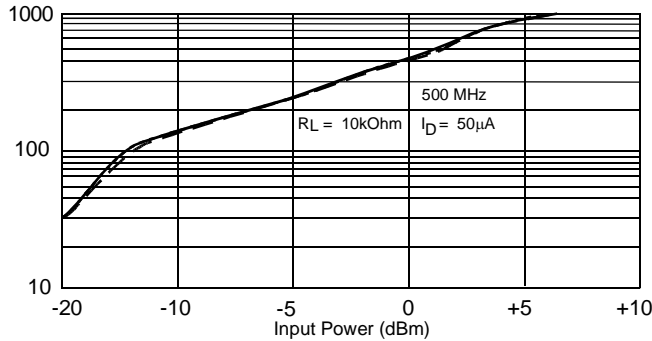
Ambient Operating Temperature ..... -55°C to +125 °C  
 Storage Temperature ..... -62°C to +150 °C  
 Bias Current (Diode) ..... 1mA  
 Continuous RF Input Power ..... +17 dBm  
 Short Term RF Input Power ..... 100 mW (1 Minute Max.)

Note: Care should always be taken to effectively ground the case of each unit.  
 \* I<sub>D</sub> = 50  $\mu$ A, R = 10 kOhm  
 ^ P<sub>IN</sub> = -10 dBm (RF Input)

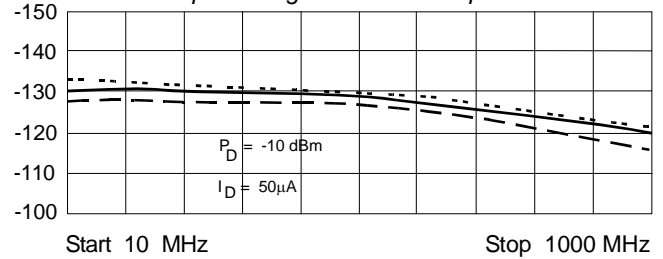
Legend ——— + 25 °C - - - - + 50 °C - - - - - 0 °C

## Typical Performance Data

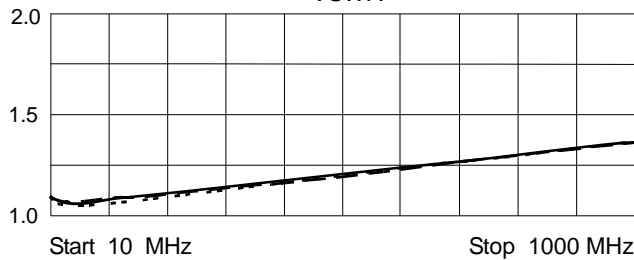
Output Voltage vs Input Power @ 500 MHz (mV)



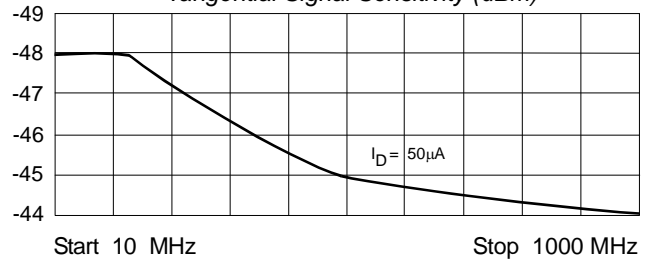
Output Voltage @ -10 dBm Input Power



VSWR



Tangential Signal Sensitivity (dBm)



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