

# THRESHOLD DETECTOR *TMJ9903*

## Packaging Options

TMJ9903, 5 Pin TO-8 (T5)  
 TNJ9903, 4 Pin Sq. Surface Mount (SM3)  
 BXJ9903, SMA Connectorized Housing (H6)

## Features

- External Threshold Control; Voltage or Resistance
- -10 dBm to +10 dBm Input Operating Range
- Wide 10 MHz to 3000 MHz Bandwidth

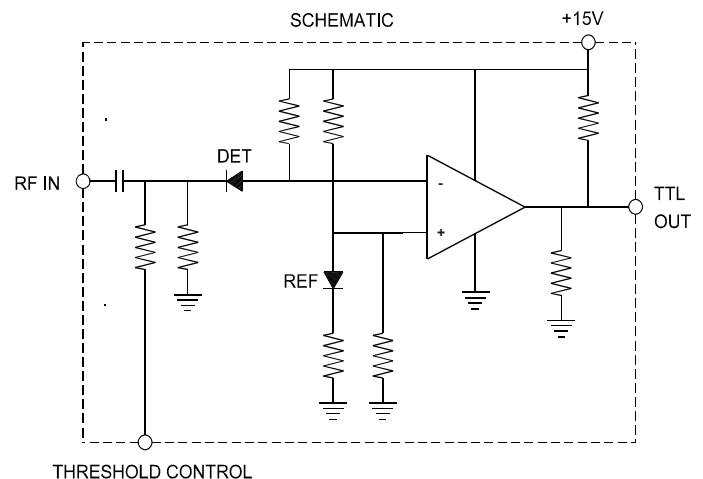
## Specifications

CHARACTERISTIC	TYPICAL Ta= 0 to 60 °C	MIN/MAX Ta = -55 °C to +85 °C
Input Flatness (dB) P = -10 to +10 dBm	+/- 1.0	+/- 1.5 Max.
Input VSWR (Max)	<1.75:1	2.2:1 Max.
Threshold Control Level (V/Ohms) @ P <sub>IN</sub> = -10 dBm @ P <sub>IN</sub> = 0 dBm @ P <sub>IN</sub> = +10 dBm	.01/600 .265/2.0K .870/6.8K	- - -
Threshold Temp. Stability (dB) @ P <sub>IN</sub> = -10 dBm @ P <sub>IN</sub> = 0 dBm @ P <sub>IN</sub> = +10 dBm	- - -	+/- 1.5 Max. +/- 1.0 Max. +/- 0.5 Max.
Threshold Hysteresis Voltage Control (dB) Resistance Control (dB)	<0.1 >1.0	- -
Output @ P <sub>IN</sub> = Threshold (V)	3.2	2.7 Min
Output Short Circuit Current (mA)	8	3.0 Min.
Rise Time/Fall Time (ns)	75	125
Power Vdc mA	+15 3	+15 5 Max.

Note: Care should always be taken to effectively ground the case of each unit.

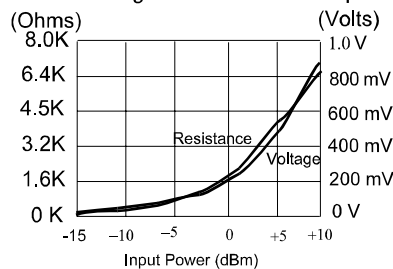
## Maximum Ratings

Operating Case Temperature..... -55 °C to +125 °C  
 Storage Temperature..... -62 °C to +150 °C  
 Continuous RF Input Power..... +15 dBm  
 DC Voltage..... +17 Volts

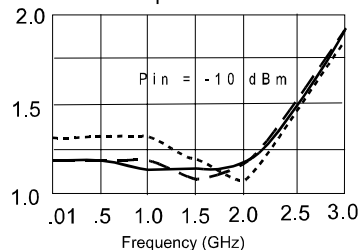


## Typical Performance Data

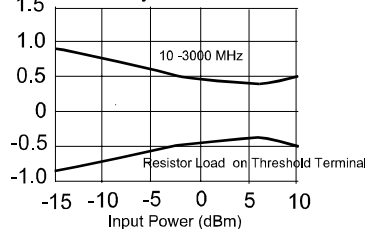
Control Voltage & Resistance vs. Input Power



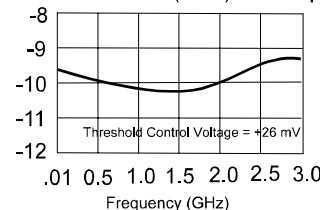
Input VSWR



Hysteresis



Threshold Power (dBm) vs. Frequency



Legend ——— +25 °C    - - - +85 °C    - - - - -55 °C



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