



UTD-2002
Threshold Detector
10 to 2000 MHz

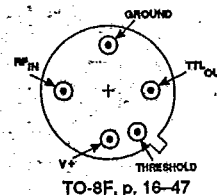
T-77-05-07

FEATURES

- Externally Set Threshold
- TTL Output
- Low VSWR
- 20dB Threshold Range

APPLICATIONS

- Specifically Designed for System Built-In Test
- Built for Retrofitting
- Channel RF Activity Monitoring



DESCRIPTION

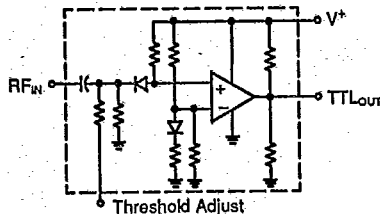
The UTD-2002 is a sensitive microwave threshold detector which provides efficient and accurate RF level measurement at critical system points. It contains a Schottky diode detector,

comparator, and a temperature compensated voltage reference assembly. The unit is built with chip and wire construction, on a thin-film substrate for small size and ruggedness.

ELECTRICAL SPECIFICATIONS (Measured in a 50 Ohm system @ +15 VDC nominal unless otherwise noted)

Symbol	Characteristic	Typical T _c = 25°C	Guaranteed Specifications		Unit
			T _c = 0° to 50°C	T _c = -55° to +85°C	
—	Frequency Range (Min.)	10-2000	10-2000	10-2000	MHz
—	Input Flatness (Max.)	±0.5	±0.7	±1.0	dB
—	P _{IN} = -10 to +10 dBm	—	—	—	dBm
—	Input Operating Range	-10 to +10	-10 to +10	-10 to +10	—
—	Input VSWR (Max.)	1.3:1	1.7:1	2.0:1	—
—	Input Power (Max.)	+15	+15	+15	dBm
—	Threshold Temp. Stability (Max.)	—	—	—	—
—	@ -10 dBm Input Power	—	±1.0	±1.5	dB
—	@ 0 dBm Input Power	—	±0.7	±1.0	dB
—	@ +10 dBm Input Power	—	±0.5	±0.7	dB
—	Threshold Control Level	—	—	—	—
—	@ -10 dBm Input Power	90 mV/300	—	—	Ω
—	@ 0 dBm Input Power	280 mV/900	—	—	Ω
—	@ +10 dBm Input Power	900 mV/2900	—	—	Ω
—	Threshold Hysteresis (Max.)	—	—	—	—
—	Resistance Control	1.0	—	—	dB
—	Voltage Control	0.1	—	—	dB
—	Control Terminal Current	0.3	—	—	mA
—	Output Compatibility	TTL	TTL	TTL	—
—	Output at P _{IN} Threshold (Min.)	2.7	2.7	2.7	V
—	Output Short Circuit Current (Min.)	3.0	3.0	3.0	mA
—	Output Sink Current (Min.)	—	—	—	—
—	V _o = 0.7 V	2.0	2.0	2.0	mA
—	Output for Input Power Change > 3 dB above CW Threshold	—	—	—	—
—	C _L = 15 pF	—	—	—	—
—	Rise Time	30	—	—	ns
—	Fall Time	80	—	—	ns
—	Propagation Delay	1000	—	—	ns
—	Supply Voltage	—	—	—	—
—	As Specified	+15	—	—	VDC
—	Operational	+11 to +16	—	—	VDC
—	Supply Current @ +15 Volts	12	15	15	mA

SCHEMATIC



Avantek, Inc. • 481 Cottonwood Drive, Milpitas, CA 95035 • Contact your local representative, distributor or field sales office for further information. Listings are in the back of this Data Book.

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Threshold Detector

MAXIMUM RATINGS

T-77-05-07

DC Voltage	+17 Volts	Storage Temperature	-62°C to +150°C
Continuous RF Input Power	+15.0 dBm	"R" Series Burn-In Temperature	125°C
Operating Case Temperature	-55°C to +125°C	DC Voltage Reference	+12 Volts

WEIGHT: (typical) 2.1 grams

TYPICAL PERFORMANCE @ 25°C

KEY: +25°C ———
+85°C - - - -
-55°C - - - -

