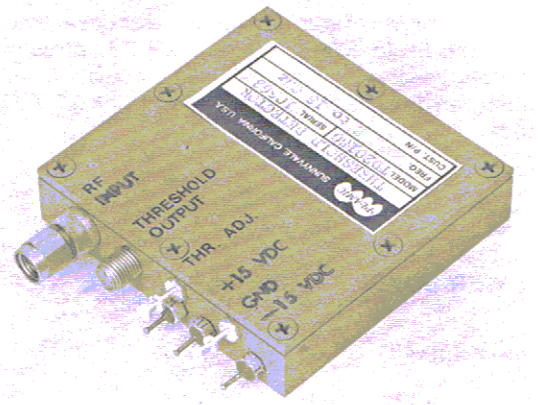
FAST RF THRESHOLD DETECTOR



FEATURES

- **Response Time of 23 Nanoseconds from 50% RF Input to 90% Logic into 50 ohms**
- **Rugged and Miniaturized**
- **Low Threshold Uncertainty**
- **PRI Capability of 300,000 P.P.S.**
- **Short Recovery Time**

DESCRIPTION:

PLAMIC'S TD series of miniaturized Threshold Detectors feature extremely fast response time. These units can be used as "adjustable" RF level detectors. They are specially suitable for determining input pulse time of arrival or for generating system timing and gating signals. 23 nanoseconds total response time allows convenient pulse by pulse processing on 100 nanosecond pulses.

Unique circuit techniques have been used to achieve low threshold uncertainty and low recovery time for high pulse density operation. Threshold can be adjusted either with an external voltage, or an external resistor.

APPLICATIONS:

- Elint Systems
- DF Systems
- Surveillance Receivers

SPECIFICATIONS:

MODEL	FREQ	THRESHOLD ADJUSTMENT RANGE	THRESHOLD AMBIGUITY at any Single Frequency		VSWR	FLATNESS NOM.	*EQUIVALENT T.S.S.	**MIN OUTPUT S/N RATIO at low end of range	*EQUIVALENT VIDEO BANDWIDTH
			25°C	-54°C to +71°C					
	GHz	dBm	dB	dB	Nom	dB	dBm	dB	MHz
TD 2040	2-4	-38 to -18	±0.50	±1.0	2.00:1	±0.3	-44.0	20	40
TD 4080	4-8	-36 to -16	±0.65	±1.1	2.75:1	±0.5	-42.5	20	40
TD 8012	8-12	-36 to -16	±0.65	±1.1	2.75:1	±0.5	-42.5	20	40
TD 1218	12-18	-34 to -14	±0.75	±1.2	2.75:1	±0.5	-40.0	20	40
TD 2018	2-18	-34 to -14	±0.75	±1.2	3.00:1	±1.0	-40.0	20	40

*Internal to unit. For reference only. ** At comparator input.

For further information please contact:

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PLAMIC

SPECIFICATIONS:

Total Response Time: Maximum response time from 50% RF to 90% or the output T.T.L. pulse is 23 nano seconds. This includes internal driver which can drive 50 ohm load as well as sink 5 T.T.L. loads.

Threshold Ambiguity or Uncertainty: At a selected frequency, voltage at the adjust pin (or alternatively a resistor between adjust pins) can be set such that for the selected power level, the output just switches to logic "1." Threshold ambiguity defines the uncertainty around the "set level," where the output can be either in logic "1" or logic "o".

POWER SUPPLY AND MECHANICAL

Power Supply:	+15V @ 100 mA (without load) -15V @ 75 mA Regulation ±2% maximum with spikes in DC to 10 MHz range 50 mV maximum.
Connectors:	
Input:	SMA - Male
Output:	SMA - Female
Power Supply:	Feedthrough
Threshold Adjust:	Feedthrough
All connectors are on 2.5" x 0.55" side.	
Size:	2.65" x 2.5" x 0.55"

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