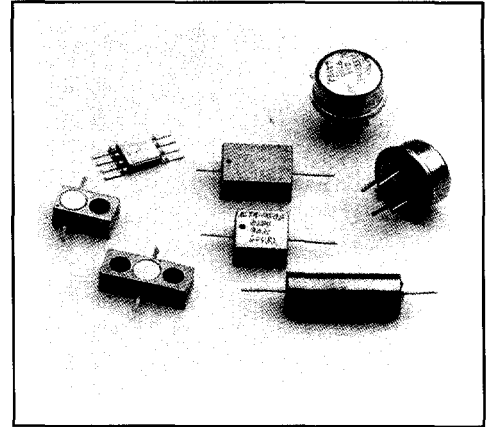


## TUNNEL MODULE DETECTORS (up to 20GHz)

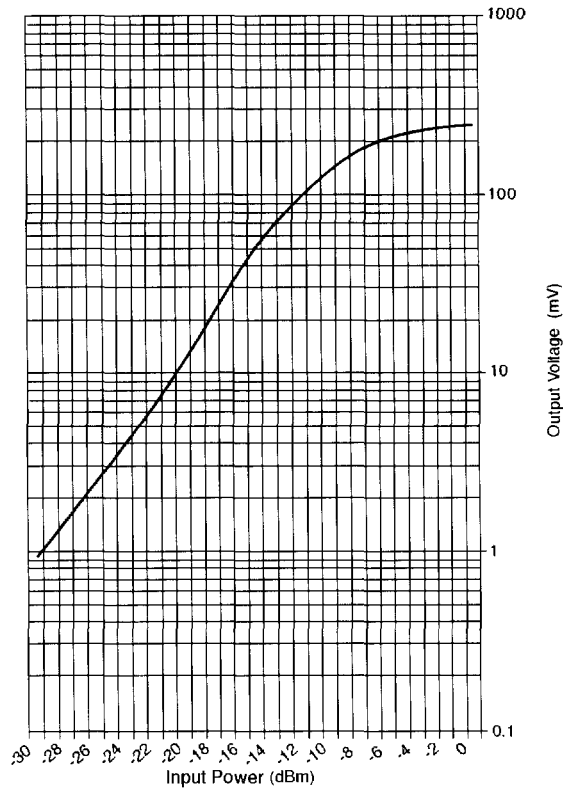
The detectors listed are standard products. There are many possible variations, which can be selected as options. Package configurations may be changed if desired. Performance characteristics may be modified to meet special requirements. (e.g. the sensitivity might be moved higher or lower with a corresponding effect on VSWR). RF bypass capacitance values can be selected on some models. Contact the factory for special needs.



### FEATURES

- No Bias Required
- Exceptional Temperature Stability
- Flat Output vs. Frequency Over Broad Bandwidth
- Low Video Resistance (110 OHMS Typical)
- Very Fast Pulse Response
- Flexible Design Options

### TUNNEL MODULE DETECTOR PERFORMANCE



**ACTM-1009NM12 TRANSFER CHARACTERISTICS**

## TUNNEL MODULE DETECTOR ELECTRICAL SPECIFICATIONS

Model Number	Frequency Range (GHz)	Minimum Sensitivity K (mV/mW)	Flatness vs Frequency ( $\pm$ dB)		VSWR (max)	Nominal Video Cap. (pF)	Standard Case Styles	Optional Case Styles
				TSS (dBm)				
ACTM-1078NM12	5-500MHz	900	0.20	-50	2.0:1	1000	M12	
ACTM-1155NTO5	50-500MHz	900	0.20	-50	2:1	470	TO-5	M12
ACTM-1080NM12	10-750MHz	1000	0.20	-51	1.9:1	1000	M12	
ACTM-1037NM12	0.1-1.0	1000	0.20	-51	1.9:1	270	M12	TO-8
ACTM-1089NM12	0.5-1.3	1000	0.20	-51	2:1	9.1	M12	TO-8, M47, M51, TO-5
ACTM-1069NM12	0.01-2.0	1000	0.20	-51	1.8:1	1000	M12	
ACTM-1071NM12	0.1-2.0	1000	0.20	-51	2:1	75	M12	
ACTM-1001NM12	0.5-2.0	1000	0.25	-51	1.9:1	75	M12	TO-8, M47
ACTM-1013NM12	1.0-2.0	1000	0.20	-51	1.9:1	20	M12	TO-8, M47, M51, TO-5
ACTM-1073NM12	0.1-4.0	900	0.25	-50	2:1	75	M12	
ACTM-1054NM12	0.5-4.0	1000	0.30	-51	2:1	39	M12	TO-8, M47, M51
ACTM-1002NM12	2.0-4.0	1000	0.35	-51	2:1	39	M12	TO-8, M47, M51, TO-5
ACTM-1017NM12	0.1-6.0	900	0.30	-50	2:1	75	M12	
ACTM-1006NM12	2.0-6.0	1000	0.40	-51	2:1	20	M12	M51
ACTM-1007NM12	2.0-8.0	950	0.50	-50	2.5:1	20	M12	M51
ACTM-1003NM12	4.0-8.0	900	0.30	-51	1.8:1	20	M12	M51
ACTM-1012NM12	8.0-12.0	900	0.40	-50	1.7:1	12	M12	M51
ACTM-1020NM12	0.5-18.0	700	1.25	-49	3.3:1	20	M12	
ACTM-1009NM12	2.0-18.0	750	1.00	-50	3:0:1	20	M12	M42
ACTM-1058NM12	6.0-18.0	800	1.00	-49	2.4:1	9.1	M12	M51
ACTM-1066NM12	8.0-18.0	800	0.90	-49	2.4:1	9.1	M12	
ACTM-1144NM12	1.0-20.0	700	1.30	-49	3.4:1	20	M12	M51

### NOTES:

1. The video capacitance is used for r.f. bypass. This value can be changed if required for video response time or other considerations. Contact the factory if value other than those shown are needed.
2. VSWR is measured at or below -20dBm input power level.
3. Tangential signal sensitivity is a measure of low level sensitivity with respect to noise. It is measured with a video amplifier with a 2MHz bandwidth and a 3dB noise figure. The standard output polarity is negative if positive output is required, substitute (P) for (N) in the part number. Diode values can be changed to alter the level of sensitivity. As sensitivity is increased, the VSWR will get worse. VSWR will improve as sensitivity is lowered. Flatness and TSS will also be influenced by these changes. If your applications require something special please contact the factory.

### ENVIRONMENTAL:

- Operating & storage temperature range = -65°C to +100°C
- Shock: 50 g's @ 11msec
- Vibration: 20 g's, 10-2000Hz
- Input Power Rating: +14dBm  
(this allows for a 3dB margin from possible burnout at +17dBm)