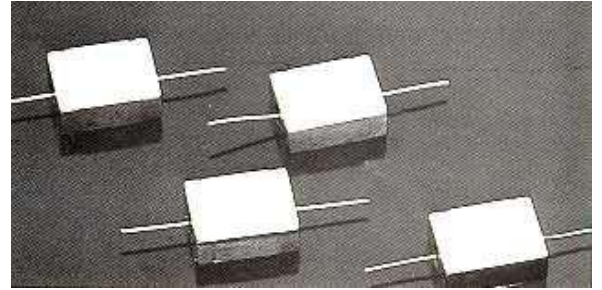


The detectors listed are standard products. There are many possible variations, which can be selected as options. Package configurations can be changed if desired. Performance characteristics may be modified to meet special requirements (e.g. the sensitivity might be moved higher or lower with a corresponding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



#### Features:

- Exceptional Temperature Stability
- Low Video Resistance (112Ω typical)
- Flat Output vs. Frequency Over Broadband Performance
- Very Fast Pulse Response
- No Bias Required
- Flexible Design Options

#### Applications:

- Transmitter Monitoring
- Missile Guidance Systems
- Input to Low-Noise Amplifiers
- Broadband Or Narrowband ECM Receivers
- Power and Signal Monitors
- Doppler Radar and Beacon Receivers
- Matched units available for Multi-channel Receivers, Amplitude Comparator Systems and Discriminators

Frequency Range (GHz)	Part (1) Number	Minimum (2)	Flatness	Typical (3)		Standard (5)	Standard Case Styles	Optional Case Styles
		Sensitivity K (mV/mW)	vs Frequency (+/-dB)	TSS (dBm)	Typical (4) VSWR	Video Capacitance (pF)		
0.005 - 0.5	ACTM1078N	800	0.2	-50	2.2:1	1000	M12	M35
0.05 - 0.5	ACTM1155N	700	0.3	-49	2.2:1	470	M35	M12
0.01 - 0.75	ACTM1080N	800	0.3	-50	2.4:1	1000	M12	M35
0.1 - 1	ACTM1037N	900	0.2	-51	2.3:1	270	M12	M34
0.5 - 1.3	ACTM1089N	900	0.2	-51	2.2:1	9	M12	M34,M35,M47,M51
0.01 - 2	ACTM1069N	400	0.3	-49	1.5:1	1000	M12	M35
0.1 - 2	ACTM1071N	900	0.2	-51	2.0:1	75	M12	M35
0.5 - 2	ACTM1001N	900	0.25	-51	1.9:1	75	M12	M34,M47
1 - 2	ACTM1013N	850	0.2	-51	1.9:1	20	M12	M34,M35,M47,M51
0.1 - 4	ACTM1073N	800	0.25	-50	2.0:1	75	M12	—
0.5 - 4	ACTM1054N	800	0.35	-51	2.0:1	39	M12	M34,M35,M47,M51
2 - 4	ACTM1002N	850	0.35	-51	2.0:1	39	M12	M34,M35,M47,M51
0.1 - 6	ACTM1017N	700	0.35	-50	2.2:1	75	M12	—
2 - 6	ACTM1006N	900	0.4	-51	2.5:1	20	M12	M51
2 - 8	ACTM1007N	750	0.5	-50	2.5:1	20	M12	M51
4 - 8	ACTM1003N	800	0.35	-51	1.9:1	20	M12	M51
8 - 12	ACTM1012N	650	0.4	-50	2.0:1	12	M12	M51
0.5 - 18	ACTM1020N	600	1.25	-49	3.3:1	20	M12	—
2 - 18	ACTM1009N	650	1.0	-50	3.0:1	20	M12	—
6 - 18	ACTM1058N	700	1.0	-49	2.5:1	9	M12	M51
8 - 18	ACTM1066N	700	0.9	-49	2.5:1	9	M12	—
1 - 20	ACTM1144N	600	1.3	-49	3.0:1	20	M12	M51

#### NOTES:

- 1) Standard output polarity is negative. If positive output is required, substitute "P" for "N" in part number.
- 2) Diode values can be changed to alter the level of sensitivity. As sensitivity is increased, VSWR will degrade. 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.
- 3) Tangential Signal Sensitivity (TSS) is a measure of low level sensitivity with respect to noise. It is measured using a video amplifier with a 20MHz bandwidth and a 3dB noise figure.
- 4) VSWR measured at or below -20dBm input power level.
- 5) Video capacitance is used for RF 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.

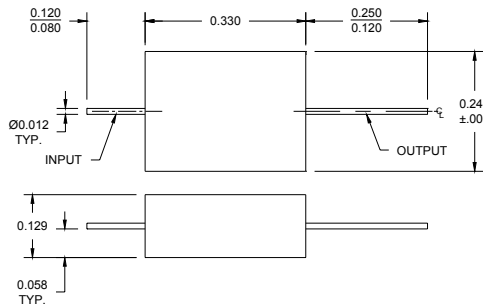


**ENVIRONMENTAL SPECIFICATIONS:**

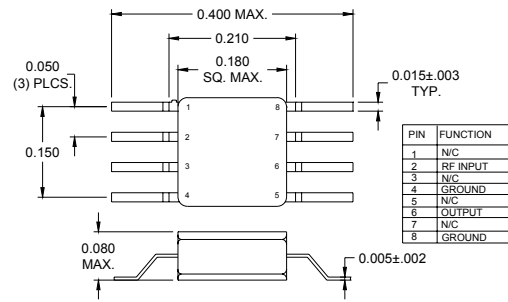
MIL-E-5400, MIL-STD-202, MIL-E-16400  
 Operating Temp: -65°C to +100°C  
 Storage Temp: -65°C to +100°C  
 Humidity: MIL-STD-202F, M103, Cond B  
 Shock: MIL-STD-202F, M213, Cond B  
 Altitude: MIL-STD-202F, M105, Cond B  
 Vibration : MIL-STD-202F, M204, Cond B  
 Thermal Shock: MIL-STD-202F, M107, Cond A  
 Temperature Cycle: MIL-STD-202F, M105C, Cond D  
 Maximum Input Power: +14dBm  
 (This allows for 3dB margin from possible burnout at +17dBm)

**SCREENING :**

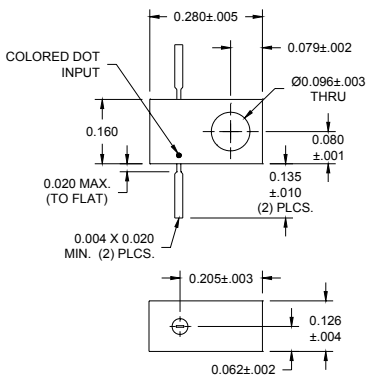
Standard Screening:  
 Internal Visual per MIL-STD-883, Method 2017  
 Temperature Cycle: -65°C to +100°C, 10 cycles  
Optional High-Rel Screening (Ref MIL-PRF-38534):  
 Internal Visual per MIL-STD-883, Method 2017  
 Stabilization Bake per MIL-STD-883, Method 1008  
 Temperature Cycle per MIL-STD-883, Method 1010  
 Constant Acceleration per MIL-STD-883, Method 2001  
 Burn-in per MIL-STD-883, Method 1015  
 Leak Test per MIL-STD-883, Method 1014  
 External Visual per MIL-STD-883, Method 2009



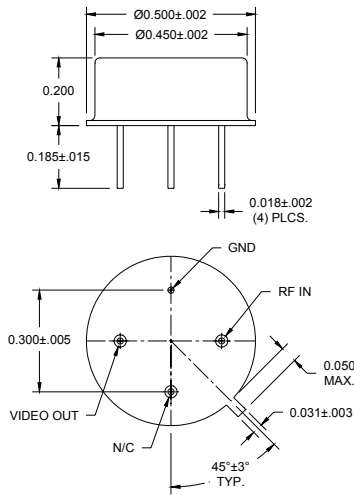
CASE STYLE M12



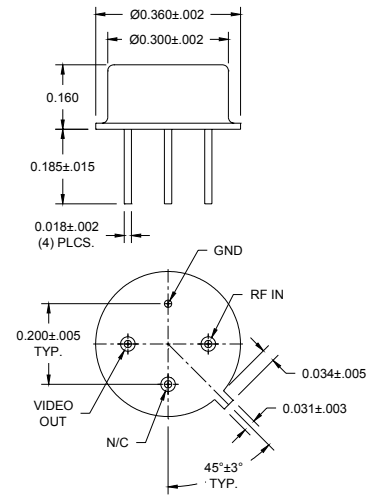
CASE STYLE M47



CASE STYLE M51



CASE STYLE M34



CASE STYLE M35

**Part Number Ordering Information:**

Example: ACTM1002NM1220  
 ACTM1002: Tunnel Module Detector, 2 - 4GHz  
 N: Negative output polarity  
 M12: Package type  
 20: 20pF custom video capacitance (omit for standard value)