

# OCTAVE AND MULTI-OCTAVE DETECTORS, VIDEO

**GENERAL INFORMATION:** Series PB and PT Miniature Detectors achieve the input impedance match without the use of resistive elements, which assures excellent sensitivity. This unique design also results in low VSWR and low video ripple. The units are supplied with either Schottky diodes (PT Series) or back diodes (PB Series).

**FREQUENCY RANGE:** 0.20 to 18.0 GHz

**RF IMPEDANCE:** 50 OHMS.

**BURNOUT POWER:** Series PT; 50 mW CW, 5 W Peak  
Series PB; 10 mW CW, 1.0 W Peak

**TEMPERATURE INFORMATION:** Operating temperature from -55° C to +85° C

**ENVIRONMENT:** MIL-E-5400, MIL-STD-202, MIL-E-16400, MIL-STD-883 (Special request only).

**CONNECTORS:** SMA standard, others on request.

# SERIES PB, PT

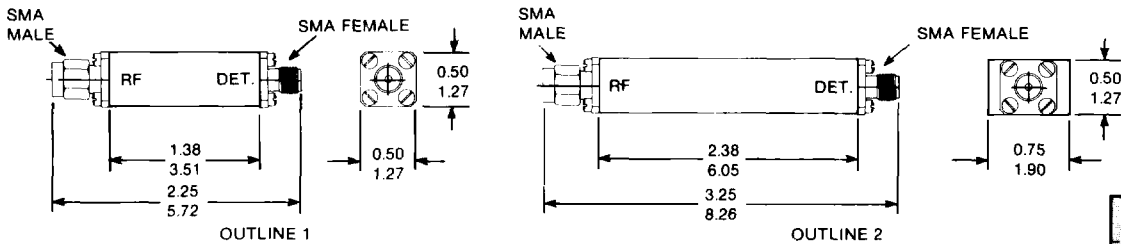


**NOTES:**

1. Models with prefix PB use either zero bias, Schottky or back diodes and require no bias. Models with prefix PT use Schottky diodes and require 20 to 60 microamps bias.
2. Diodes are replaceable.
3. All units have DC returns.
4. Output voltages are negative.
5. Figure 1 shows the relationship of tangential sensitivity versus video bandwidth.
6. Figure 2 illustrates the output voltage versus input power.

7. If a narrow frequency bandwidth is required, KDI/Triangle can supply a unit that is electrically optimized for that bandwidth. Mechanical dimensions will remain the same as the standard unit, and the price will generally be lower. Specify the frequency range when ordering a narrow bandwidth model and a special part number will be assigned.

8. The video resistance of the Schottky detectors is approximately 250 ohms and approximately 125 ohms for the back diode detectors.



**ELECTRICAL PERFORMANCE, OCTAVE MODELS**

Model No.	Frequency Range GHz	Tangential Sensitivity @ 2MHz Video Bandwidth -dBm	Max. VSWR	Output Voltage Flatness vs. Frequency dB	Sensitivity mV/mW	Outline
PB-3N	0.2 - 0.4	52	1.75	±0.60	1000	1
PB-3Q	0.2 - 0.4	53	1.40	±0.50	1000	2
PB-5N	0.25 - 0.5	52	1.75	±0.60	1000	1
PB-5Q	0.25 - 0.5	53	1.40	±0.50	1000	2
PB-7N	0.5 - 1.0	52	1.80	±0.60	800	1
PB-7Q	0.5 - 1.0	53	1.40	±0.50	800	2
PB-8N	1.0 - 2.0	52	1.80	±0.60	800	1
PB-8Q	1.0 - 2.0	53	1.50	±0.50	800	2
PT-22A	1.0 - 2.0	56	2.20	±0.60	2000	1
PB-27N	1.5 - 3.0	52	1.80	±0.60	600	1
PB-27Q	1.5 - 3.0	53	1.50	±0.50	600	2
PT-28A	1.5 - 3.0	56	2.20	±0.60	1800	1
PB-34N	2.0 - 4.0	50	1.80	±0.60	600	1
PT-36A	2.0 - 4.0	55	2.20	±0.60	1800	1
PB-45N	2.6 - 5.2	50	2.00	±0.70	600	1
PT-47A	2.6 - 5.2	55	2.40	±0.70	1800	1
PB-48N	4.0 - 8.0	50	2.00	±0.80	600	1
PT-49A	4.0 - 8.0	54	2.50	±0.80	1800	1
PB-54N	7.0 - 12.4	50	2.00	±1.00	400	1
PT-56A	7.0 - 12.4	54	2.50	±1.00	1700	1
PB-58N	8.0 - 16.0	48	2.50	±1.25	300	1
PT-59A	8.0 - 16.0	53	3.00	±1.25	1500	1
PB-62N	12.0 - 18.0	48	2.20	±1.25	300	1
PT-64A	12.0 - 18.0	53	2.50	±1.25	1500	1

INCHES/CENTIMETERS  
XX ±.03 XXX ±.010 / XX ±.08 XXX ±.025

**ELECTRICAL PERFORMANCE, MULTI-OCTAVE MODELS**

Model No.	Frequency Range GHz	Tangential Sensitivity @ 2MHz Video Bandwidth -dBm	Max. VSWR	Output Voltage Flatness vs. Frequency dB	Sensitivity mV/mW	Outline
PB-318	0.1 - 1.0	48	1.5	±1.0	800	2
PB-325	0.1 - 1.0	52	2.0	±1.0	800	2
PB-518	0.5 - 18.0	46	1.5	±2.0	300	1
PT-525	1.0 - 18.0	49	2.5	±2.0	300	1

All specifications subject to change without notice.

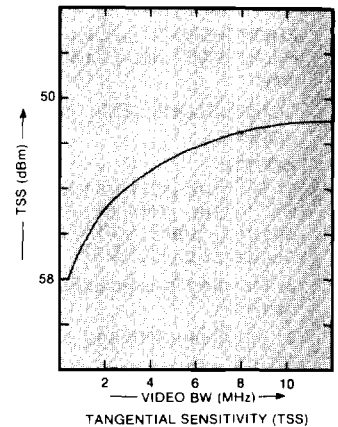


FIG. 1

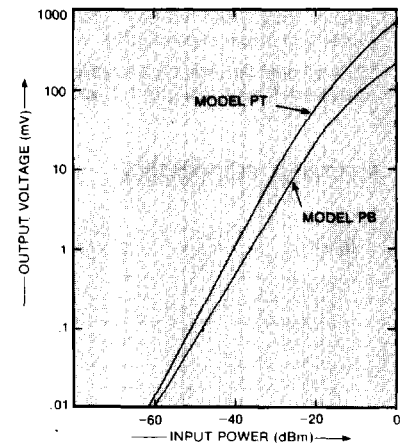


FIG. 2

**KDI/triangle ELECTRONICS**

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