

# COAXIAL DEVICES

**SMA-SMB/SMA/SMC/BNC/ Solder pin detectors up to 18 GHz**

## WIDE BAND AND HIGH SENSITIVITY

|                         | PART NUMBER       |                   | Connectors      |                   | Figure |
|-------------------------|-------------------|-------------------|-----------------|-------------------|--------|
|                         | Negative polarity | Positive polarity | RF Input        | Video output      |        |
| <b>WIDE BAND</b>        | <b>R451533000</b> | <b>R451533500</b> | <b>SMA male</b> | <b>SMB male</b>   | 1      |
|                         | <b>R451534000</b> | <b>R451534500</b> | <b>SMA male</b> | <b>SMC male</b>   | 2      |
|                         | <b>R451542000</b> | <b>R451542500</b> | <b>SMA male</b> | <b>SMA female</b> | 3      |
|                         | <b>R451543000</b> | <b>R451543500</b> | <b>SMA male</b> | <b>Solder pin</b> | 4      |
|                         | <b>R451544000</b> | <b>R451544500</b> | <b>SMA male</b> | <b>BNC female</b> | 5      |
| <b>HIGH SENSITIVITY</b> | <b>R451030000</b> | <b>R451030500</b> | <b>SMA male</b> | <b>SMB male</b>   | 1      |
|                         | <b>R451031000</b> | <b>R451031500</b> | <b>SMA male</b> | <b>SMC male</b>   | 2      |
|                         | <b>R451032000</b> | <b>R451032500</b> | <b>SMA male</b> | <b>SMA female</b> | 3      |
|                         | <b>R451033000</b> | <b>R451033500</b> | <b>SMA male</b> | <b>Solder pin</b> | 4      |
|                         | <b>R451034000</b> | <b>R451034500</b> | <b>SMA male</b> | <b>BNC female</b> | 5      |

## SPECIFICATIONS FOR ALL COAXIAL DETECTORS

|                                 |                                                                            |
|---------------------------------|----------------------------------------------------------------------------|
| Impedance ( $\Omega$ )          | 50                                                                         |
| Square law response limit (dBm) | - 12                                                                       |
| Average power (max) CW (mW)     | 200                                                                        |
| Peak power max (W)              | 2 (10 ns, 1 ms)                                                            |
| Video impedance ( $k\Omega$ )   | 1 typical                                                                  |
| Filtering capacity (pF)         | 20 (typical)                                                               |
| Polarity                        | Negative or positive                                                       |
| RF input connector              | SMA (male)                                                                 |
| Video output connector          | SMA (female) - SMC (male) - SMB (male) - Pin and Solder lug - BNC (female) |
| Diode                           | SCHOTTKY "zero bias"                                                       |
| Weight (g)                      | 10                                                                         |

## SPECIFICATIONS FOR WIDE BAND COAXIAL DETECTORS

|                                    |               |             |           |
|------------------------------------|---------------|-------------|-----------|
| Frequency range (GHz)              | .01 - 18      |             |           |
|                                    | .01 - 8       | 8 - 12.4    | 12.4 - 18 |
| Frequency response (dB)            | $\pm 0.2$     | $\pm 0.5$   | $\pm 1$   |
| V.S.W.R.                           | $\leq 1.35$   | $\leq 1.50$ |           |
| Tangential sensitivity min (dB)    | - 44          |             |           |
| Sensitivity                        |               |             |           |
| Low level (input power < - 20 dBm) | > 500 mV / mW |             |           |
| High level (input power = 0.35 mW) | > 100 mV      |             |           |

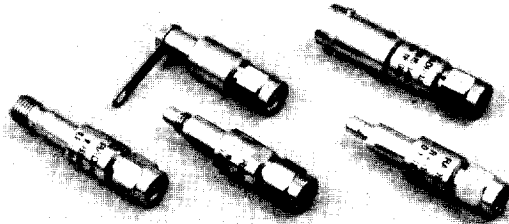
## SPECIFICATIONS FOR HIGH SENSITIVITY COAXIAL DETECTORS

|                                    |                       |
|------------------------------------|-----------------------|
| Frequency range (GHz)              | 1 - 18                |
| V.S.W.R.                           | 1 : 4 (Typical value) |
| Frequency response (dB)            | $\pm 2$               |
| Sensitivity (mV / mW)              |                       |
| Low level (input power < - 20 dBm) | > 1500                |
| Tangential sensitivity min (dB)    | - 50                  |

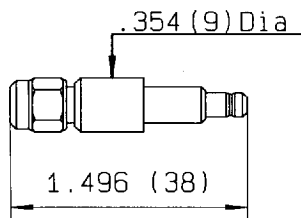
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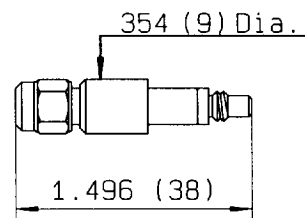
**WIDE BAND AND HIGH SENSITIVITY**



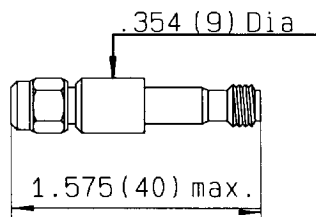
## TYPICAL OUTLINE DRAWING



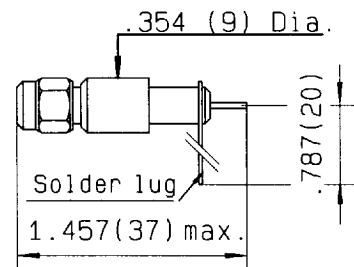
**Fig. 1**



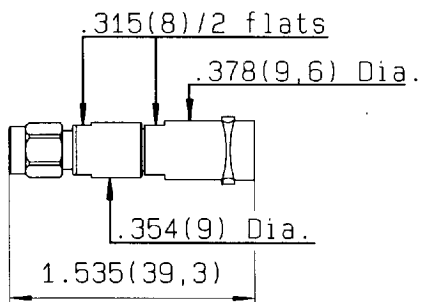
**Fig. 2**



**Fig. 3**



**Fig. 4**



**Fig. 5**