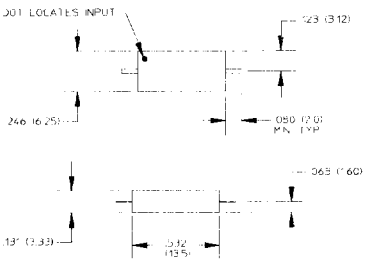
Modular Limiter-Tunnel Diode Detectors

7718N Series

Description

The 7718N series provide extended RF input power range while maintaining the desirable characteristics of a broadband tunnel diode detector. Dependent upon video load resistance, CW limiting starts at +10 to +17 dBm input power with pulsed power limiting up to +30 dBm. Limiting is reflective rather than absorptive.

Mechanical Outline (Top View)



Leads are .012 (.31) diameter (std.). Dimensions in ()'s are mm. Tolerance: .xxx = ±.005 ±.010 ±.002
May be supplied as tabs: .025 (.64) Wide, .006 (.15) Thick (opt.).
Contact factory.

Specifications

Frequency Range (GHz)	Voltage[2] Sensitivity (K) Min. (mV/mW)	Flatness Max. (dB)	T_{SS}[3] Typ. (-dBm)	RF Bypass Capacitance Typ. (pF)	Rise[4] Time Typ. (nS)	Video[5] Resistance Typ. (Ohms)	Part Number[1]
0.1-2.0	700	±0.7	48	100	15	120	7718N-0025
2.0-8.0	800	±0.6	48	20	10	120	7718N-0026
8.0-18.0	500	±1.2	48	12	6	100	7718N-0027

Notes:

1. Detectors are normally supplied with negative (-) output voltage polarity, referenced to case ground. Positive (+) output polarity is available for most parts. To designate, add suffix "P" to end of part numbers. Other package styles available. Consult factory.
2. Minimum open circuit voltage sensitivity (K) in mV/mW is measured at -20 dBm RF input power into 30K ohm, external video load resistance (R_L).
3. Tangential signal sensitivity (T_{SS}) is measured using a video amplifier restricted to 2 MHz bandwidth and having a noise contribution of 3 dB maximum.
4. Pulse rise time (t_r) in nanoseconds, is measured into an external load (R_L) of 100 ohms with 12 picofarads in parallel.
5. Video resistance is measured at -20dBm.