

# Solid State PIN Control Products



## 1-18 GHz

### Limiters

- Connectorized and Drop-In Modules
- High-Power Ratings
- Fast Recovery Time
- Small Size

### Description

Narda offers a wide range line of PIN diode based limiters designed to meet severe environmental conditions for airborne as well as other applications. Broadband limiters cover up to 1 to 18 GHz in one band and support power handling of up to 500 watts of pulsed power. The Narrowband limiters cover typically 25% frequency band within the frequency range of up to 18 GHz. They support power handling of up to 400 watts of pulsed power.

### Specifications

#### Broadband, SMA (F), 1 to 18 GHz

FREQUENCY RANGE (GHz)*	MODEL	BAND SEGMENTS (GHz)	INSERTION LOSS (dB max.)	VSWR (max.)	INPUT POWER* (W max.)		PULSE WIDTH ( $\mu$ s max.)	DUTY CYCLE (max.)	INPUT 1 dB COMPRESSION POINT (dBm min.)	FLAT LEAKAGE (mW max.)	RECOVERY TIME (ns max.)	OPERATING TEMPERATURE RANGE ( $^{\circ}$ C max.)
					CW	PEAK						
1-18	LIM101	1-18	2.5	2.0	2	150	1	1.0%	+5	100	200	-55 to +95
		2-4	1.0	1.7						150		
2-18	LIM201	4-8	1.4	1.9	1	150	1	0.1%	+5	130	100	-30 to +85
		8-12	1.8	1.9						130		
		12-18	2.3	2.0						130		
2-18	LIM301	2-4	1.3	1.7						150		
		4-8	1.8	1.9	3	500	1	0.1%	+5	130	200	-30 to +85
		8-12	2.2	1.9						130		
		12-18	2.7	2.0						130		

\* Maximum pulsed (CW power) at 25 $^{\circ}$ C derate linearly to 0 W at 175 $^{\circ}$ C

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## Examples of Custom Designs

Narrowband, SMA (F), 1 to 12 GHz

FREQUENCY RANGE* (GHz)	INSERTION LOSS (dB max.)	VSWR (max.)	INPUT POWER (W max.)		PULSE WIDTH (µs max.)	DUTY CYCLE (max.)	INPUT 1 dB COMPRESSION POINT (dBm min.)	FLAT LEAKAGE (mW max.)	RECOVERY TIME (ns max.)	OPERATING TEMPERATURE RANGE (°C max.)
			CW	PEAK						
1-2	0.8	1.5	40	400	10	10%	+7	100	400	-30 to +75
1.2-1.4	0.7	1.3	30	300	20	10%	+7	100	400	-30 to +85
3.1-3.5	1.0	1.3	25	250	50	10%	+7	50	350	-40 to +75
8.4-9.6	2.0	2.0	15	50	20	5%	+5	64	500	-20 to +70
8-12	2.2	1.8	5	50	10	10%	+5	100	500	-40 to +85
1.28-1.4	0.6	1.5	30	300	25	13%	+7	32	200**	-30 to +85

\* = 25% Bandwidth

\*\* from 50 W input peak power of 1 dB of small signal gain

## Environmental Specifications

### TEMPERATURE

Operating ..... See Examples of Custom Designs

Storage ..... -55°C to +85°C

### HUMIDITY

RTCA/DO-160D, Category B Section 6.3.2

R.H. Operating 95% @ 60°C

### SHOCK

RTCA/DO-160D, Category B Section 7

### ALTITUDE

(70,000 feet)

### VIBRATION

RTCV/DO-160D Category R or R2, Section 8, Par. 8.7.2

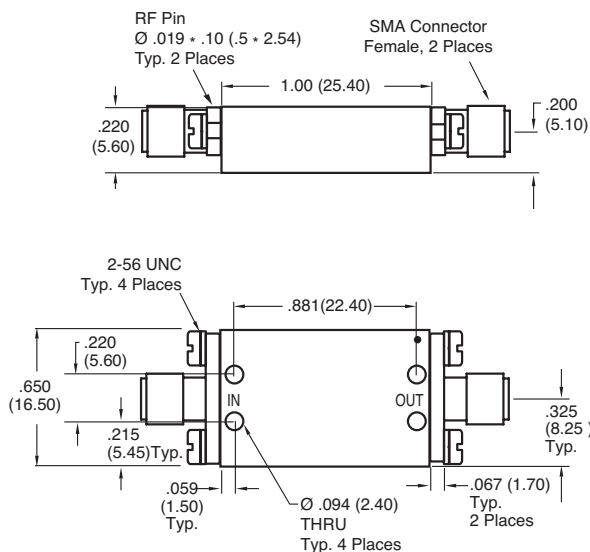
Fig 8-1 & 8-4, Curve C & C1, G rms 4.12 & 5.83

Random 30 min at performance level and 3 hours at endurance level for each axis

### THERMAL SHOCK

Per MIL-STD-202F, method 107D, condition A (5 cycles)

## Outline Drawing



Dimensions in inches (mm in parentheses), unless otherwise specified.