Coaxial Limiters
1 - 18 GHz

2690 Series
Rev. V6

Features

- Broadband Frequency Ranges
- Environmentally Sealed
- Feedback Leveling
- Small Size
- Reduced VSWR

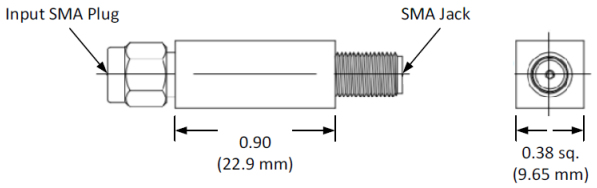
Applications

- Aerospace & Defense
- ISM

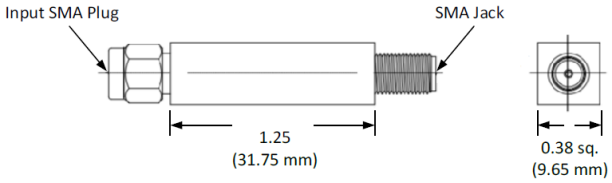
Description

The 2690 Series standard limiter is a line of completely passive solid state receiver protectors. They exhibit octave and multi-octave performance using a unique construction technique involving PIN diodes in broadband microstrip circuits. Careful diode selection allows a variety of device performance, trading off peak and average power handling, spike leakage and recovery time.

Outline 1



Outline 2



Electrical Specifications[1,2,3,4]: T_A = +25°C

Part Number	Frequency Range (GHz)	Insertion Loss (dB)	VSWR	Average Power (W)	Peak Power (W)	Recovery Time (ns)	Leakage Power (mW)	Outline Drawing
2690-1001	1 - 2	0.7	1.5:1	1	100	100	75	1
2690-1003		0.9	1.5:1	3	1000	1000	100	2
2690-1005	2 - 8	1.1	1.6:1	1	100	100	50	1
2690-1007		1.3	1.6:1	3	1000	1000	100	2
2690-1009	8 - 18	1.8	2.0:1	1	100	100	50	1
2690-1011		2.3	2.0:1	3	1000	1000	100	2
2690-1014	2 - 18	2.2	2.0:1	2	500	250	75	1
2690-1015	2 - 15 15 - 18	2.3 3.0	2.0:1	3	1000	1000	100	2

1. Insertion Loss and VSWR measured at 0 dBm input power.
2. Peak input power rated at 1 µs pulse width, 1% duty into 1.5:1 source VSWR and 1.15 load VSWR.
3. Spike leakage energy: 0.5 ergs max.
4. 1 dB compression: 7 dBm min.

Absolute Maximum Ratings[5]

Parameter	Absolute Maximum
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

5. Operation of this device above any one of these parameters may cause permanent damage.

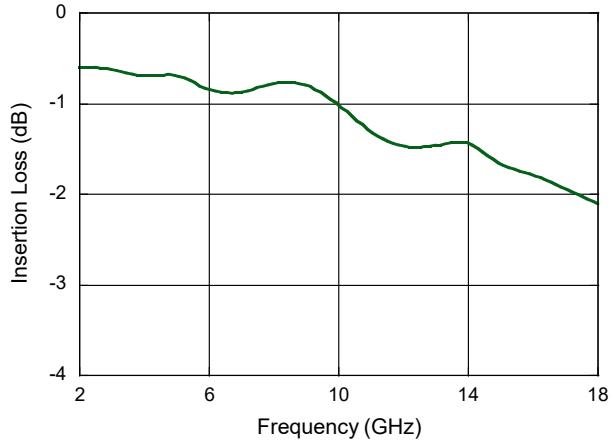
Environmental

Test	MIL-STD	Method	Condition
Non-Destructive Bond Pull	883	2023	—
Internal Visual	883	2017	—
Stabilization Bake	883	1008	B
Thermal Cycle	883	1010	B
Constant Acceleration	883	2001	A (Y1 Axis)
Burn-In	883	1015	125°C
Seal Fine Gross	 883 883	 1014 1014	 A1 C1
External Visual	883	2009	—

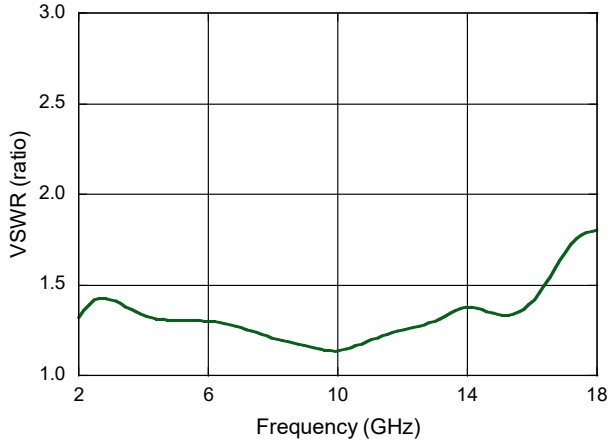
Devices are designed to meet the above screening conditions.

Typical Performance Curves

Insertion Loss



VSWR



Leakage Power @ 100 mW