

**Coaxial Limiters**

**2690 Series  
V4**

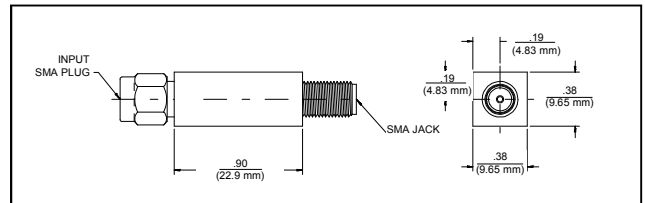
**Features**

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

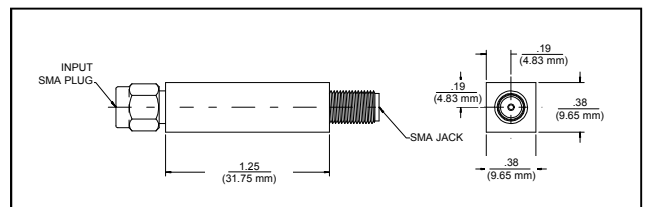
**Description**

M/A-COM's standard limiter series 2690 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. Typical insertion loss and VSWR curves are shown below.

**Outline 1**



**Outline 2**



**Electrical Specifications: T<sub>A</sub> = 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	1.0 - 2.0	0.7	1.5:1	1.0	100	100	75	1
2690-1003		0.9	1.5:1	3.0	1000	1000	100	2
2690-1005	2.0 - 8.0	1.1	1.6:1	1.0	100	100	50	1
2690-1007		1.3	1.6:1	3.0	1000	1000	100	2
2690-1009	8.0 - 18.0	1.8	2.0:1	1.0	100	100	50	1
2690-1011		2.3	2.0:1	3.0	1000	1000	100	2
2690-1013	2.0 - 18.0	2.0	2.0:1	1.0	100	100	50	1
2690-1014		2.2	2.0:1	2.0	500	250	75	1
2690-1015		2.3	2.0:1	3.0	1000	1000	100	2

1. Insertion Loss and VSWR measured at 0 dBm input power.
2. Peak input power rated at 1 microsecond 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.

**Environmental**

Test	MIL-STD	Method	Cond
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	883	1014	A1
Fine	883	1014	C1
Gross	883	1014	C1
External Visual	883	2009	—

Devices are designed to meet the above screening conditions.

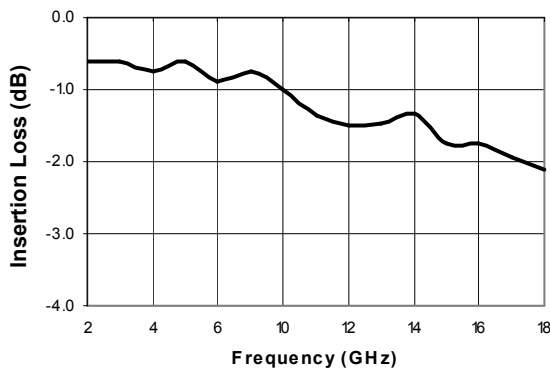
**Absolute Maximum Ratings <sup>5</sup>**

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

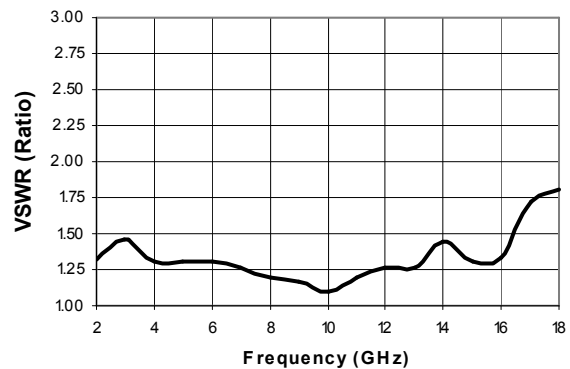
5. Operation of this device above any one of these parameters may cause permanent damage.

**Typical Performance Curves**

**Insertion Loss**



**VSWR**



**Leakage Power at 100 mW**

