

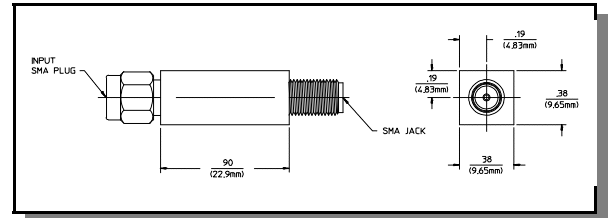
Features

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

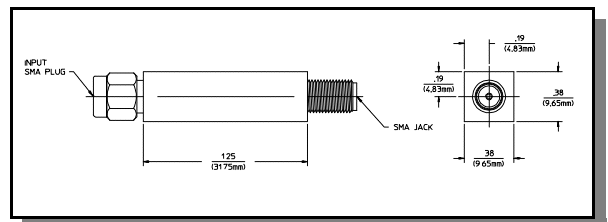
Description

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: $T_A = 25^\circ\text{C}$

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 Fine	883	1014	A1
Seal Gross	883	1014	C1
External Visual	883	2009	—

Devices are designed to meet the above screening conditions.

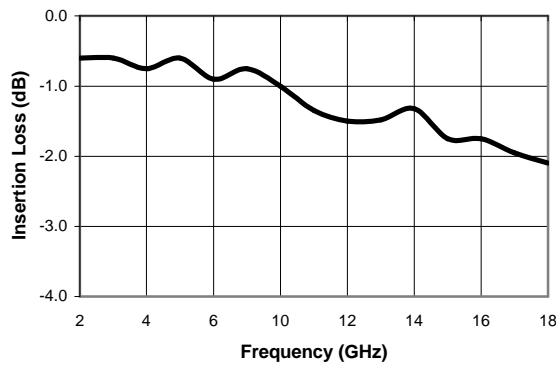
Absolute Maximum Ratings⁵

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

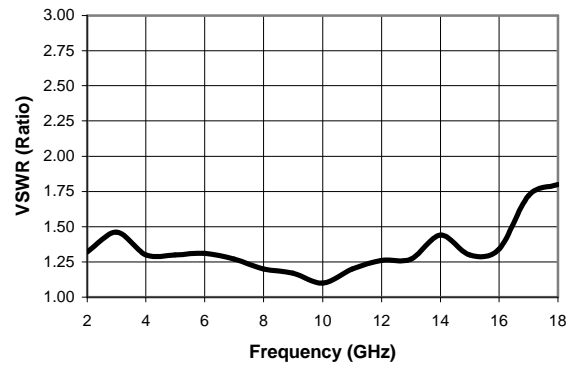
5. Operation of this device above any one of these parameters may cause permanent damage.

Typical Performance Curves

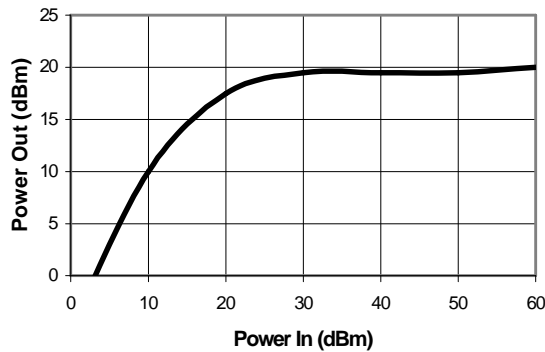
Insertion Loss



VSWR



Leakage Power at 100 mW



Specifications subject to change without notice.

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Visit www.macom.com for additional data sheets and product information.

