2690 Series

Coaxial Limiters



- **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.

Rev. V5

Outline 1



Outline 2



Recovery Frequency Insertion VSWR Average Peak Power Leakage **Outline Draw-**Part Range (GHz) Loss (dB) Power (W) (W) Time (nS) Power (mW) ing Number 1.0 - 2.0 2690-1001 0.7 1.5:1 100 100 75 1 1 2690-1003 0.9 1.5:1 3 1000 1000 100 2 2690-1005 2.0 - 8.0 1.1 1.6:1 100 100 50 1 1 2690-1007 1.3 1.6:1 3 1000 1000 100 2 2690-1009 1.8 100 100 8.0 - 18.0 2.0:1 1 50 1 2690-1011 2.3 1000 1000 100 2.0:1 3 2 2.0 - 15.0 2 2.0:1 1 100 100 50 1 2690-1013 15.0-18.0 3 100 100 50 2.0:1 1 1 2.0 - 15.0 2.2 2.0:1 2 500 250 75 1 2690-1014 15.0-18.0 3 2.0:1 2 500 250 75 1 2.0 - 15.0 2.3 2.0:1 3 1000 1000 100 2 2690-1015 15.0-18.0 2.0:1 3 3 1000 1000 100 2

Electrical Specifications: T_A = 25°C

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.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. • India Tel: +91.80.4155721 PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology

may be available

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

Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples Commitment to produce in volume is not gu

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Rev. V5

Environmental

Test	MIL-STD	Method	Cond
Non-Destructive Bond Pull	883	2023	—
Internal Visual	883	2017	_
Stabilization Bake	883	1008	В
Thermal Cycle	883	1010	В
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



Leakage Power at 100 mW



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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.

VSWR

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