

+12 to +33dBm

Limiter

VLM-63-2W+

50Ω Broadband 30 to 6000 MHz

The Big Deal

- Protection against up to 2.5 W of unwanted input signals
- Wide frequency range, 30 MHz-6 GHz
- Very fast recovery time, 5 nsec typ.



CASE STYLE: FF704

Product Overview

The VLM-63-2W+ reacts almost instantaneously to protect sensitive devices from power surges and other unwanted signals at the device input. For inputs >12 dBm, the output power remains about 11.5 dBm, whereas lower-level input losses are only 0.4 dB typ. These units are housed in a patented, rugged unibody enclosure (1.43" x 0.410") specifically designed to function in tough environments such as manufacturing sites, train tunnels, weapon systems, or anywhere sensitive components, such as low noise amplifiers, need protection.

Feature	Advantages
High power handling, up to 2.5W max	Affords protection against peak voltages of multi-tone signals
Very fast recovery time, 5 nsec typ.	Back in operation almost instantaneously following signal spikes
Wideband, 30 MHz-6 GHz	Protection for a wide range of applications, from IF receivers to toll-booth operations

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Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	2.5W

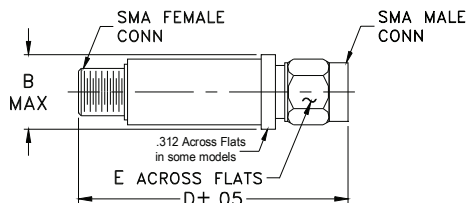
Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections*

INPUT	SMA FEMALE
OUTPUT	SMA MALE

*Suggested Connections. For reverse connections, consult Mini-Circuits.

Outline Drawing



Outline Dimensions (inch/mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

Features

- wideband, 30 to 6000 MHz
- low insertion loss 0.4 dB typ.
- fast recovery time, 5nsec typ.
- excellent VSWR 1.05:1 typ.
- low leakage power, 11.5 dBm typ.

Applications

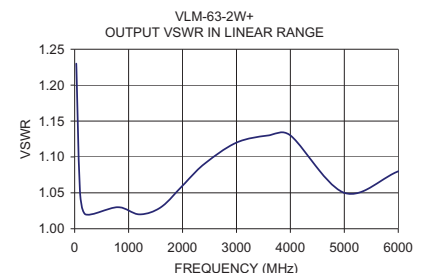
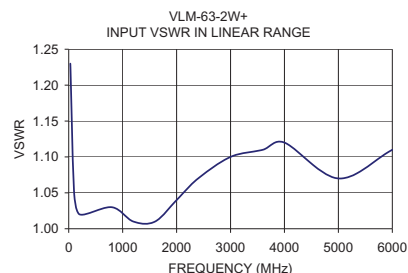
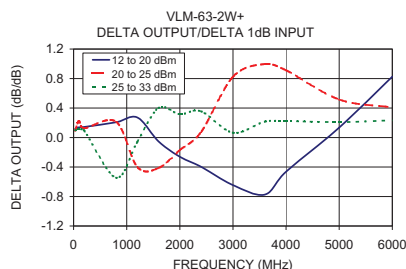
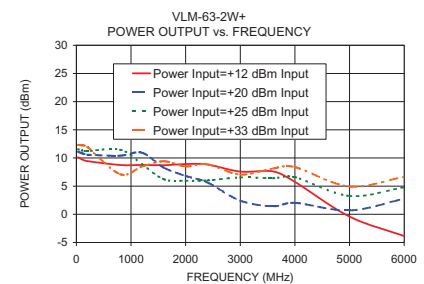
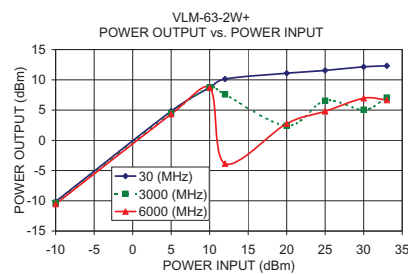
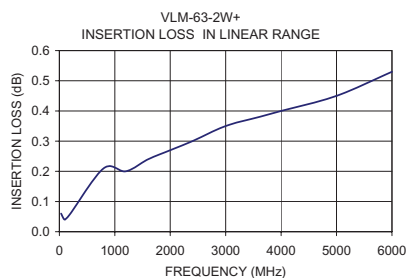
- protects low noise amplifiers and other devices from ESD or input power damage
- military, hi-rel applications

Electrical Specifications

Parameter	Condition	Min.	Typ.	Max.	Units
Frequency Range		30		6000	MHz
Insertion Loss in Linear Range	<+4 dBm Input	—	0.4	1.2	dB
VSWR	<+4 dBm Input	—	1.05	1.5	:1
Input Power Limiting Range		+12	—	+33	dBm
Output Power	In limiting range	—	+11.5	—	dBm
Recovery Time	1 watt pulse 50 usec pw 1kHz duty cycle recovery to within 90% of final value.	—	5	—	nsec
Response Time	-30 to +33 dBm input 50 usec, BW 1 kHz duty cycle	—	7	—	nsec
Limiting Δ Output/1dB Δ Input	Input Power Range (dBm) 12 to 20 20 to 25 25 to 33	— — —	0.3 0.5 0.6	— — —	dB/dB

Typical Performance Data

Freq. (MHz)	I. Loss in Linear Range (dB)	VSWR in Linear Range (:1)	Power Output (dBm)				Δ Output 1dB Δ Input		
			+12dBm Input	+20dBm Input	+25 dBm Input	+33dBm Input	+12 to +20dBm Input	+20 to +25 dBm Input	+25 to +33 dBm Input
30.00	0.06	1.23	10.14	11.09	11.55	12.32	0.12	0.09	0.10
100.00	0.04	1.05	9.75	10.86	11.33	12.23	0.14	0.22	0.11
200.00	0.06	1.02	9.44	10.59	11.22	11.97	0.14	0.13	0.09
800.00	0.21	1.03	8.75	10.41	11.48	7.12	0.21	0.21	-0.55
1200.00	0.20	1.01	8.76	10.93	8.93	8.46	0.27	-0.40	-0.06
1600.00	0.24	1.01	8.72	8.29	6.22	9.42	-0.05	-0.41	0.40
2000.00	0.27	1.04	8.91	6.82	5.97	8.50	-0.26	-0.17	0.32
2400.00	0.30	1.07	8.83	5.65	6.02	8.87	-0.40	0.07	0.36
3000.00	0.35	1.10	7.59	2.42	6.54	7.06	-0.65	0.82	0.06
3600.00	0.38	1.11	7.61	1.42	6.40	8.13	-0.77	1.00	0.22
4000.00	0.40	1.12	5.75	2.04	6.60	8.39	-0.46	0.91	0.22
5000.00	0.45	1.07	-0.40	0.68	3.26	4.93	0.14	0.52	0.21
6000.00	0.53	1.11	-3.86	2.75	4.79	6.66	0.83	0.41	0.23



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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