WINSOURCE ELECTRONICS

THE DATASHEET OF

VLM-33-S+

+12 to +30dBm

Limiter

VLM-33-S+

50Ω Broadband 30 to 3000 MHz



CASE STYLE: FF704

Connectors	Model
SMA	VLM-33-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	2W

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

Features

- wideband, 30 to 3000 MHz
- low insertion loss 0.23 dB typ.
- fast recovery time, 10nsec typ.
- excellent VSWR 1.05:1 typ.
- low leakage power, 11.5 dBm typ.

Applications

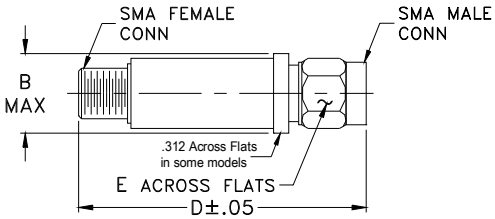
- protects low noise amplifiers and other devices from ESD or input power damage
- military, hi-rel applications

Coaxial Connections*

INPUT	SMA FEMALE
OUTPUT	SMA MALE

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

Outline Drawing



Outline Dimensions (inch / mm)

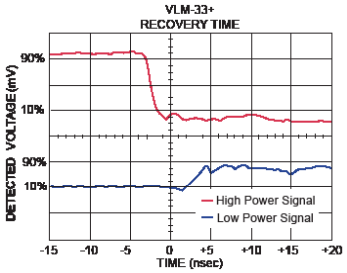
B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

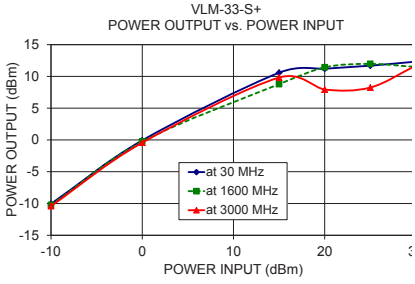
Electrical Specifications

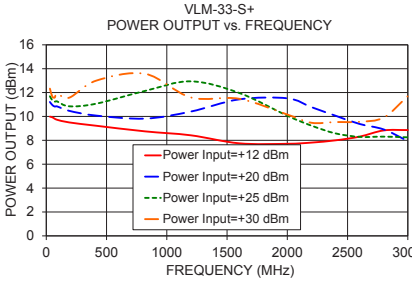
Parameter	Condition	Min.	Typ.	Max.	Units
Frequency Range		30		3000	MHz
Insertion Loss in Linear Range	<+5 dBm Input	—	0.23	0.7	dB
VSWR	<+5 dBm Input		1.05	1.5	:1
Input Power Limiting Range		+12	—	+30	dBm
Output Power	In limiting range	—	+11.5	—	dBm
Recovery Time	1 watt pulse 50 µsec pw 1kHz duty cycle recovery to within 90% of final value.	—	10	—	nsec
Response Time	-30 to +30 dBm input 50 µsec, BW 1 kHz duty cycle	—	2	—	nsec
Limiting Δ Output/1dB Δ Input	Input Power Range (dBm) 12 to 20 20 to 25 25 to 30	 — — —	 0.2 0.2 0.2	 — — —	dB/dB

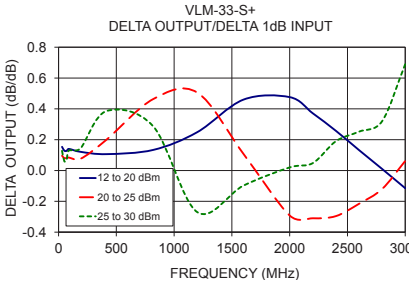
Typical Performance Data

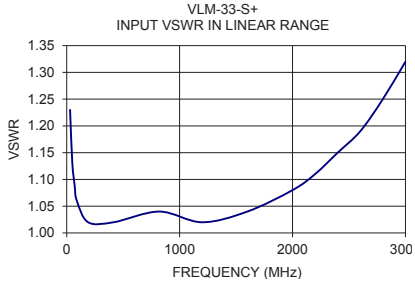
Freq. (MHz)	I. Loss in Linear Range (dB)	VSWR in Linear Range (:1)	Power Output (dBm) +12dBm Input	+20dBm Input	+25 dBm Input	+30dBm Input	Δ Output 1dB Δ Input +12 to +20dBm Input	+20 to +25 dBm Input	+25 to +30 dBm Input
30.00	0.06	1.23	9.98	11.21	11.69	12.33	0.15	0.10	0.13
50.00	0.04	1.13	9.93	10.96	11.36	11.66	0.13	0.08	0.06
70.00	0.04	1.09	9.81	10.83	11.24	11.58	0.13	0.08	0.07
90.00	0.04	1.06	9.72	10.84	11.26	11.91	0.14	0.08	0.13
190.00	0.06	1.02	9.50	10.47	10.85	11.57	0.12	0.08	0.14
415.00	0.10	1.02	9.22	10.07	11.07	13.00	0.11	0.20	0.39
820.00	0.21	1.04	8.75	9.82	12.14	13.57	0.13	0.46	0.29
1200.00	0.19	1.02	8.42	10.41	12.94	11.59	0.25	0.51	-0.27
1600.00	0.23	1.04	7.75	11.43	11.97	11.48	0.46	0.11	-0.10
2000.00	0.26	1.08	7.71	11.52	10.06	10.16	0.48	-0.29	0.02
2200.00	0.28	1.11	7.81	10.78	9.23	9.47	0.37	-0.31	0.05
2400.00	0.30	1.15	8.00	10.06	8.58	9.53	0.26	-0.30	0.19
2600.00	0.32	1.19	8.31	9.37	8.29	9.55	0.13	-0.22	0.25
2800.00	0.35	1.25	8.83	8.91	8.31	9.91	0.01	-0.12	0.32
3000.00	0.40	1.32	8.86	7.94	8.25	11.70	-0.12	0.06	0.69

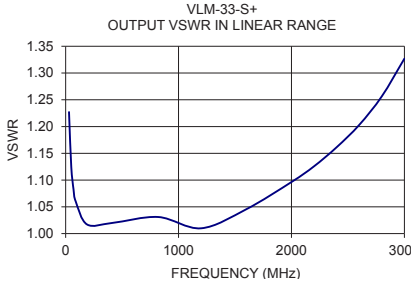












Notes

A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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