

Broad Band Voltage Variable Attenuator

MVA-2000+

50Ω 10 to 2000 MHz

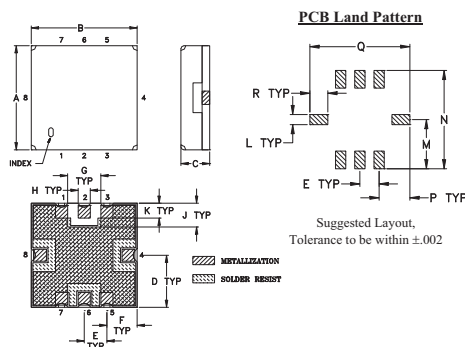
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 85°C
Absolute Max. Supply Voltage(V+)	7V
Absolute Max. Control Voltage(Vctrl)	14V
Absolute Max. RF Input Level	+19 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

RF IN	6
RF OUT	2
V CONTROL	4
V+	8
GROUND	1,3,5,7

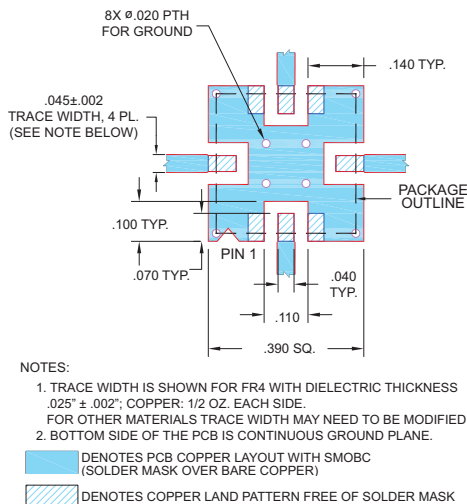
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.93	2.54	2.79	1.02	2.03
K	L	M	N	P	Q	R	wt.	
.050	.040	.195	.390	.120	.390	.070	grams	
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25	

Demo Board MCL P/N: TB-286 Suggested PCB Layout (PL-154)



Features

- Broadband, 10-2000 MHz
- Low Insertion Loss, 1.9 dB typ.
- IP3, +45 dBm Typ.
- Small phase deviation over attenuation range
- No external bias and RF matching network required
- Shielded case
- Aqueous washable

Applications

- Power level control
- Feed forward amplifiers
- CATV



CASE STYLE: GP731
PRICE: \$12.95 ea. QTY (10)

+RoHS Compliant

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

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

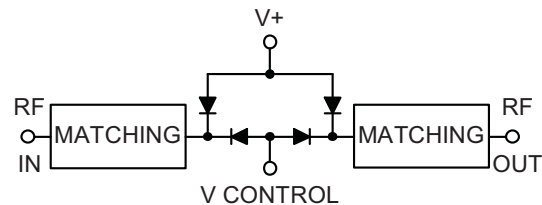
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)		MIN. INSERTION LOSS, dB (+12V)		MAX. ATTENUATION dB (0V)		INPUT POWER (dBm)	CONTROL Voltage Current (V) (mA)		IP3 (dBm)	RETURN LOSS (dB)	POWER SUPPLY Voltage Current (V) (mA)	
Min.	Max.	Typ.	Max.	Typ.	Min.	Max.			Typ.			Max.
10 - 500		1.7	2.7	43	25	+19	0 - 12	15	43	23	+3 to +5	5
500 - 1000		1.9	2.8	28	20	+19	0 - 12	15	48	23	+3 to +5	5
1000 - 2000		2.1	3.0	23	15	+19	0 - 12	15	50	23	+3 to +5	5

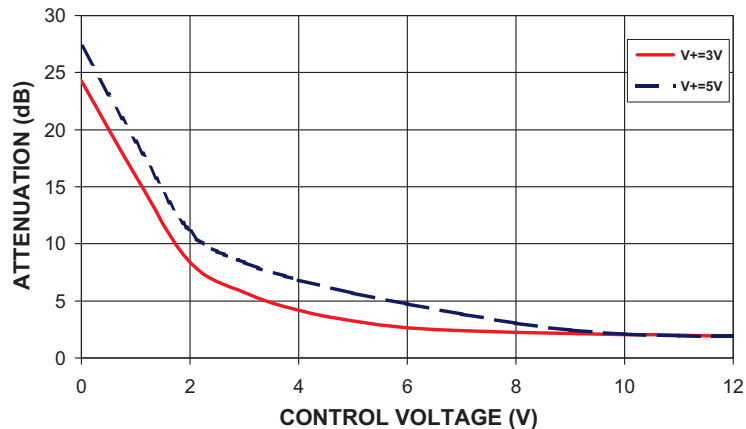
Notes:

Rise/Fall time: 17μSec/10μSec Typ.
Switching Time, turn on/off: 20μSec. Typ.
Improved R.Loss in/out performance can be achieved at certain frequencies by choosing a V+ between +3V to +5V

Equivalent Schematic



MVA-2000+ TYPICAL ATTENUATION AT 1000MHz



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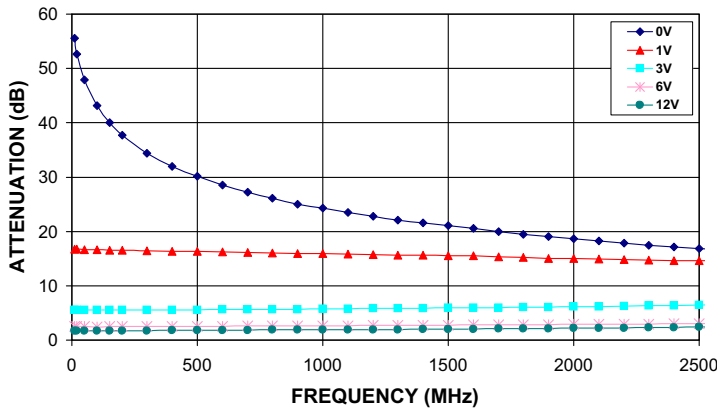
For detailed performance specs
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

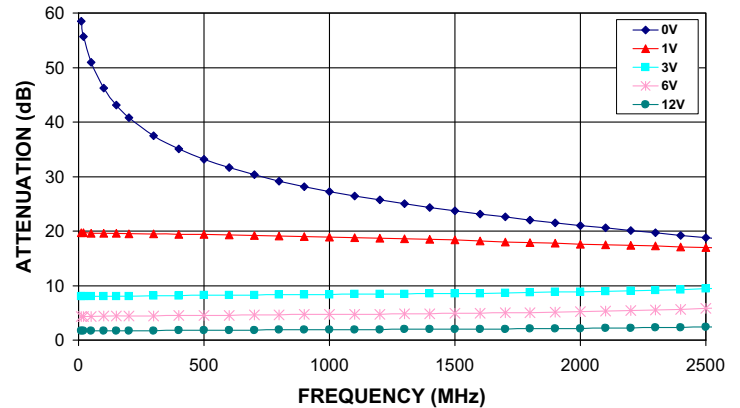
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

REV. OR
M110472
EDR-6631A
MVA-2000+
RAV
120913
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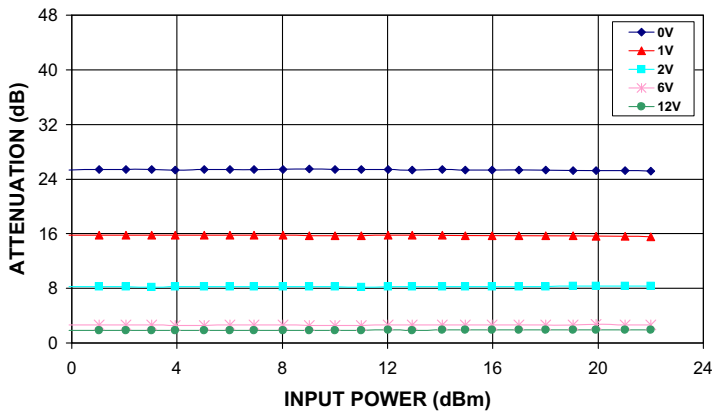
MVA-2000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V



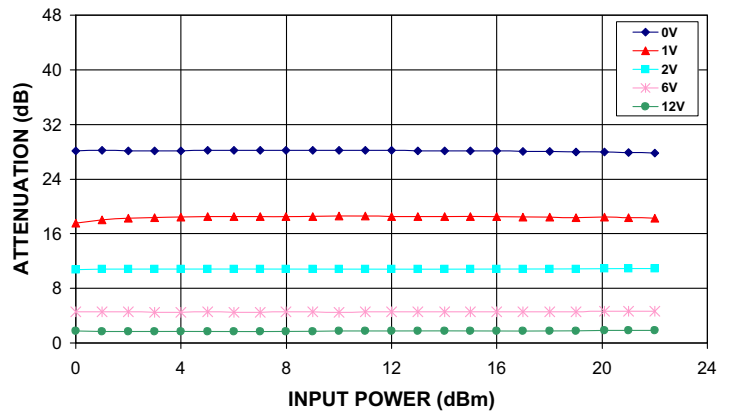
MVA-2000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V



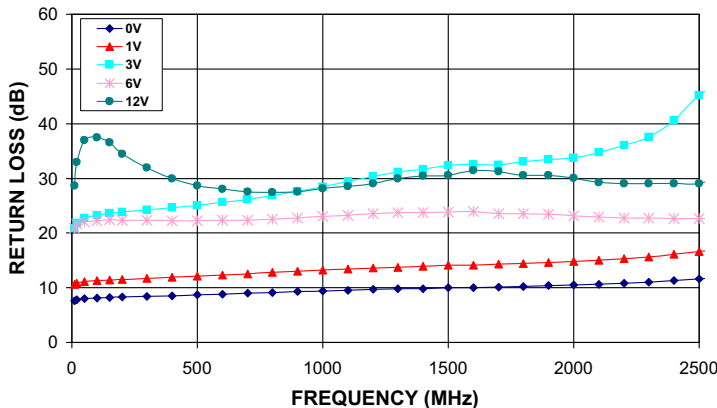
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ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000MHz @ V+=3V



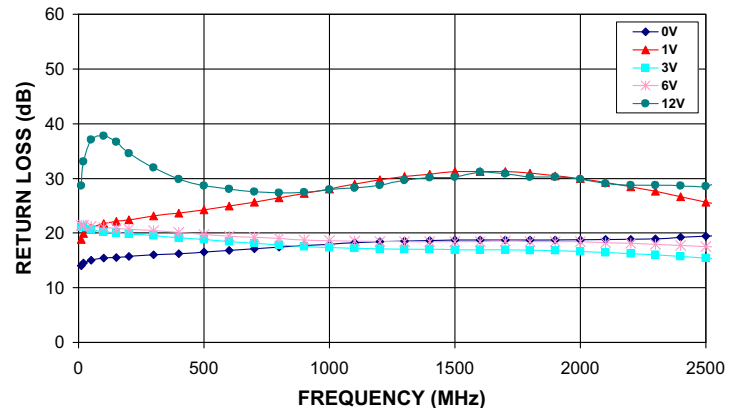
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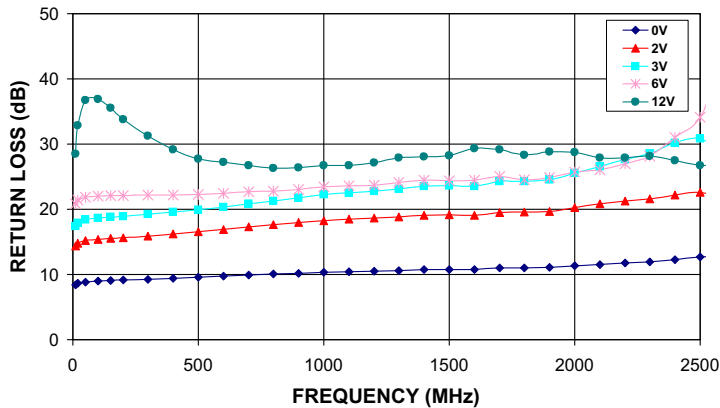
MVA-2000+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V



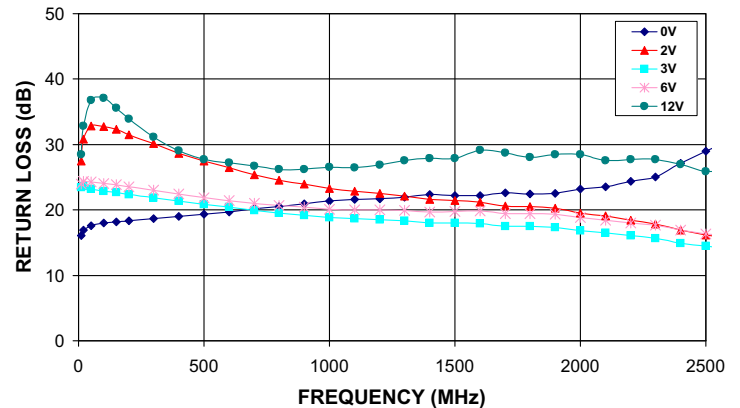
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INPUT RETURN LOSS Vs. FREQUENCY
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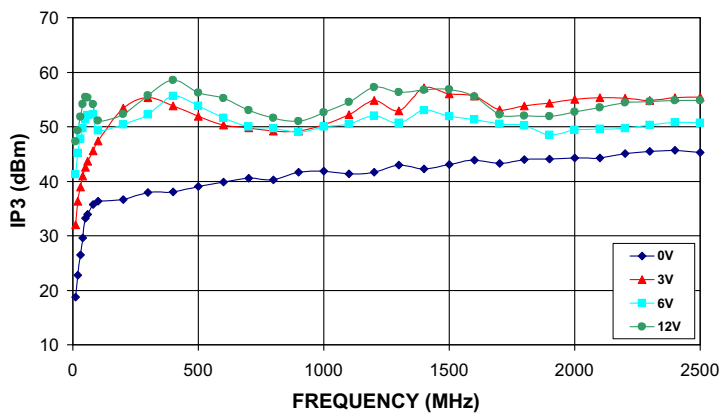
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OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V**



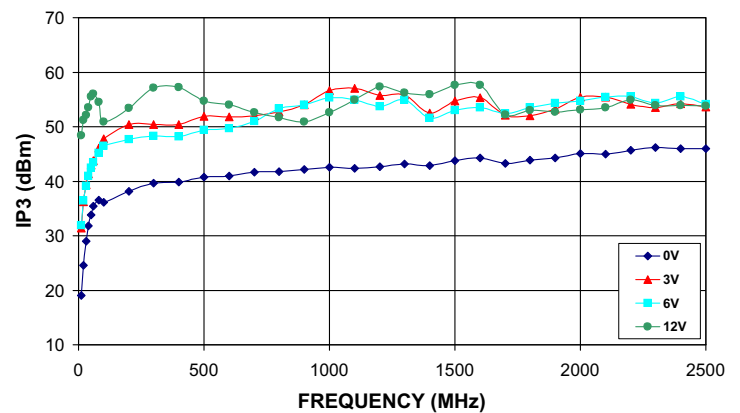
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OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V**



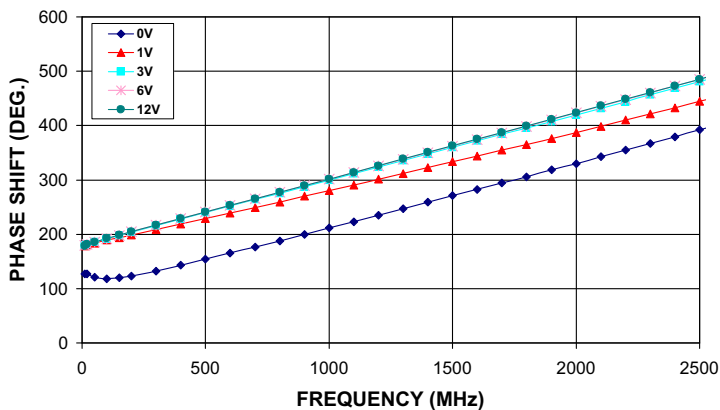
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IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V**



**MVA-2000+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V**



**MVA-2000+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V**



**MVA-2000+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V**

