

Surface Mount Voltage Variable Attenuator

SVA-2000+

50Ω 50 to 2000 MHz

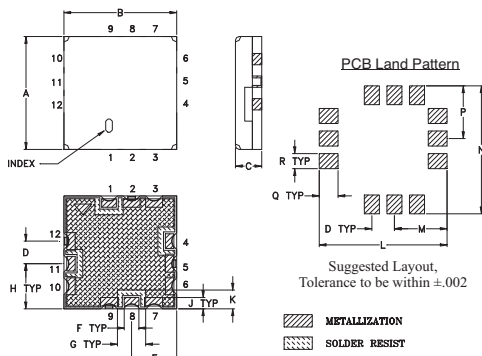
Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage(V+)	7V
Absolute Max. Control Voltage(Vctrl)	15V
Absolute Max. RF Input Level	+17dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

RF IN	8
RF OUT	1
V CONTROL	4
V+	11
GROUND	2,3,5,6,7,9,10,12

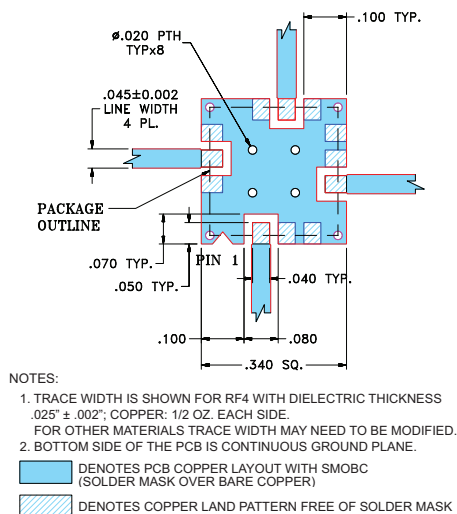
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.300	.300	.100	.060	.120	.039	.075	.120	.030
7.62	7.62	2.54	1.52	3.05	0.99	1.91	3.05	0.76
K	L	M	N	P	Q	R		wt.
.050	.340	.140	.340	.140	.050	.040		grams
1.27	8.64	3.56	8.64	3.56	1.27	1.02		.25

Demo Board MCL P/N: TB-457+ Suggested PCB Layout (PL-277)



Features

- Frequency range, 50-2000 MHz
- Low insertion loss, 1.6dB typ.
- Maximum attenuation at minimum current
- No external bias and RF matching network required
- Small size, 0.3" x 0.3" x 0.1"
- Shielded case
- Aqueous washable



CASE STYLE: FZ990
PRICE: \$13.95 ea. QTY (10-49)

Applications

- CATV
- Power level control
- Feed forward amplifiers

+RoHS Compliant

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

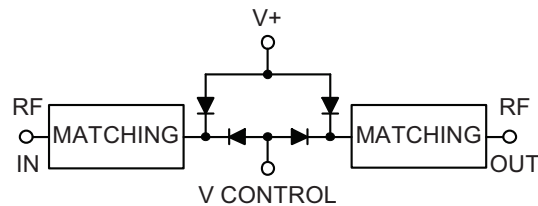
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)	MIN. INSERTION LOSS, dB (+12V)		MAX. ATTENUATION dB (0V)		INPUT POWER (dBm)	CONTROL Voltage Current		IP3 (dBm)	RETURN LOSS (dB)	POWER SUPPLY	
	Min.	Max.	Typ.	Max.		V	(mA)			Voltage	Current
							Max.	Typ.	Typ.	(V)	(mA)
50 - 500			1.5	2.0				38	23	+5	2
500 - 1000			1.6	2.2				44	21	+5	2
1000 - 2000			1.9	2.6				47	20	+5	2

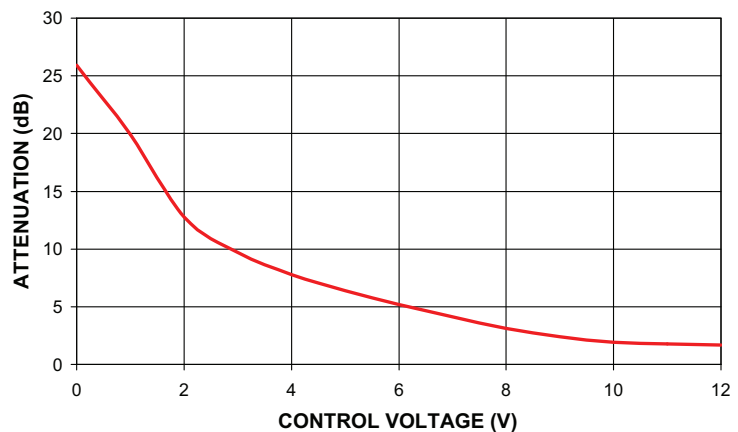
Notes:

Rise/Fall time: 15μSec/19μSec Typ.
Switching Time, turn on/off: 20μSec. Typ.

Equivalent Schematic



SVA-2000+ TYPICAL ATTENUATION AT 1000 MHz



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED
The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com
IF/RF MICROWAVE COMPONENTS

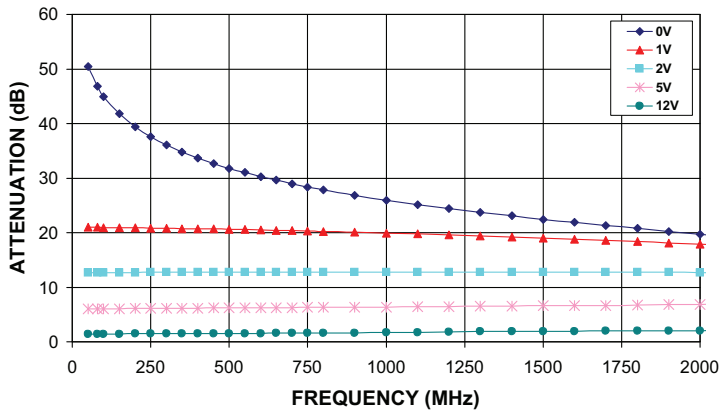
For detailed performance specs
& shopping online see web site

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

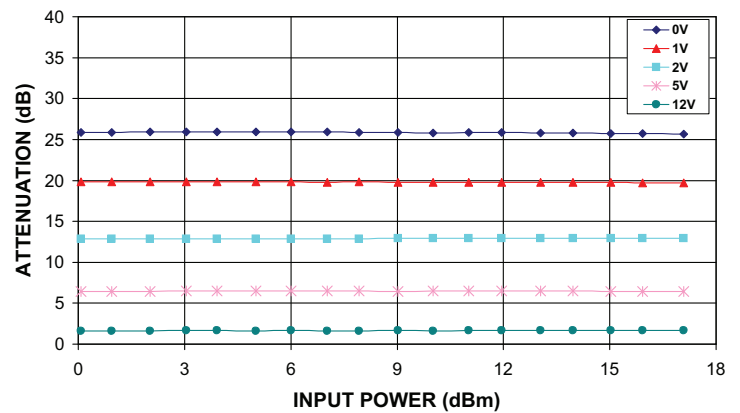
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established 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-6631/3F1
SVA-2000+
RAV
121024
Page 1 of 2

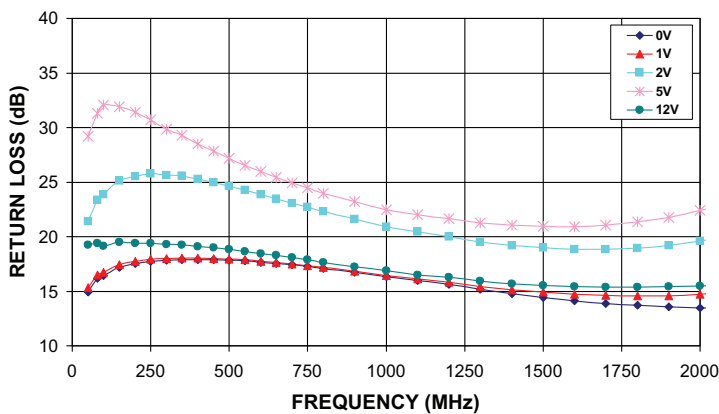
SVA-2000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES



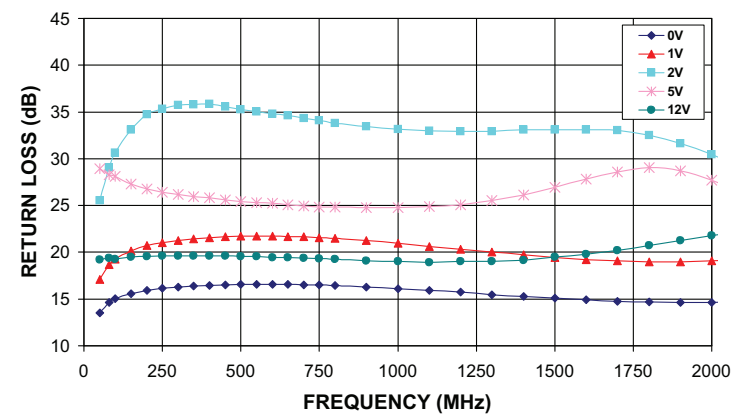
SVA-2000+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000MHz



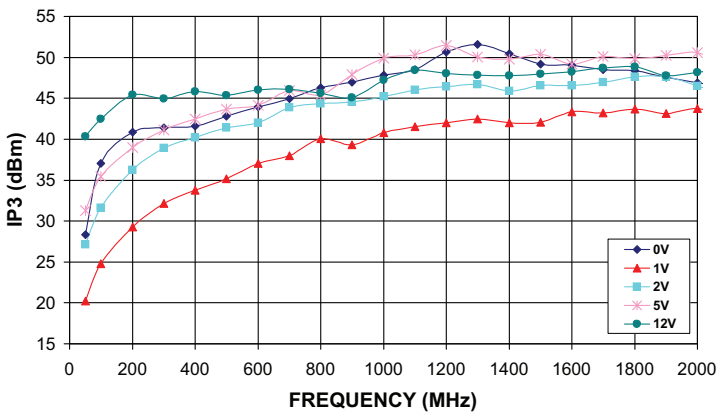
SVA-2000+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



SVA-2000+
OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



SVA-2000+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES



SVA-2000+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES

