

Surface Mount Voltage Variable Attenuator

SVA-2000+

50Ω 50 to 2000 MHz

Maximum Ratings

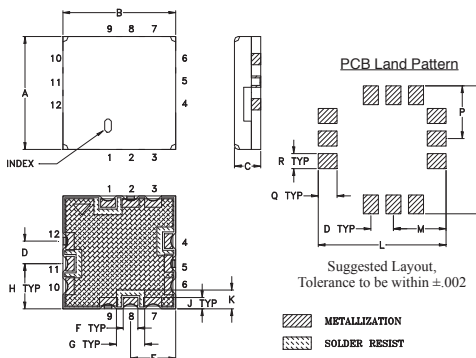
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage(V+)	7V
Absolute Max. Control Voltage(Vctrl)	15V
Absolute Max. RF Input Level	+17dBm

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

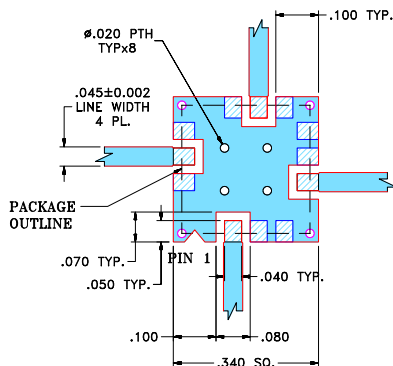
Outline Drawing



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)



- NOTES:
- TRACE WIDTH IS SHOWN FOR RF4 WITH DIELECTRIC THICKNESS .025 ± .002"; COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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

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

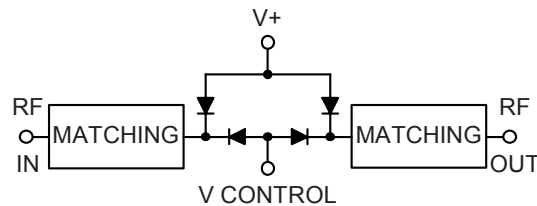
Electrical Specifications (T_{AMB} = 25°C)

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			V	Current (mA)
50 - 500	1.5	2.0	35	26	+17	0 - 12	5	38	23	+5	2
500 - 1000	1.6	2.2	29	21	+17	0 - 12	5	44	21	+5	2
1000 - 2000	1.9	2.6	23	15	+17	0 - 12	5	47	20	+5	2

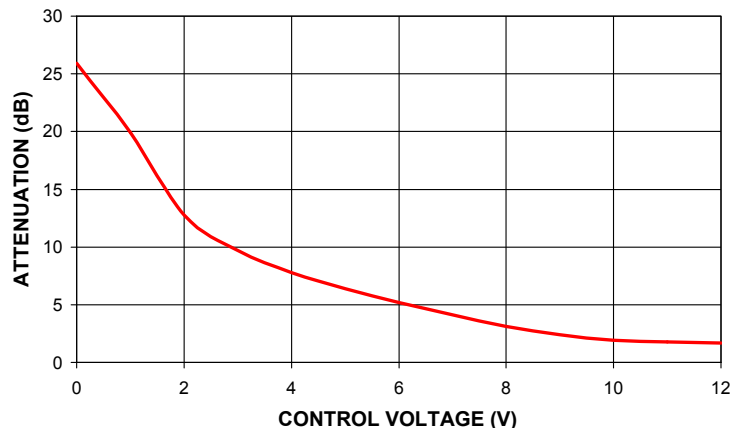
Notes:

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

Equivalent Schematic



SVA-2000+ TYPICAL ATTENUATION AT 1000 MHz

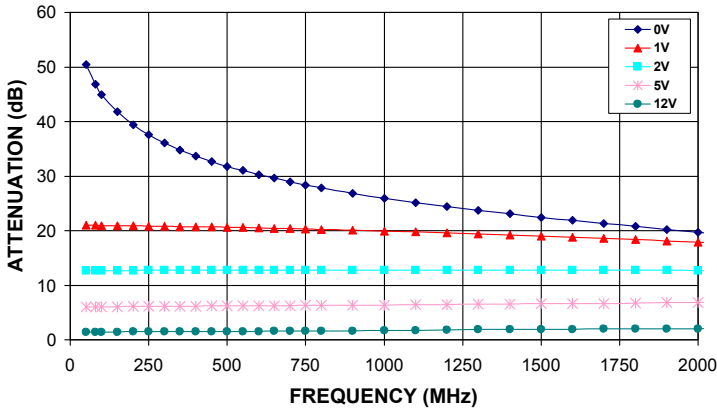


Notes

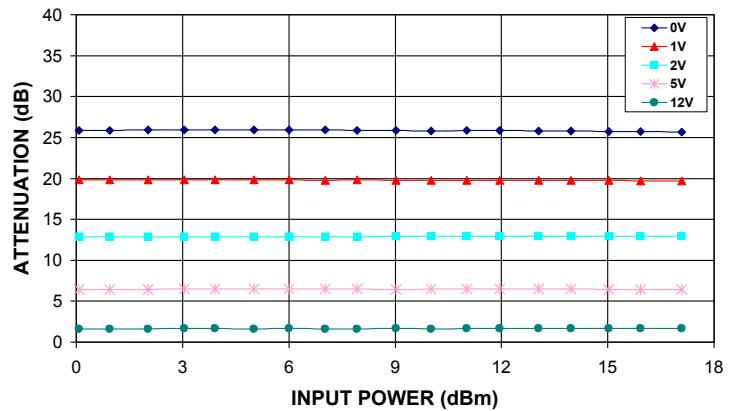
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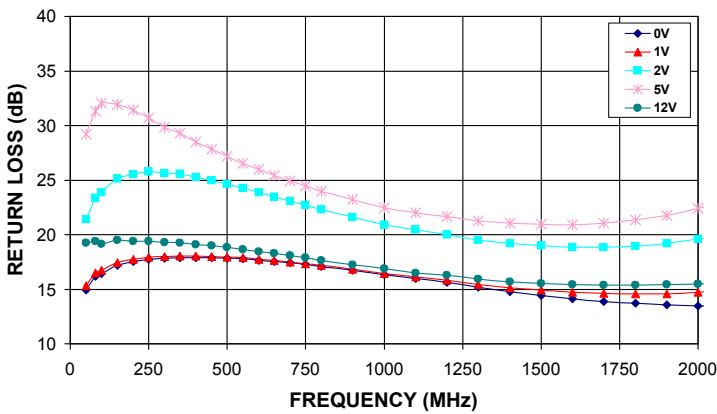
SVA-2000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES



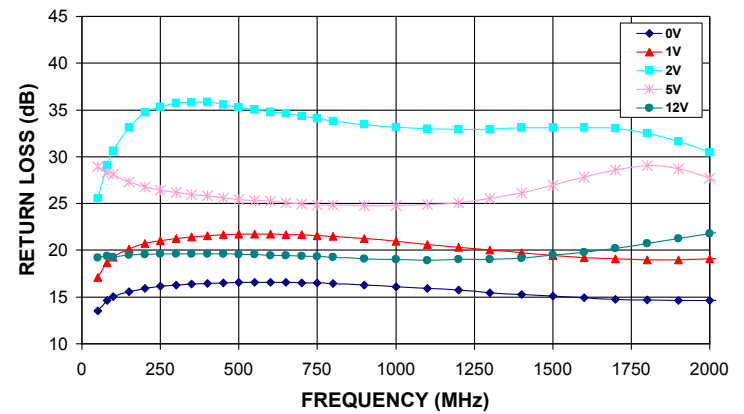
SVA-2000+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000MHz



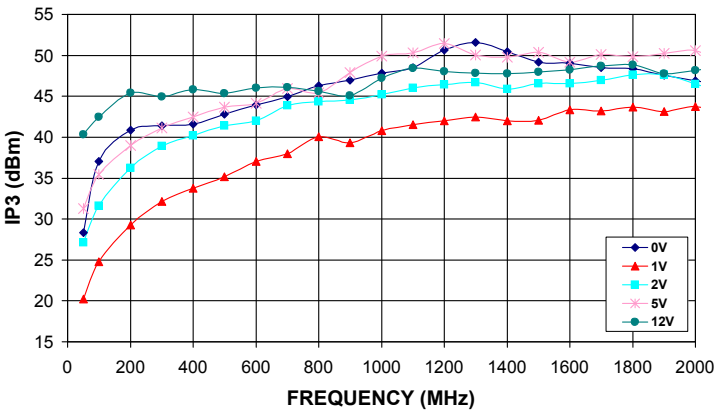
SVA-2000+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



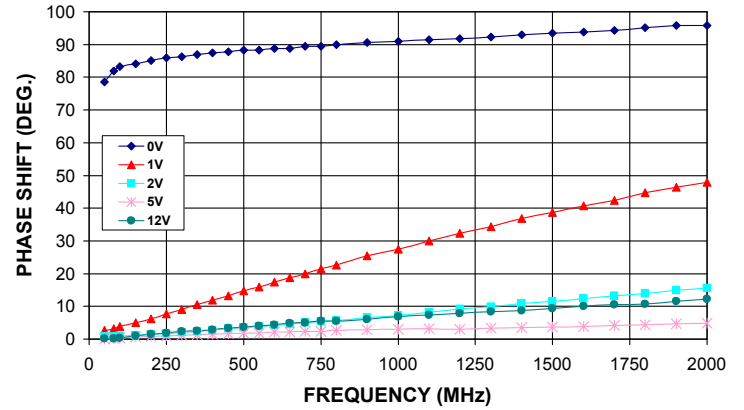
SVA-2000+
OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



SVA-2000+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES



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



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