

Surface Mount Voltage Variable Attenuator

EVA-3000+

50Ω 50 to 3000 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)	9V
Absolute Max. RF Input Level	+22 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

Features

- Frequency range, 50-3000 MHz
- IP3, 45 dBm typ.
- Maximum attenuation at minimum current
- No external bias and RF matching network required
- Small size, shielded case
- Low cost
- Aqueous washable



CASE STYLE: HE1135

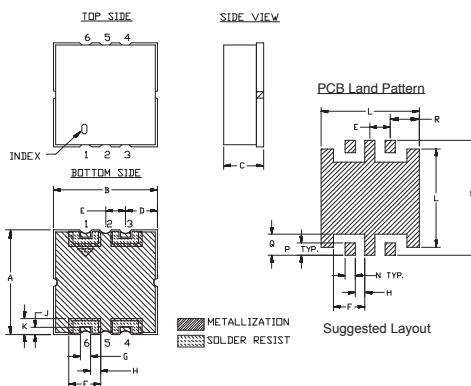
Applications

- Variable gain amplifier
- Feed forward amplifiers
- ALC circuits

+RoHS Compliant

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

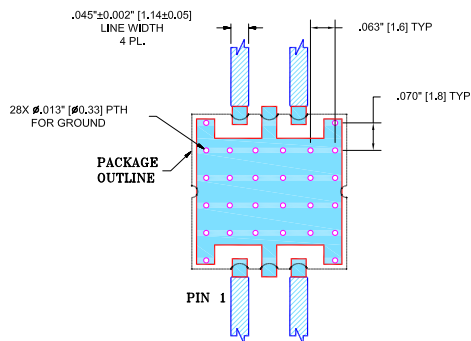
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	
.394	.394	.150	.122	.075	.120	.038	.037	
10.01	10.01	3.81	3.10	1.90	3.05	0.97	0.94	
J	K	L	M	N	P	Q	R	wt.
.026	.061	.370	.434	.038	.046	.081	.110	grams
0.66	1.55	9.40	11.02	0.97	1.17	2.06	2.79	0.7

Demo Board MCL P/N: TB-335 Suggested PCB Layout (PL-187)



NOTE:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS. .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

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

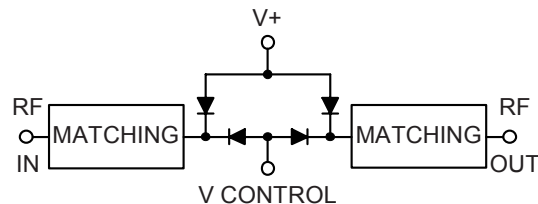
FREQ. (MHz)		MIN. INSERTION LOSS, dB (+8V)		MAX. ATTENUATION dB (0V)		INPUT POWER (dBm)	CONTROL Voltage Current (V) (mA)		IP3 (dBm)	RETURN LOSS (dB)	POWER SUPPLY Voltage Current (V) (mA)	
Min.	Max.	Typ.	Max.	Typ.	Min.	Max.	Max.	Max.	Typ.	Typ.	Max.	Max.
50 - 1000		2.5	4.0	43	27	+22	0 - 8	40	41	21	+5	5
1000 - 2000		3.0	4.5	29	21	+22	0 - 8	40	45	22	+5	5
2000 - 3000		3.5	5.5	24	17	+22	0 - 8	40	44	18	+5	5

Notes:

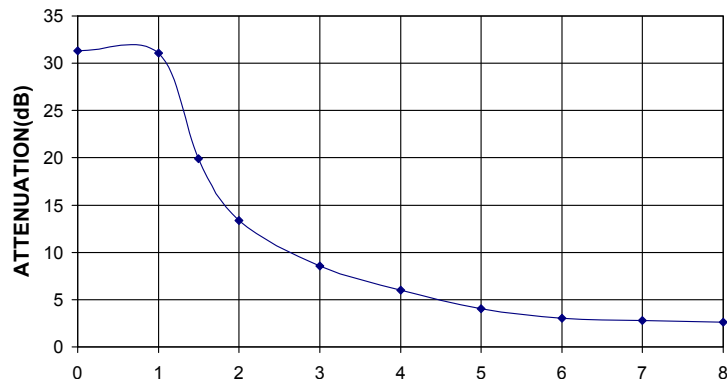
Rise/Fall time: 15μSec/36μSec Typ.

Switching Time, turn on/off: 40μSec. Typ.

Equivalent Schematic



EVA-3000+ TYPICAL ATTENUATION AT 1500MHz



Notes

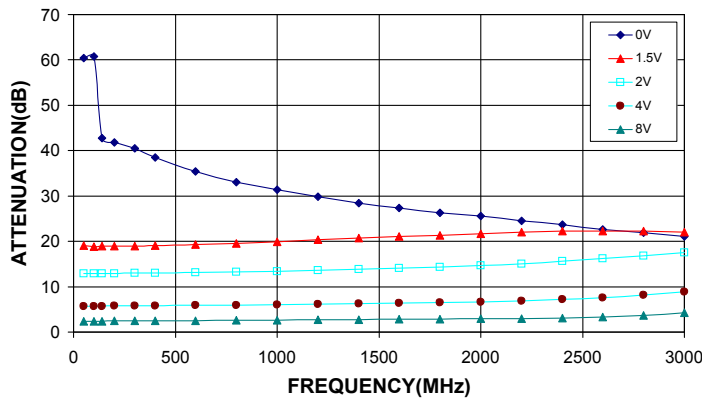
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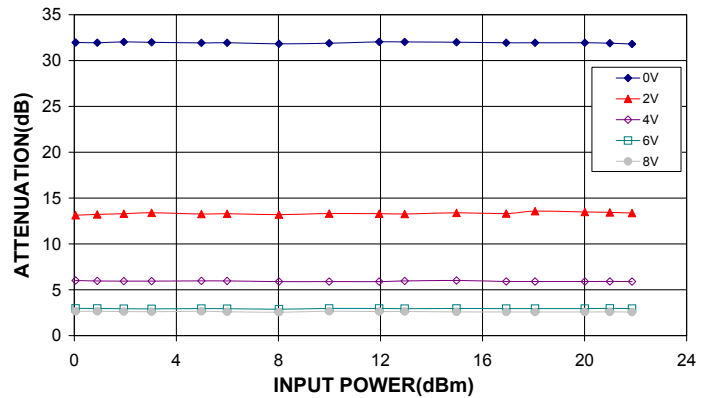
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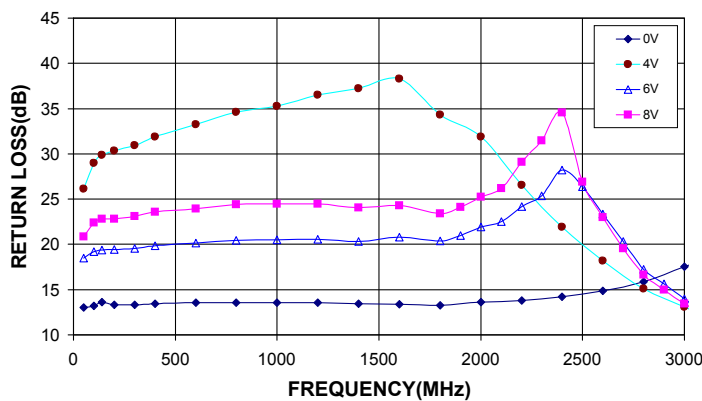
**EVA-3000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES**



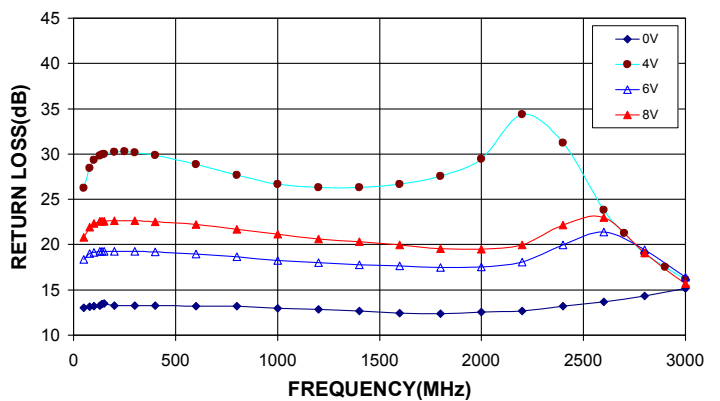
**EVA-3000+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 900MHz**



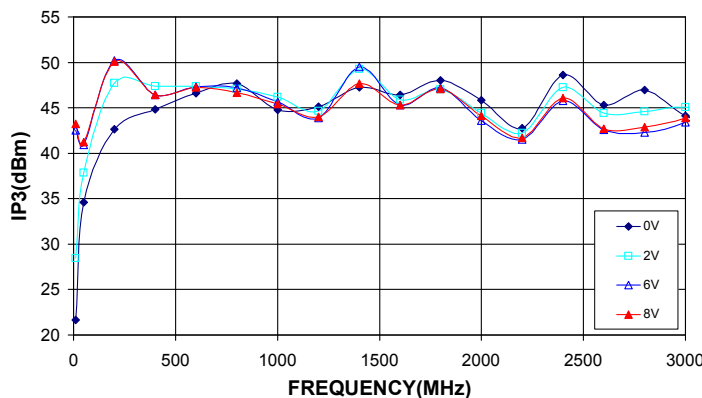
**EVA-3000+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES**



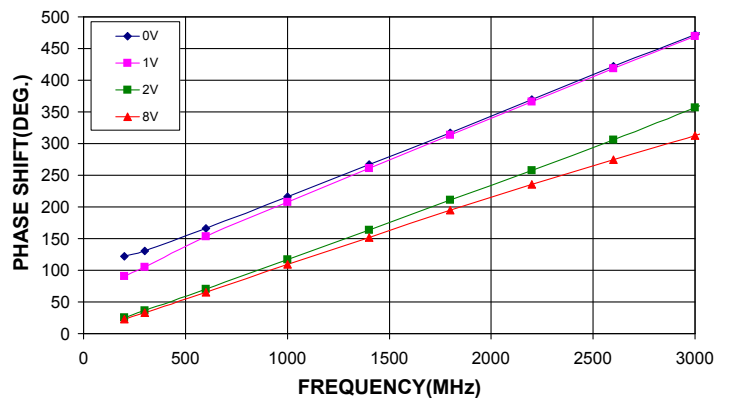
**EVA-3000+
OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES**



**EVA-3000+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES**



**EVA-3000+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES**



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