Surface Mount

Voltage Variable Attenuator

EVA-1500+

50Ω 100 to 1500 MHz

Maximum Ratings

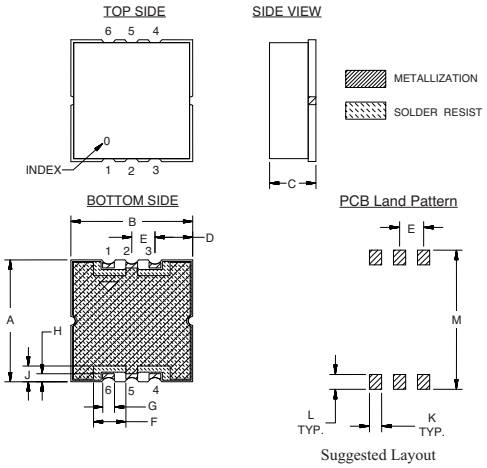
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage(V+)	6V
Absolute Max. Control Voltage(Vctrl)	10V
Absolute Max. RF Input Level	+20dBm

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

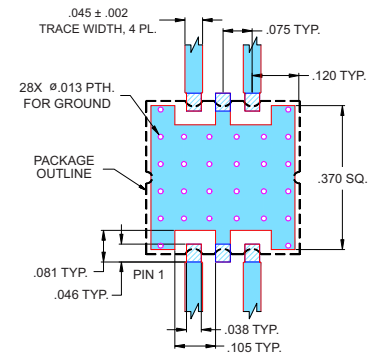
Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	
.394	.394	.150	.122	.075	.098	
10.01	10.01	3.81	3.10	1.90	2.49	
G	**H**	**J**	**K**	**L**	**M**	wt.
.038	.026	.051	.038	.046	.434	grams
0.97	0.66	1.29	0.97	1.17	11.02	0.7

Demo Board MCL P/N: TB-474+
Suggested PCB Layout (PL-285)



NOTES:
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 WITH SMOBC (SOLDER MASK OVER BARE COPPER)

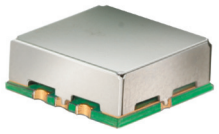
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- Frequency range, 100-1500 MHz
- Low current consumption
- Low insertion loss
- IP2 +85 dBm typ.
- IP3 +49 dBm typ.
- Minimal phase deviation over attenuation range
- No external bias and RF matching network required
- Shielded case
- Aqueous washable

Applications

- Power level control
- Feed forward amplifier
- Test equipment
- VHF



CASE STYLE: HE1354
PRICE: $9.95 ea. QTY (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

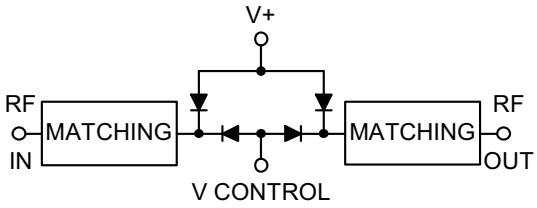
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

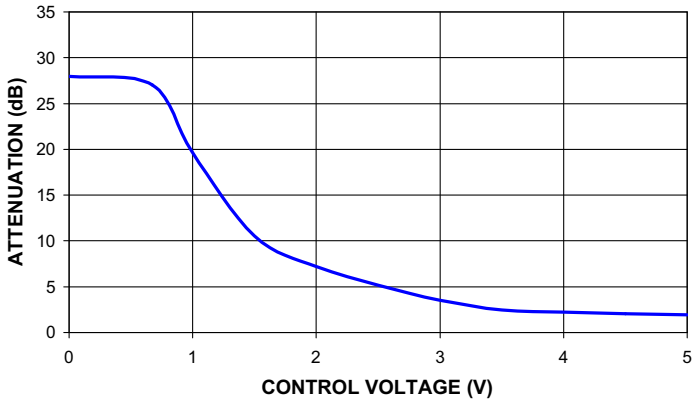
FREQ. (MHz)		MIN. INSERTION LOSS, dB (+5V)		MAX. ATTEN. dB (0V)		INPUT POWER (dBm)	CONTROL Voltage (V)	CONTROL Current (mA)	IP3* (dBm)	IP2* (dBm)	RETURN LOSS (dB)	POWER SUPPLY Voltage (V)	POWER SUPPLY Current (mA)
Min.	Max.	Typ.	Max.	Typ.	Min.	Max.		Max.	Typ.	Typ.	Typ.		Max.
100 - 500		1.5	2.5	35	25	+20	0 - 5	7	47	80	17	+3	0.5
500 - 1000		1.7	3.0	30	20	+20	0 - 5	7	50	85	20	+3	0.5
1000 - 1500		2.0	3.5	25	17	+20	0 - 5	7	50	85	20	+3	0.5

Notes:
Rise/Fall time: 13 μSec / 15 μSec Typ.
Switching Time, turn on/off: 15 μSec / 25 μSec Typ.
* Typical IP2 & IP3 at Vc=5V

Equivalent Schematic

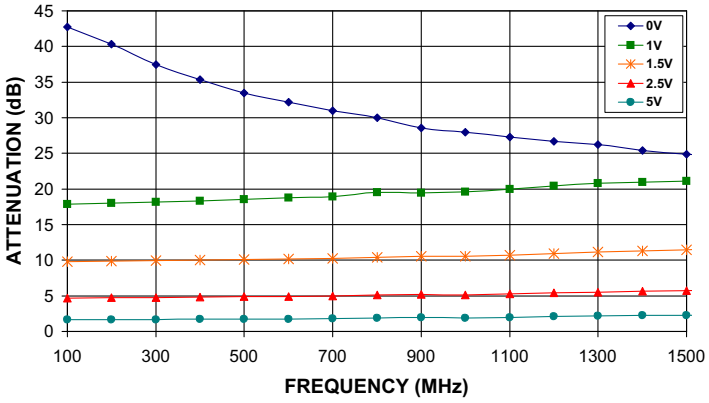


EVA-1500+
TYPICAL ATTENUATION AT 1000 MHz

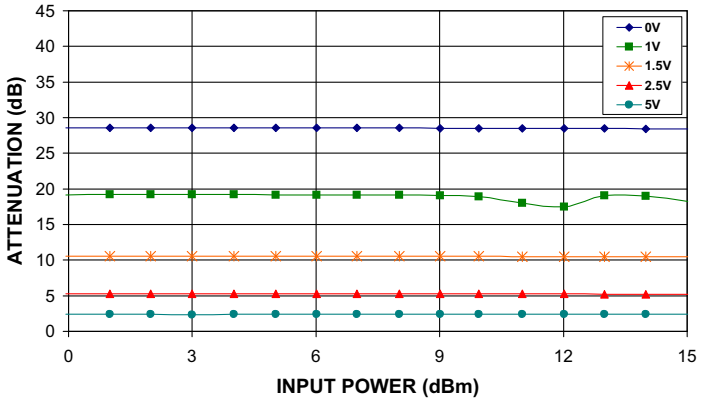


REV. OR
M124434
EVA-1500+
EDR-9027AU
URJ/RAV
090910

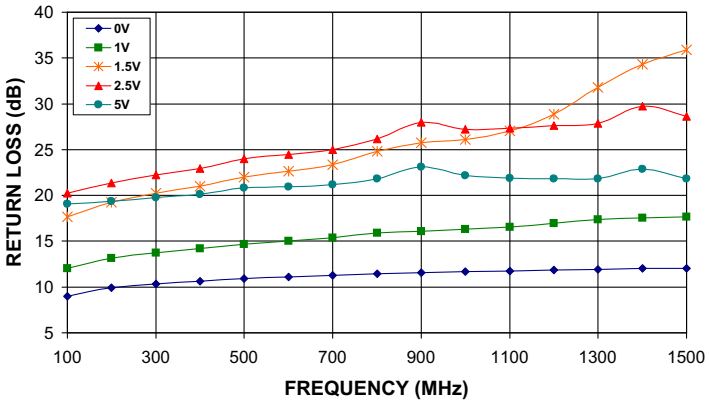
EVA-1500+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES



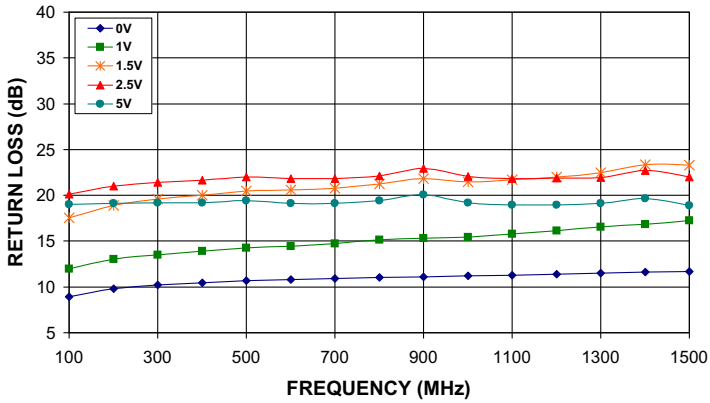
EVA-1500+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000 MHz



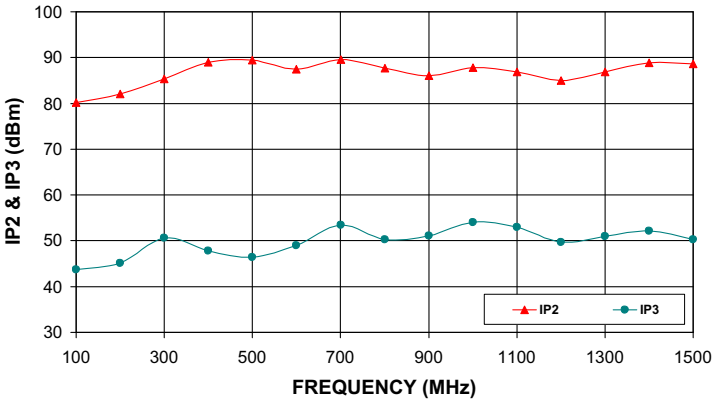
EVA-1500+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



EVA-1500+
OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



EVA-1500+
IP2 & IP3 Vs. FREQUENCY
@ Vc=5V



EVA-1500+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES