

Broad Band Voltage Variable Attenuator

RVA-3000+

50Ω 20 to 3000 MHz

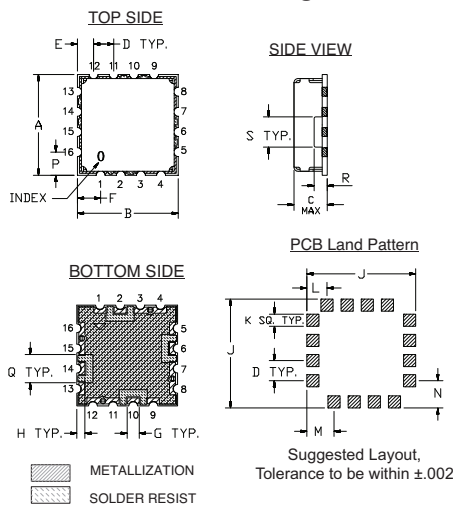
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 85°C
Absolute Max. Supply Voltage(V+)	12V
Absolute Max. Control Voltage(Vctrl)	20V
Absolute Max. RF Input Level	+26 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

RF IN	2
RF OUT	10
V CONTROL	6
V+	14
GROUND	1,3,4,5,7,8,9,11,12,13,15,16

Outline Drawing

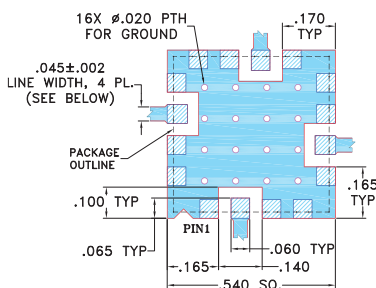


Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.500	.500	.195	.100	.080	.115	.060	.040	.540
12.70	12.70	4.95	2.54	2.03	2.92	1.52	1.02	13.72
K	L	M	N	P	Q	R	S	wt.
.060	.100	.135	.135	.115	.140	.070	.150	grams
1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.0

Demo Board MCL P/N: TB-163

Suggested PCB Layout (PL-040)



- NOTE:
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS 0.025" ± 0.0025"; 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

- Broadband, 20-3000 MHz, could be used up to 4000MHz
- IP3, +55 dBm typ.
- Good VSWR at IN/OUT ports over attenuation range
- Fast Rise/Fall Time, 5μSec/4μSec 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 amplifiers



CASE STYLE: DV874

PRICE: \$ 11.95 ea. QTY (10-49)

+RoHS Compliant

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

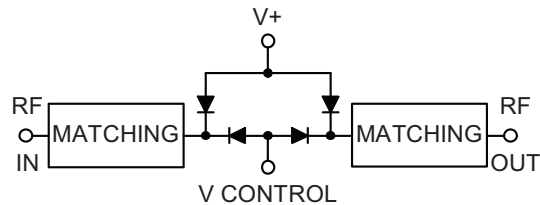
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)	MIN. INSERTION LOSS, dB (+17V)		MAX. ATTENUATION dB (0V)		INPUT POWER (dBm) Max.	CONTROL Voltage Current (V) (mA)		IP3 (dBm) Typ.	RETURN LOSS (dB) Typ.	POWER SUPPLY Voltage Current (V) (mA)			
	Min.	Max.	Typ.	Min.		Max.	Max.			Min.	Max.		
20 - 500			2.8	3.5	56	39	+26	0 - 17	30	48	23	+5	10
500 - 1500			3.0	4.0	40	28	+26	0 - 17	30	56	26	+5	10
1500 - 3000			3.6	5.0	29	22	+26	0 - 17	30	57	21	+5	10

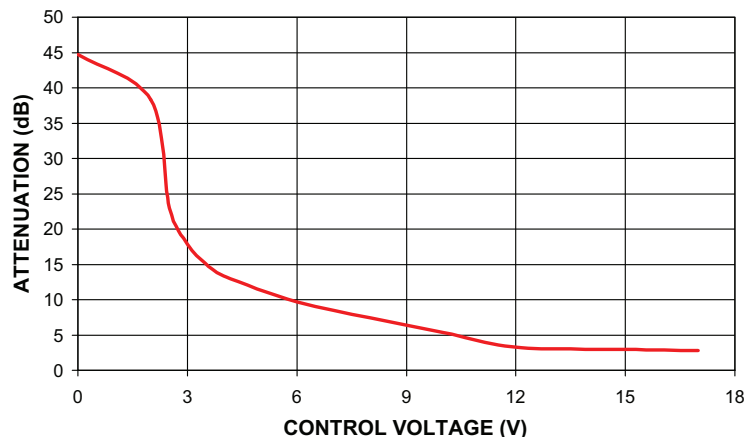
Notes:

- Rise/Fall time: 5μSec/4μSec Typ.
Switching Time, turn on/off: 6μSec. Typ.

Equivalent Schematic



RVA-3000+ TYPICAL ATTENUATION AT 500 MHz



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The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com
IF/RF MICROWAVE COMPONENTS

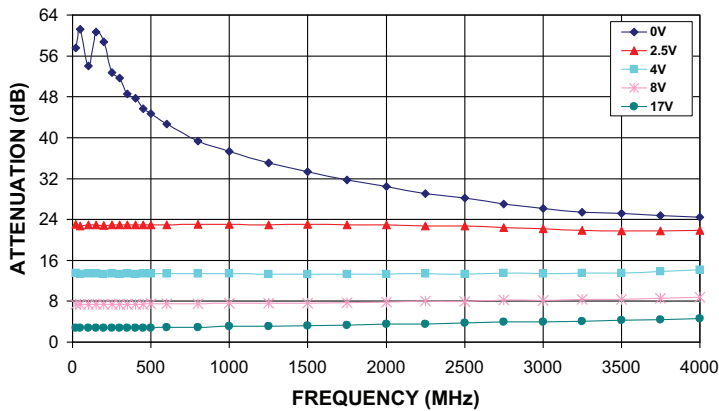
For detailed performance specs
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

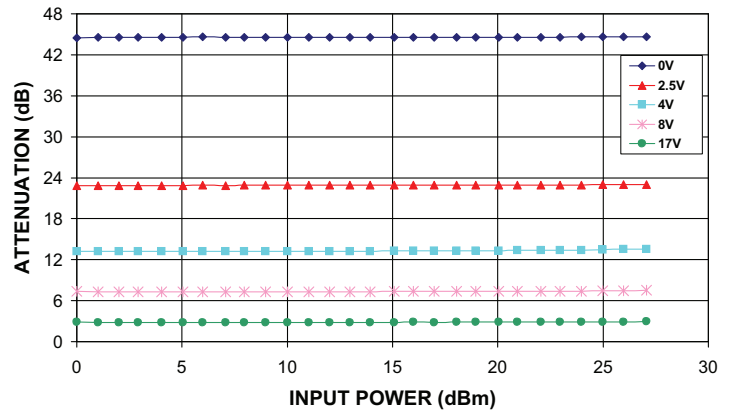
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established 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
M106828
EDR-7131/1F1
RVA-3000+
RAV
121024
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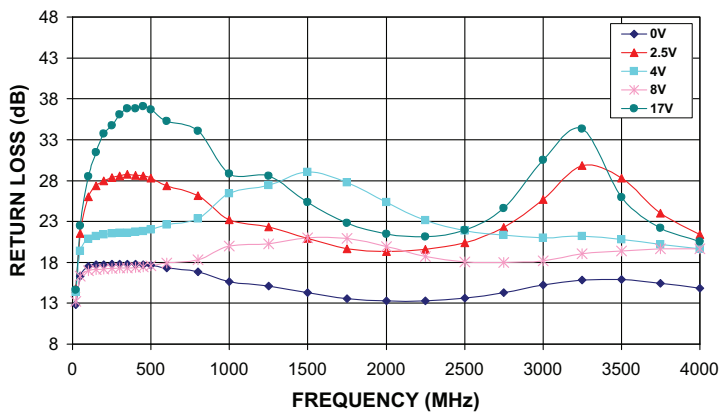
RVA-3000+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES



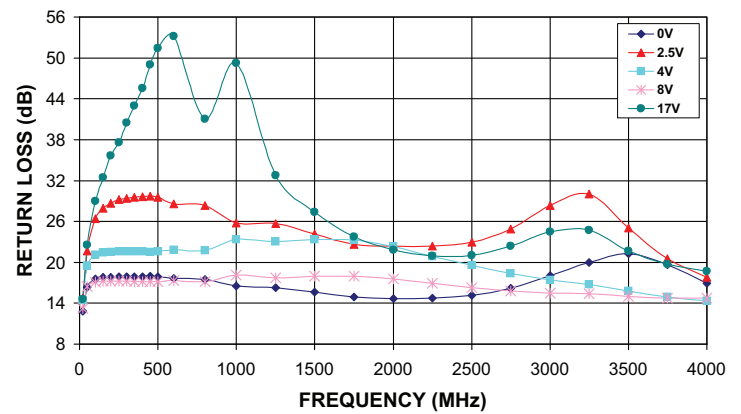
RVA-3000+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 500MHz



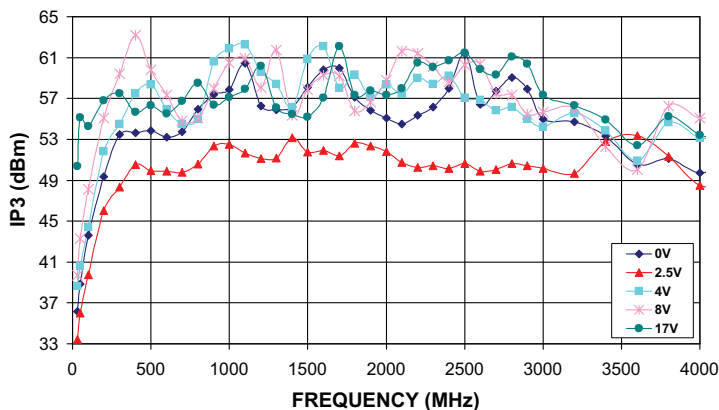
RVA-3000+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES



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



RVA-3000+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES



RVA-3000+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES

