

Broad Band Voltage Variable Attenuator

RVA-2000V3+

50Ω 50 to 2000 MHz

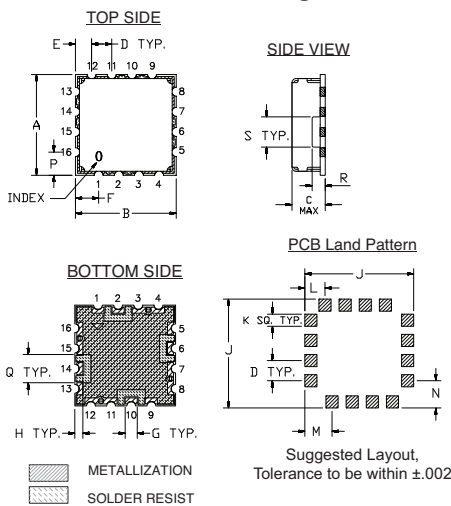
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 85°C
Absolute Max. Supply Voltage(V+)	6V
Absolute Max. Control Voltage(Vctrl)	12V
Absolute Max. RF Input Level	+18dBm
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

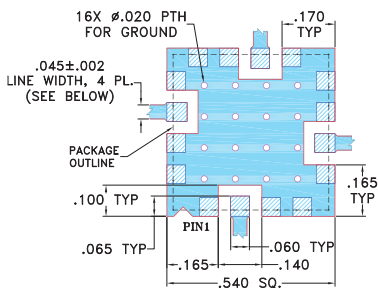
Outline Drawing



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, 50-2000 MHz
- IP3, +50 dBm typ.
- Good VSWR at IN/OUT ports over attenuation range
- No external bias and RF matching network required
- Shielded case
- Aqueous washable



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

Applications

- Power level control
- Feed forward amplifiers

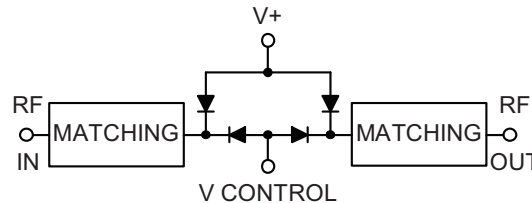
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)	MIN. INSERTION LOSS, dB (+10V)		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.	Min.		Max.	Typ.			Max.	Typ.
50 - 1000	4.0	5.0	55	35	+18	0 - 10	20	48	25	+3	5
1000 - 2000	4.5	6.0	40	30	+18	0 - 10	20	50	20	+3	5

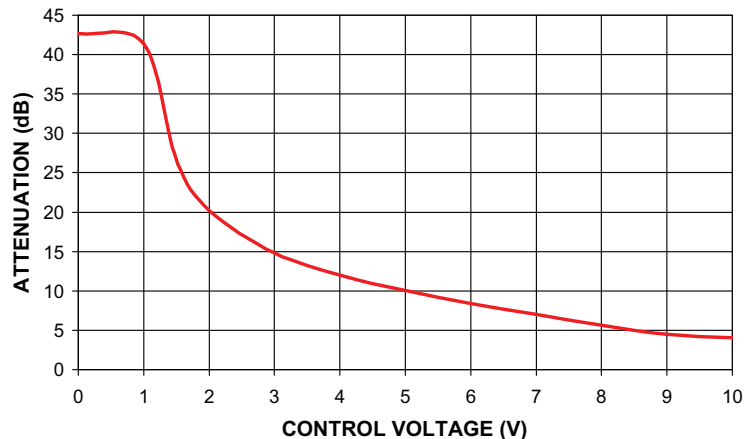
Notes:

Rise/Fall time: 20µSec/20µSec Typ.
Switching Time, turn on/off: 25µSec. Typ.

Equivalent Schematic



RVA-2000V3+ TYPICAL ATTENUATION AT 900 MHz



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

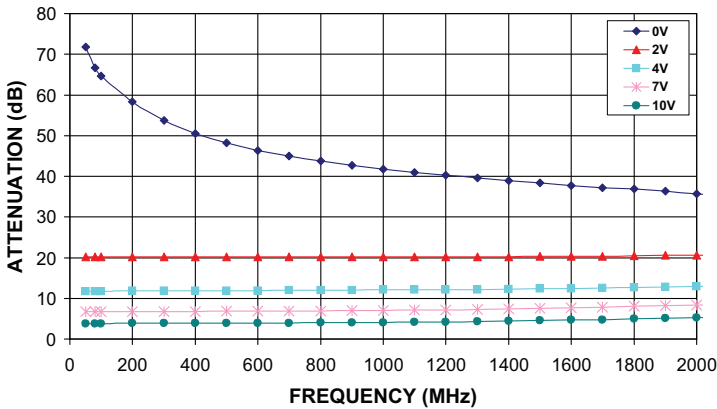
For detailed performance specs & shopping online see web site

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

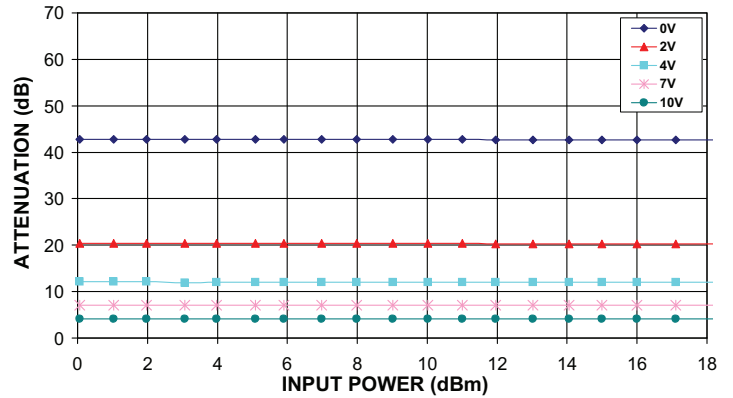
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established 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
M114801
EDR-7165/4UF+
RVA-2000V3+
URJ/RAV
121023
Page 1 of 2

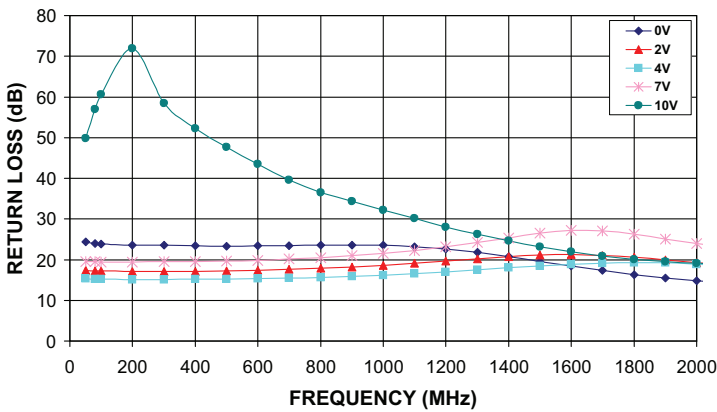
**RVA-2000V3+
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES**



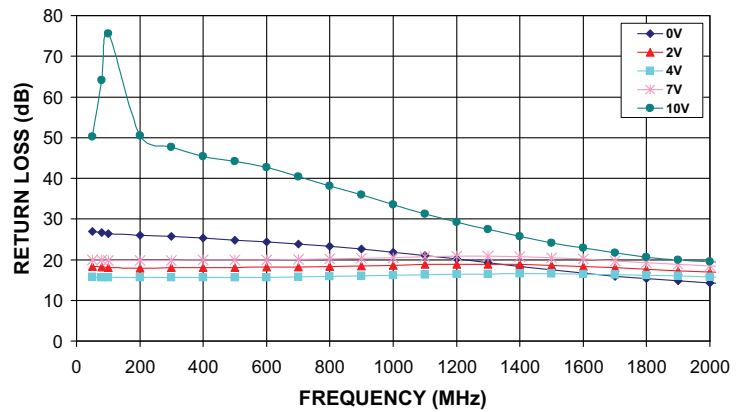
**RVA-2000V3+
ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 900 MHz**



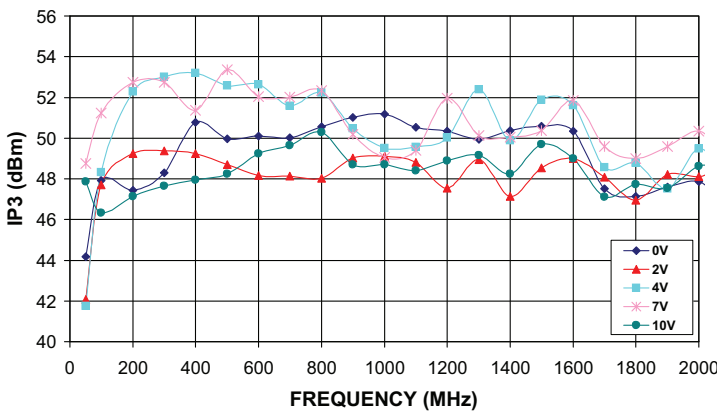
**RVA-2000V3+
INPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES**



**RVA-2000V3+
OUTPUT RETURN LOSS Vs. FREQUENCY
OVER CONTROL VOLTAGES**



**RVA-2000V3+
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES**



**RVA-2000V3+
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES**

