

Broad Band Voltage Variable Attenuator

RVA-2500+ RVA-2500

50Ω 10 to 2500 MHz

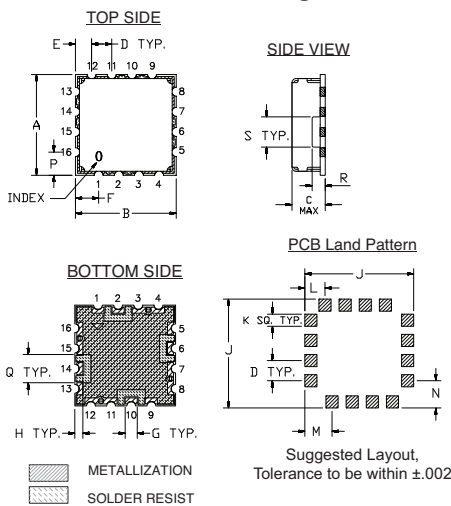
Maximum Ratings

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	+20 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

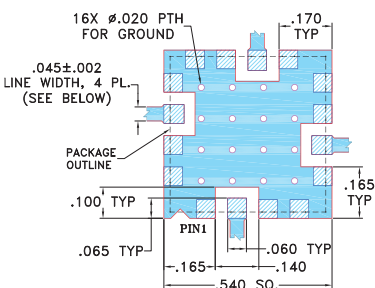
Outline Drawing



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, 10-2500 MHz
- IP3, +43 dBm typ.
- 40 dB attenuation @ 1500 MHz
- Good VSWR at IN/OUT ports over attenuation range
- Minimal phase deviation over attenuation range
- No external bias and RF matching network required
- Shielded case



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

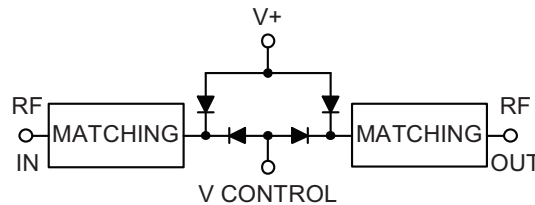
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)	MIN. INSERTION LOSS, dB (+15V)		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.	Max.			Typ.	Max.
10 - 500	3.0	4.6	55	41	+20	0 - 17	30	43	20	+3 to +5	5
500 - 1500	3.3	5.0	40	30	+20	0 - 17	30	43	20	+3 to +5	5
1500 - 2500	4.0	6.2	37	25	+20	0 - 17	30	44	20	+3 to +5	5

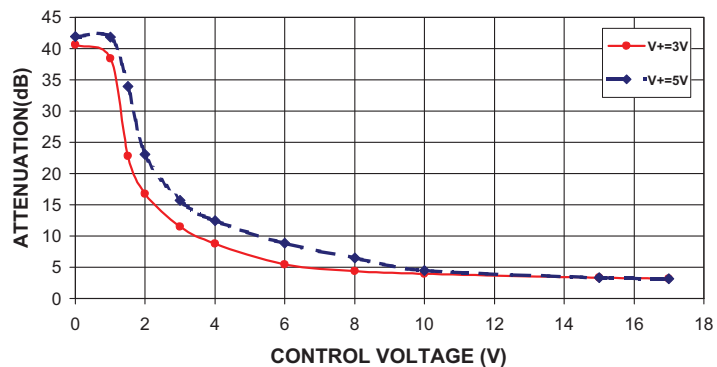
Notes:

- Rise/Fall time: 14µSec / 25µSec Typ.
- Switching Time, turn on/off: 14µSec / 25µSec Typ.
- Improved R.Loss in/out performance can be achieved at certain frequencies by choosing a V+ between +3V to +5V

Equivalent Schematic



RVA-2500 TYPICAL ATTENUATION AT 1000MHz



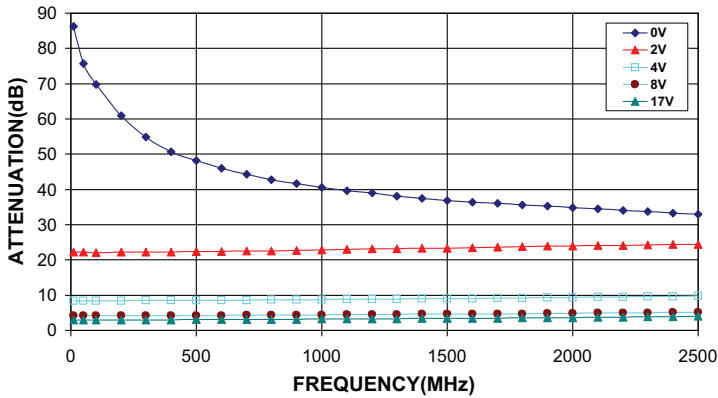
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For detailed performance specs & shopping online see web site

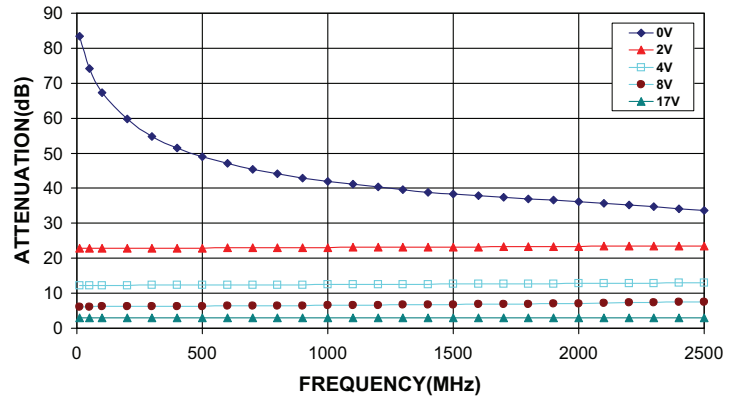
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 EDR-5407/2
 RVA-2500
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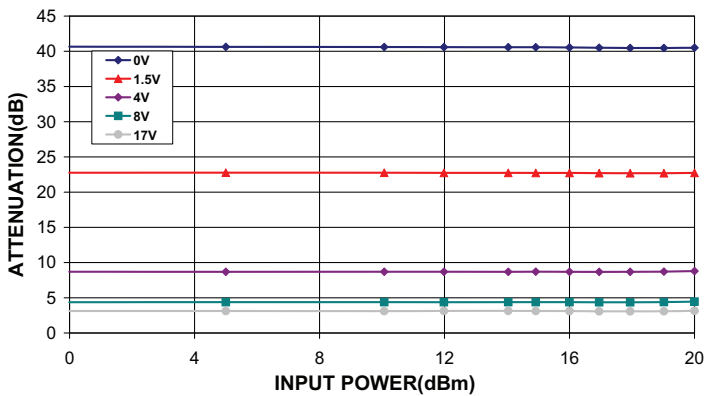
RVA-2500
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V



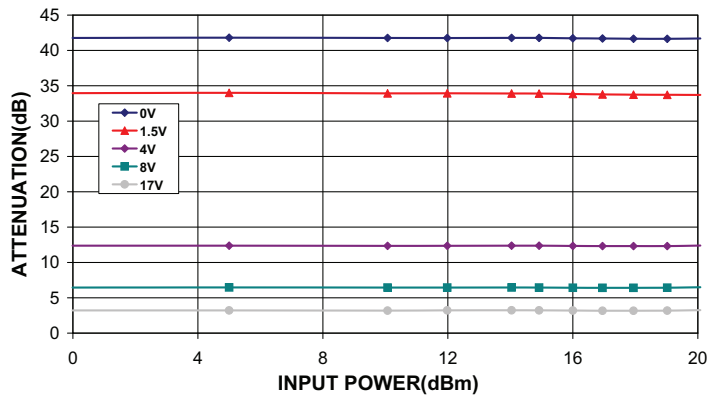
RVA-2500
ATTENUATION Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V



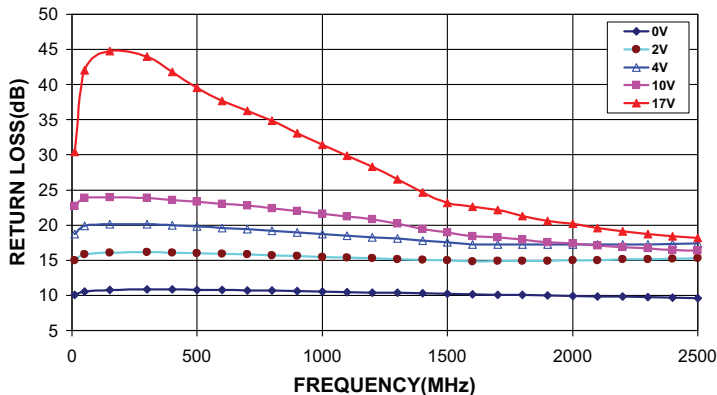
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ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000MHz @ V+=3V



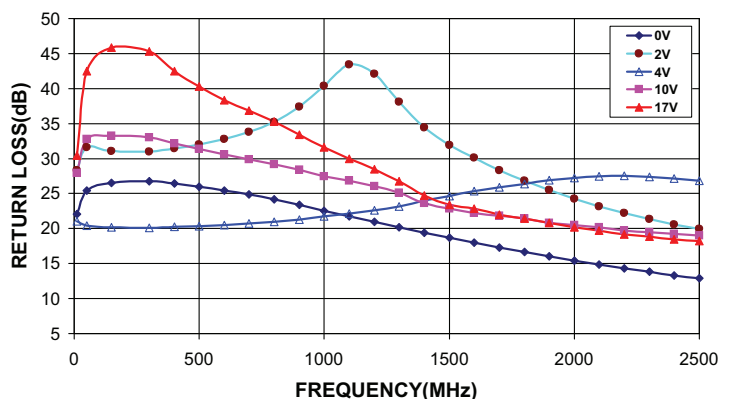
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ATTENUATION Vs. INPUT POWER
OVER CONTROL VOLTAGES AT 1000MHz @ V+=5V



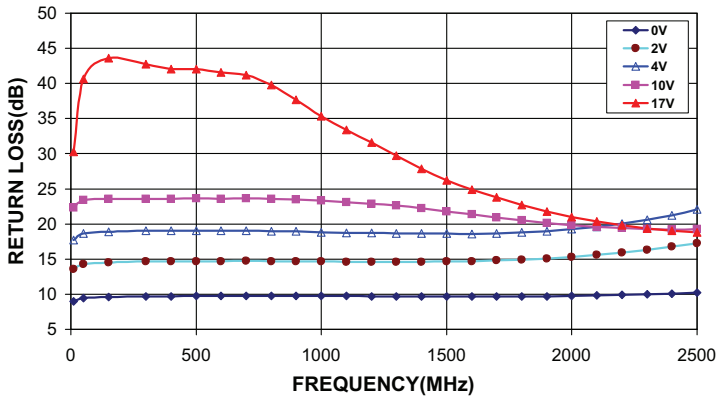
RVA-2500
INPUT RETURN LOSS Vs. FREQUENCY
Vs. CONTROL VOLTAGE @ V+=3V



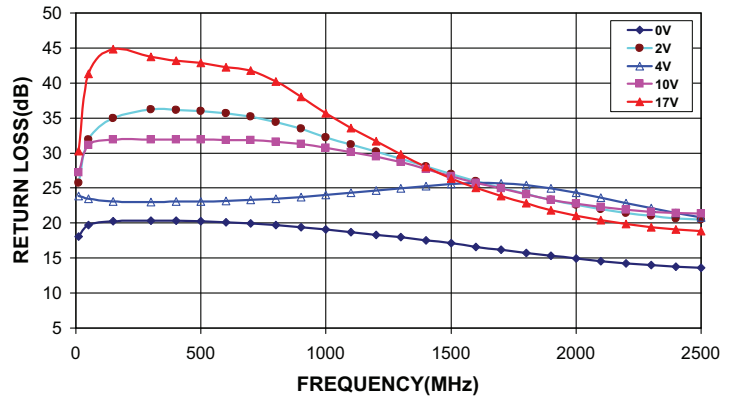
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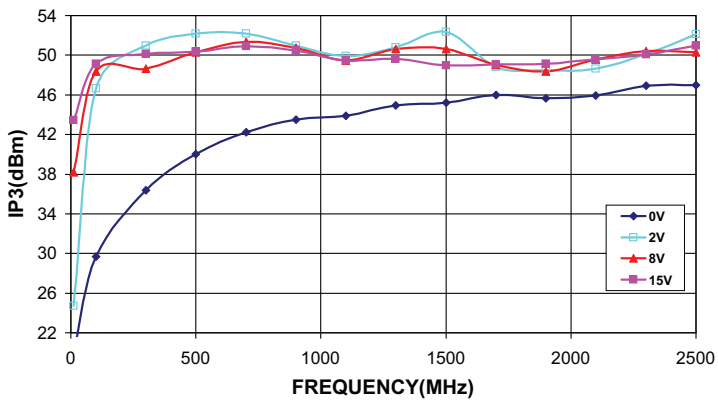
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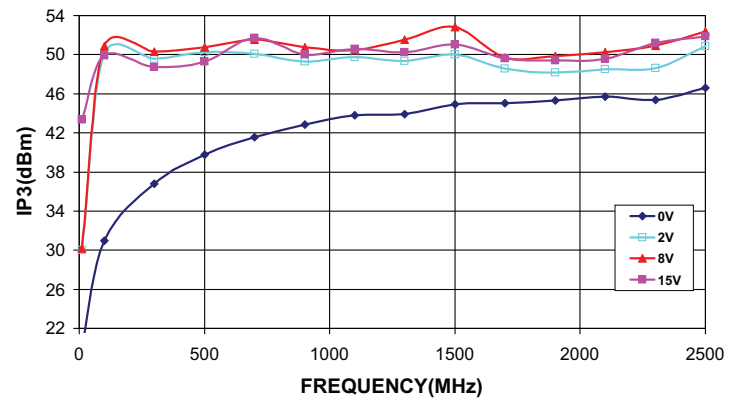
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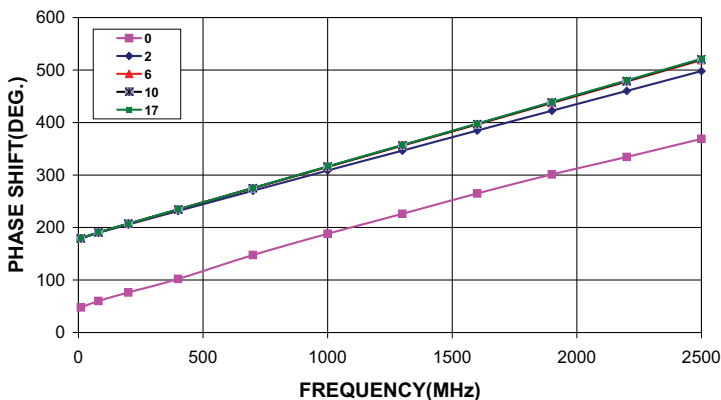
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IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V



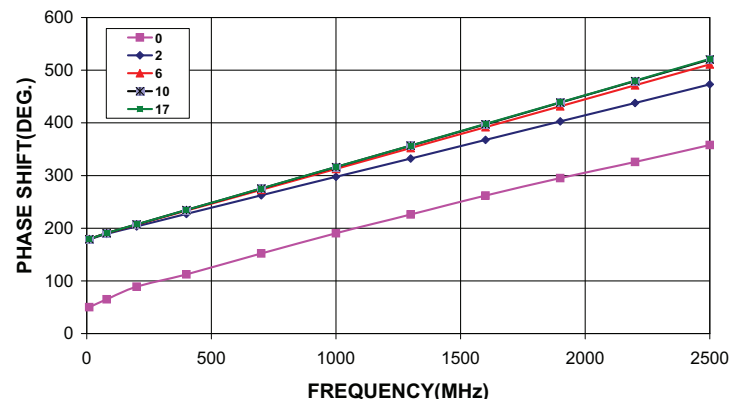
RVA-2500
IP3 Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V



RVA-2500
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=3V



RVA-2500
PHASE SHIFT Vs. FREQUENCY
OVER CONTROL VOLTAGES @ V+=5V



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