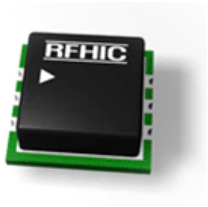
Variable Attenuator VA101

Product Features

- SMD Type
- Single Voltage
- Low Cost
- Variable Analog Attenuator
- High Linearity

Applications

- Repeater
- Base Station
- RF Sub-Systems



Package Type: HY-46A

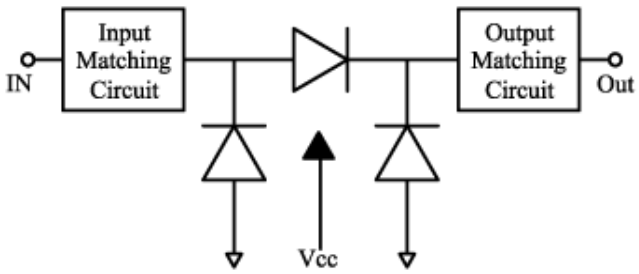
Description

This Variable Attenuator has high gain throughout the broadband.

Electrical Specifications @ Operating Temperature : -40°C ~ 100°C

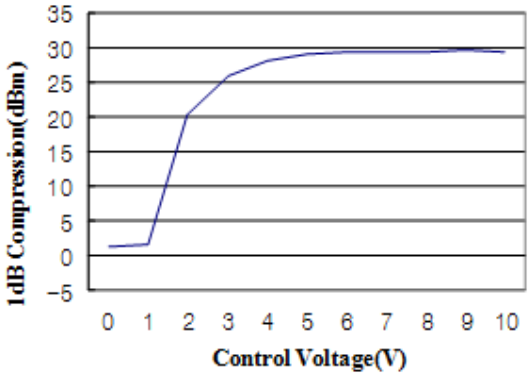
PARAMETER	UNIT	MIN	TYP	MAX	CONDITION
Insertion Loss (Min Attn) (Vctl=10 V)	dB	-	2.3	-	50 ~ 1000 MHz
		-	2.5	-	1000 ~ 2000MHz
		-	3.0	-	2000 ~ 3000MHz
Attenuation Range (Vctl= 0 to +10V)	dB	30	-	35	50 ~ 1000 MHz
		25	-	30	1000 ~ 2000MHz
		22	-	25	2000 ~ 3000MHz
Flatness (Peak to Peak)	dB	-	±0.5	-	50 ~ 1000 MHz
		-	±0.5	-	1000 ~ 2000MHz
		-	±0.5	-	2000 ~ 3000MHz
Input Return Loss	dB	-	25	-	50 ~ 1000 MHz
		-	20	-	1000 ~ 2000MHz
		-	15	-	2000 ~ 3000MHz
Output Return Loss	dB	-	25	-	50 ~ 1000 MHz
		-	20	-	1000 ~ 2000MHz
		-	15	-	2000 ~ 3000MHz
Input Power for 1dB Compression	dBm	-	30	32	-

Functional Diagram

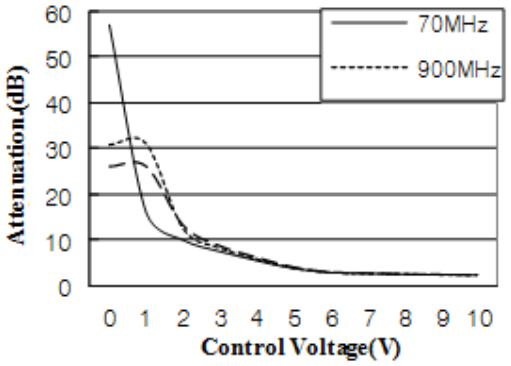


Typical Performance

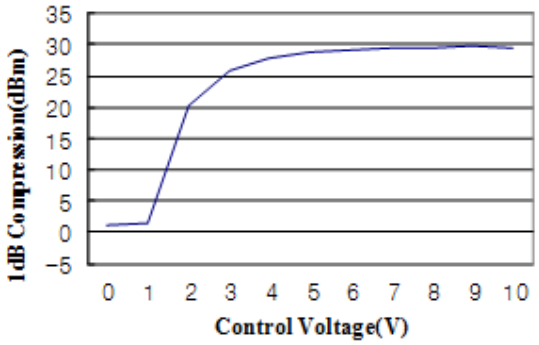
Control Voltage vs. 1dB compression



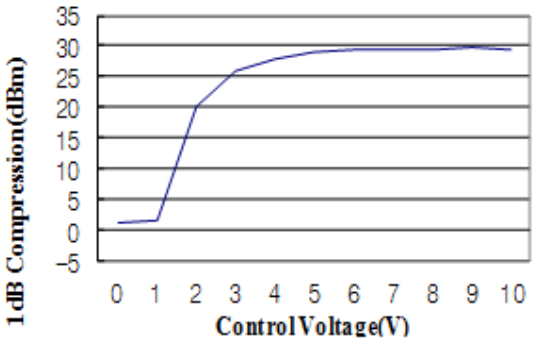
Control Voltage vs. Attenuation



Control Voltage vs. 1dB compression @900MHz

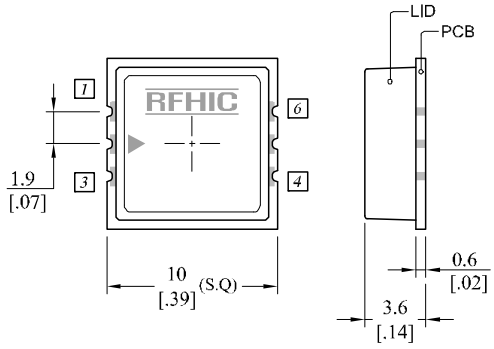


Control Voltage vs. 1dB compression @900MHz



Package Dimensions (Type: HY-46A)

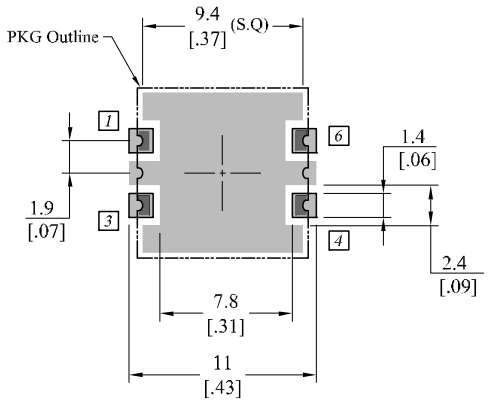
* Unit: mm[inch] | Tolerance: ±0.15[.006]



▲ Top View ▲ Side View

Pin Description			
Pin No	**Function**	**Pin No**	**Function**
1	Input 1	4	Vcc+5V
2	GND	5	GND
3	Control	6	Output 1

Recommended Pattern



*** Mounting Configuration Notes**

1. Ground / thermal via holes are critical for the proper performance of this device.
2. Add as much copper as possible to inner and outer layers near the part to ensure optimal thermal performance.
3. Mounting screws can be added near the part to fasten the board to a heatsink. Ensure that the ground / thermal via hole region contacts the heatsink.
4. Do not put solder mask on the backside of the PCB in the region where the board contacts the heatsink.
5. RF trace width depends upon the PCB material and construction.
6. Use 1 oz. Copper minimum.

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
VA101	2012.9.10	5.3	Change by a new document form	-
VA101	2005.2.18	5.2	Recommended Pattern was added	-

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