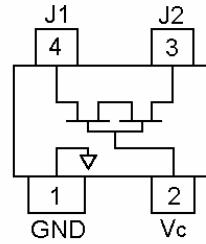


➤ **Features ver3.06**

- 13dB Variable Attenuation Volume
- Low Direct Current Power Loss: 50 μ W
- High Switch Speed
- 0~-4V Single Power Control
- SOT-143 Package
- Meet RoHS Standard



➤ **Description**

S105 is a GaAs MMIC variable attenuator in the package of SOT-143. It operates in the voltage of 0-4V, controlled by single power, easy to use. The attenuator is dapt to many telecommunication applications including mobile phone, GSM/CDMA base station, GPS system etc

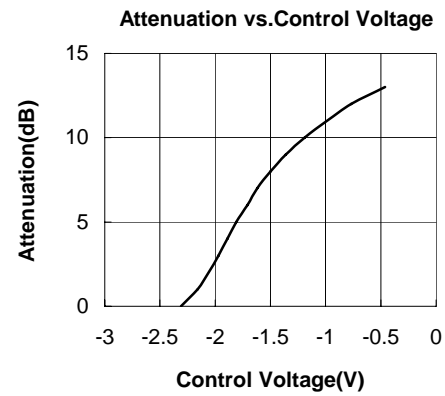
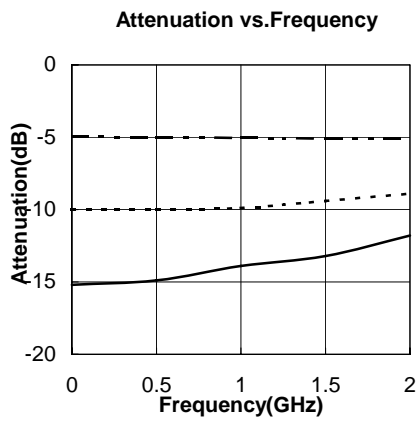
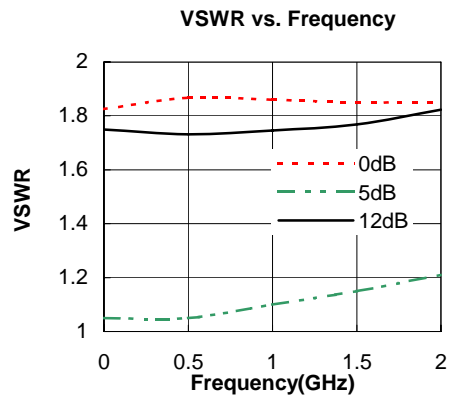
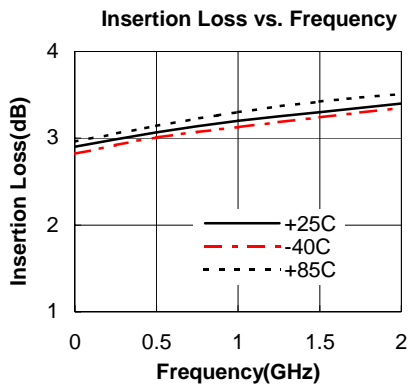
DC blocking Capacitors (C_{BL}) must be supplied for positive operation.
 $C_{BL}=47p F$ for operation >500MHz.

➤ **Typical Electrical Specification at 25°C**

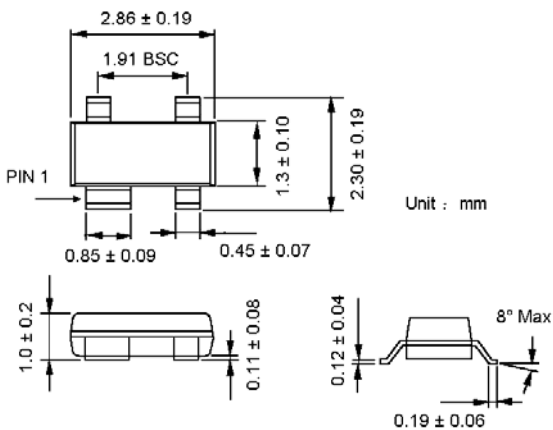
Characteristic		Frequency	Min.	Typ.	Max.	Unit
Insertion Loss		DC-0.1GHz		2.9	3.1	dB
		DC-0.5GHz		3.0	3.2	dB
		DC-1.0GHz		3.2	3.5	dB
		DC-2.0GHz		3.4	3.8	dB
Flatness	5dB Attenuation Volume	DC-2.0GHz		±0.2	±0.4	dB
	10dB Attenuation Volume			±2.3	±2.5	dB
	15dB Attenuation Volume			±6.8	±7.3	dB
VSWR				2.1:1		
Switch Characteristic	Rise or Fall(10/90% or 90/10 RF) On or Off(10/90% or 90/10 RF)			10		ns
				10		ns
IP ₂	Two-tone, input power +5dBm	0.05GHz		34		dBm
		0.5-2.0GHz		47		dBm
IP ₃	Two-tone, input power +5dBm	0.05GHz	18	31 ²		dBm
		0.5-2.0GHz	18.5	36 ²		dBm
Power Characteristic	Linearity Status				13	dBm
	Maximum Input Power				21	dBm
Control Voltage	V=0~ -4V @20μA Max					

1. All measurements in a 50-Ω system, unless otherwise specified
2. Standard when the attenuation volum > 6dB

➤ Typical Performance Curves



➤ SOT-143 Outlin Dimension



➤ Absolute Maximum Ratings

Item	Value
RF Input Power	21dBm
Control Voltage VC	+5V ~ -8.5V
Operation Temperature	-40°C ~ +85°C
Storage Temperature	-65°C ~ +150°C

1. Operation of this device above any one of these parameters may cause permanent damage