

## Voltage Controlled Attenuator 2-18 GHz/50dB Attenuation Range

Model: TLVA2G18G-50-10

The TLVA2G18G-50-10 is an broadband voltage controlled electrical attenuator operating from 2 to 18 GHz. The attenuator exhibits 2 dB typical insertion loss and 0 to 50 dB nominal attenuation range across the frequency range of 2 to 18 GHz while applying 0 to +13 V DC control voltage. The RF input and output ports are female SMA coax connectors.

### Features:

- Ultra Wide Band: 2-18GHz
- Attenuation Range: 50 dB Typ
- Insertion Loss: 2 dB Typ
- High Attenuator Accuracy

### Applications:

- Radar Systems
- Communication Systems
- Testing Equipment

### 电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	2-18			GHz
插损 Insertion Loss		2	3	dB
衰减范围 Attenuation Range	50			dB
输入三阶交调 Input IP3		43		dBm
输入驻波 Input VSWR		1.6	2	:1
输出驻波 Output VSWR		1.6	2	:1
切换时间 Switch Speed			2.5	us
最大输入功率 Input Max Power		30		dBm
控制电压 Control Voltage	0	10	13	V DC
直流电流 DC Supply Current		30		mA
阻抗 Impedance	50			Ohms

### 机械特性 Mechanical Specifications:

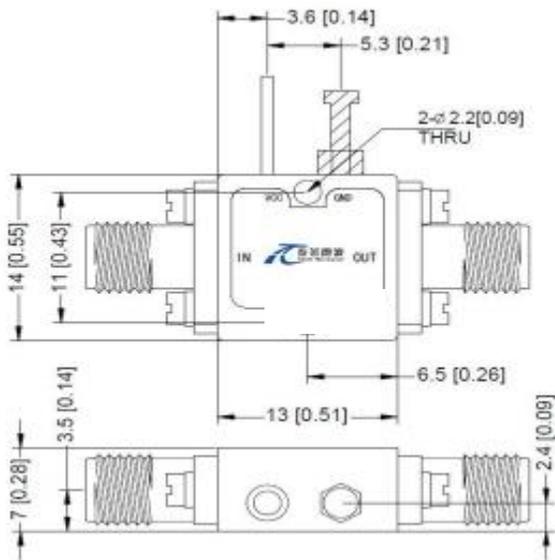
描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	

## 绝对最大值 Absolute Maximum Ratings :

描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	TBD	
射频输入功率 RF Input Power	30 dBm	
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

## 外形图 Outline Drawing:

Unit:mm



OBSERVE PRECAUTIONS  
 ELECTROSTATIC SENSITIVE  
 DEVICES

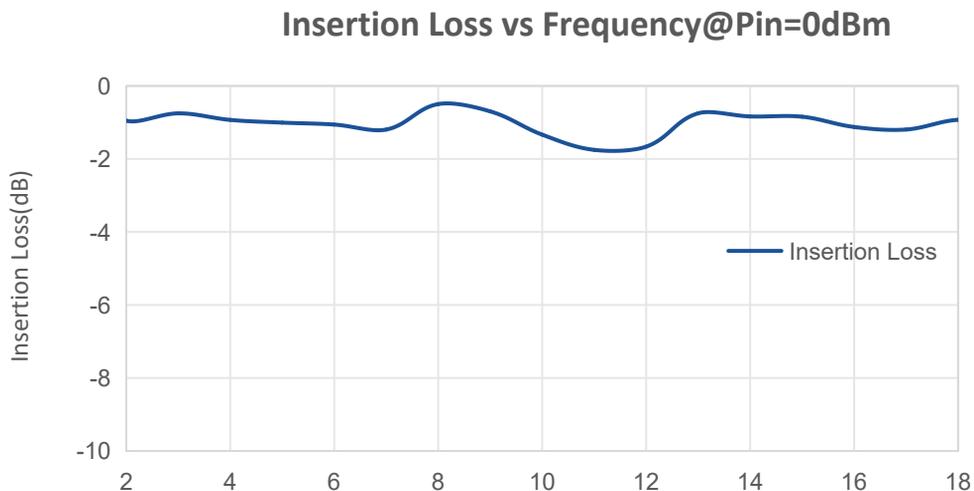
### 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	50,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

### 订货信息 Ordering Information:

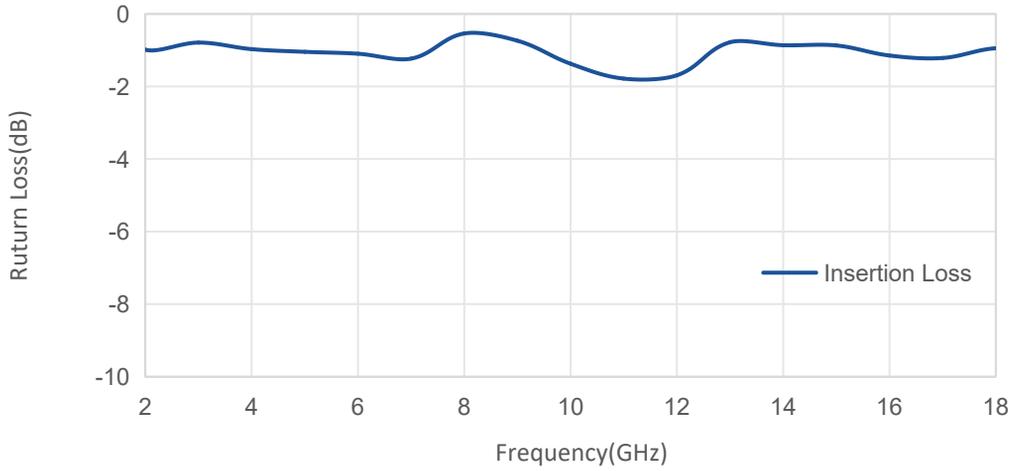
标准型号 Base Number	描述 Description	版本号 Revision
TLVA2G18G-50-10	Voltage Controlled Attenuator 2-18 GHz, 50 dB Range,SMA Female	Rev.1.1

### 典型曲线 Typical Performance Data:

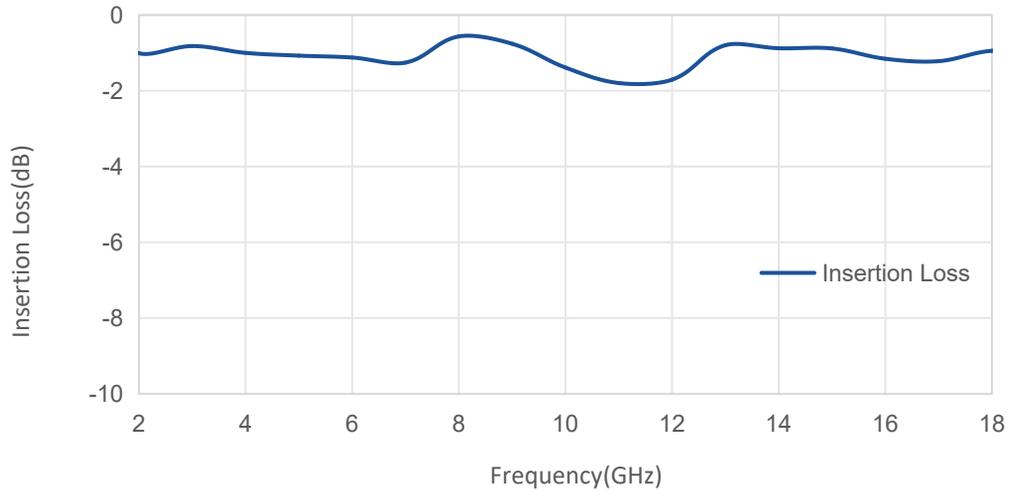


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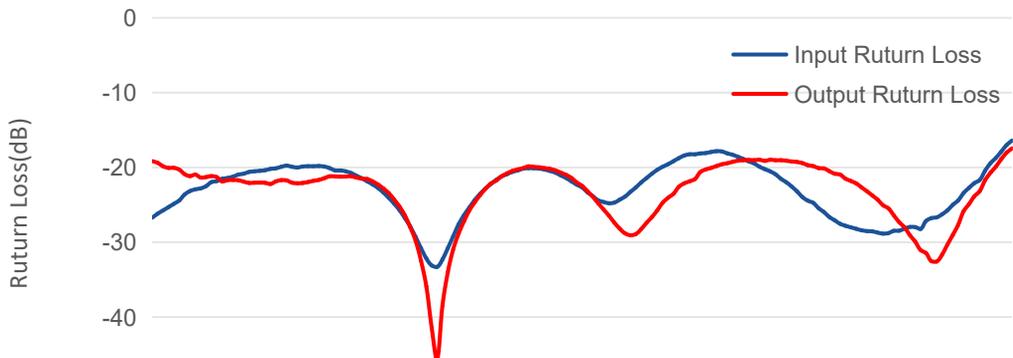
### Insertion Loss vs Frequency@Pin=5dBm



### Insertion Loss vs Frequency@Pin=10dBm

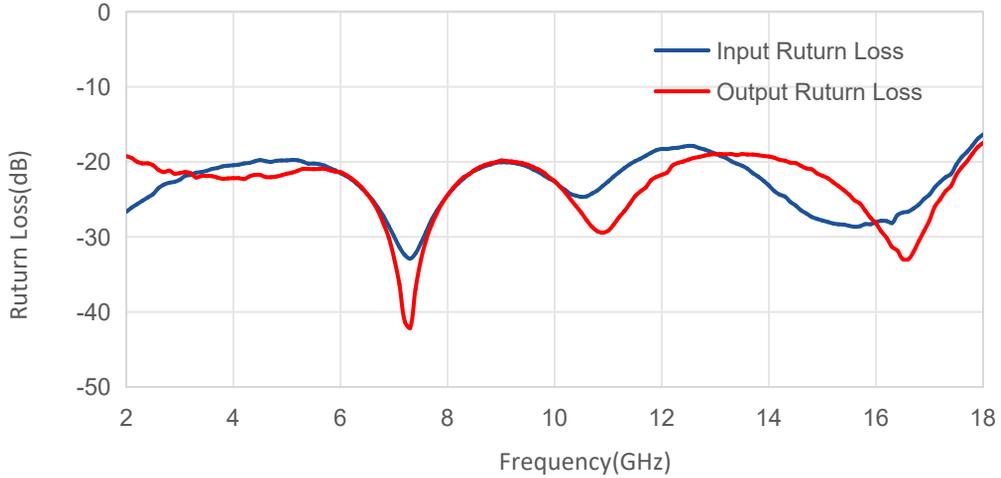


### Return Loss vs Frequency@Pin=0dBm

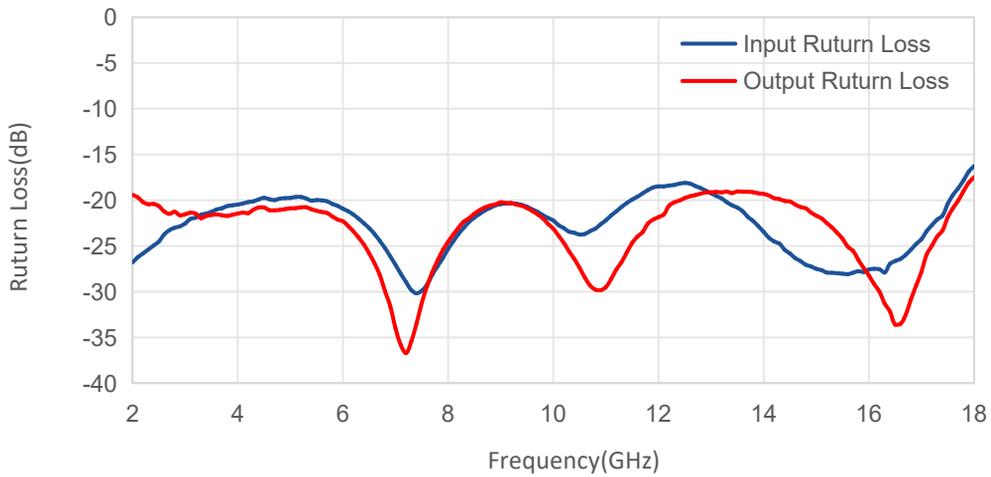


## 典型曲线 Typical Performance Data:

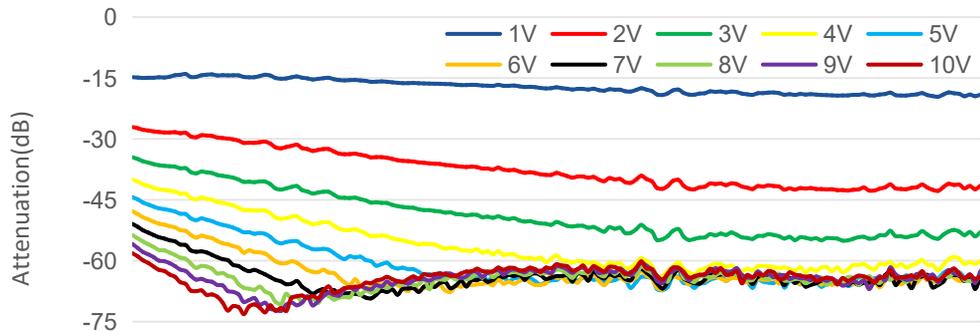
### Return Loss vs Frequency@Pin=5dBm



### Return Loss vs Frequency@Pin=10dBm

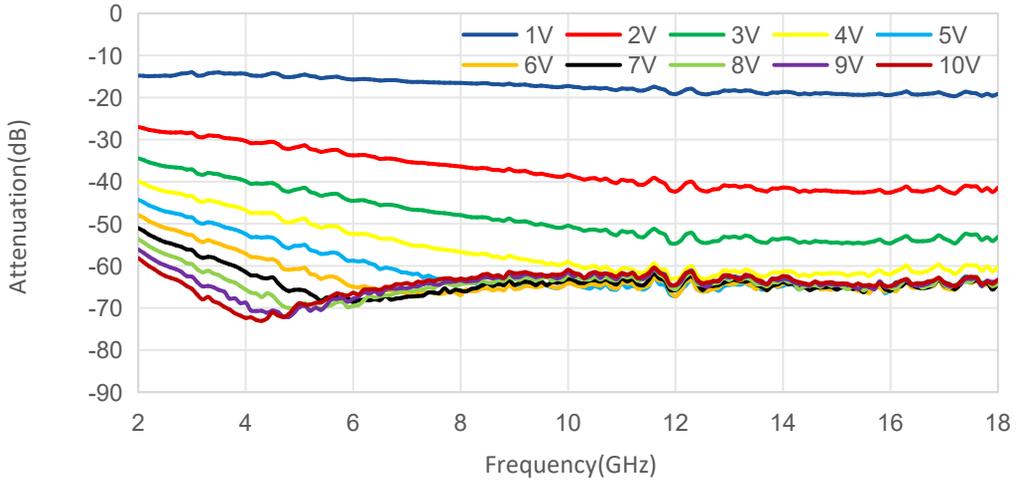


### Attenuation@Voltage Pin=0dBm

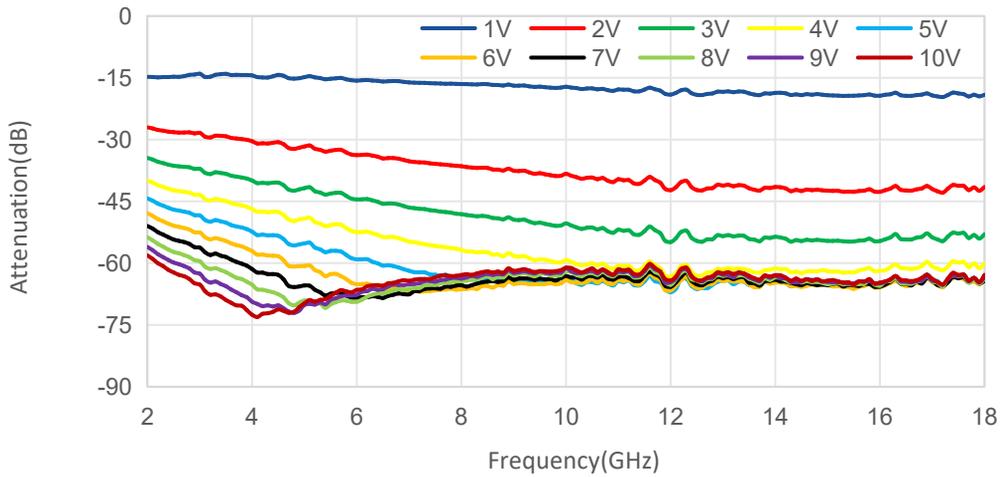


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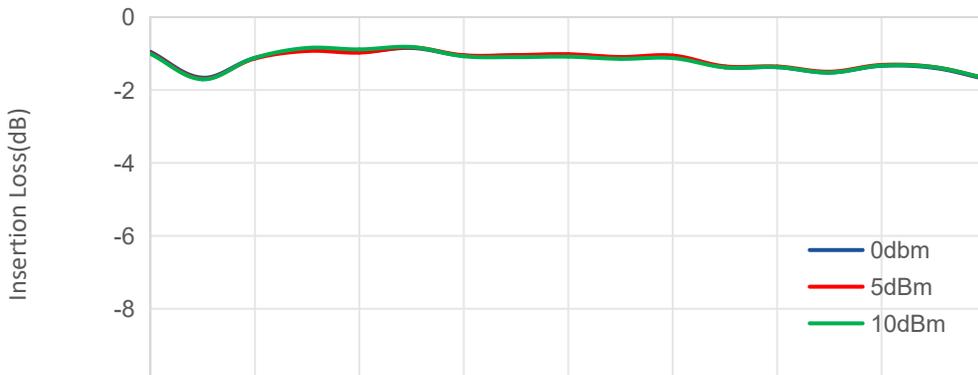
### Attenuation@Voltage Pin=5dBm



### Attenuation@Voltage Pin=10dBm

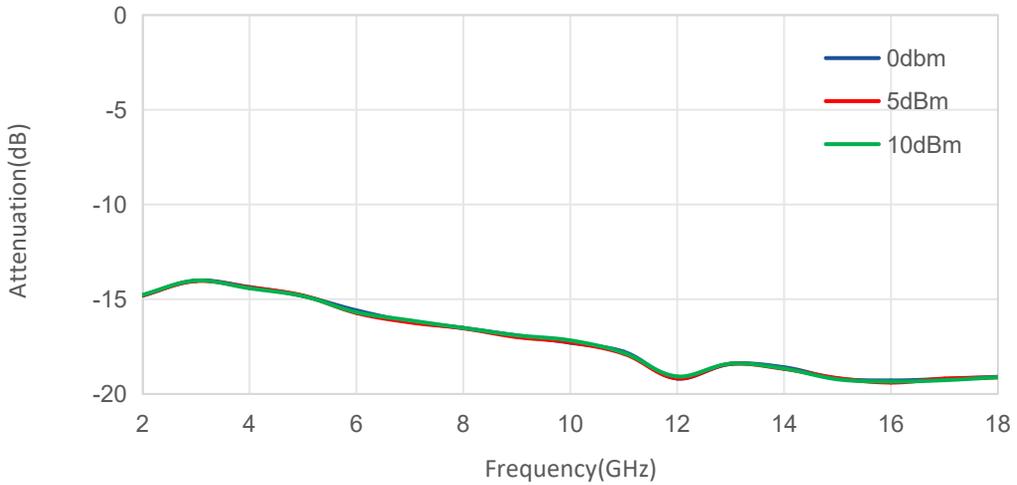


### Insertion Loss@Pin VT=0V

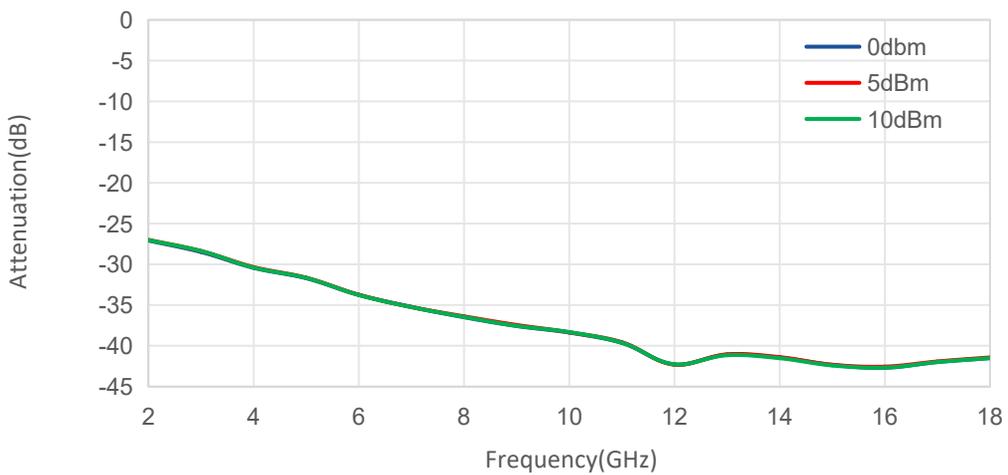


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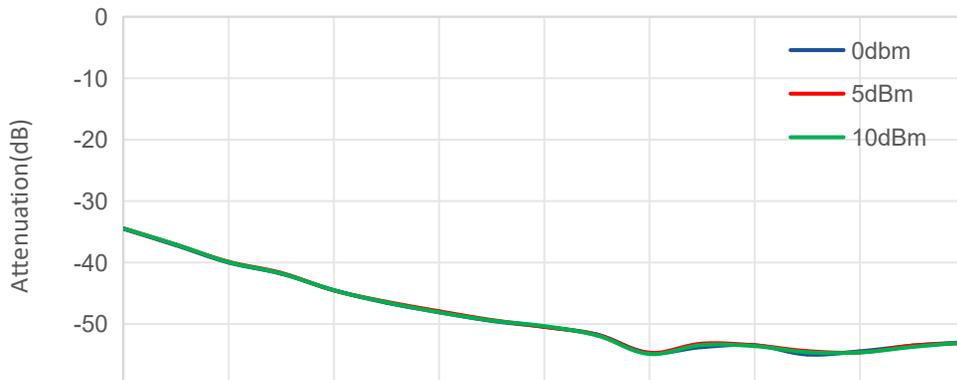
### Attenuation@Pin $V_T=1V$



### Attenuation@Pin $V_T=2V$

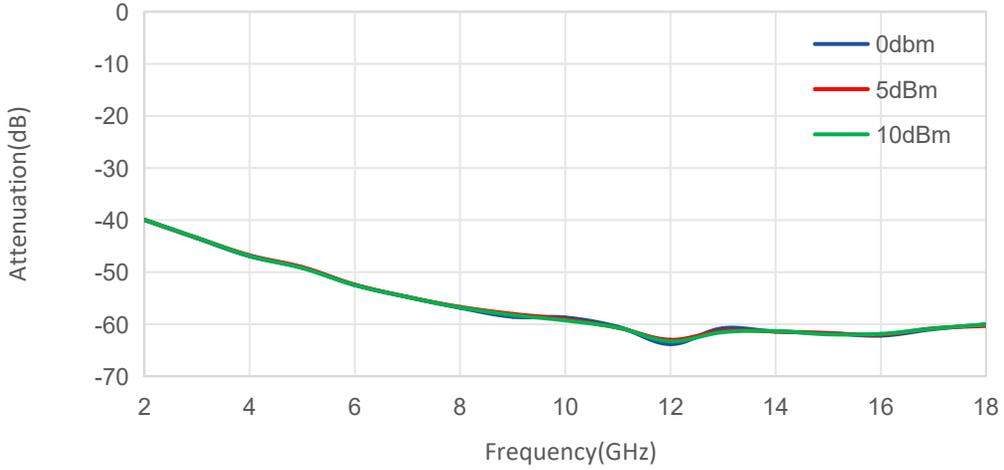


### Attenuation@Pin $V_T=3V$

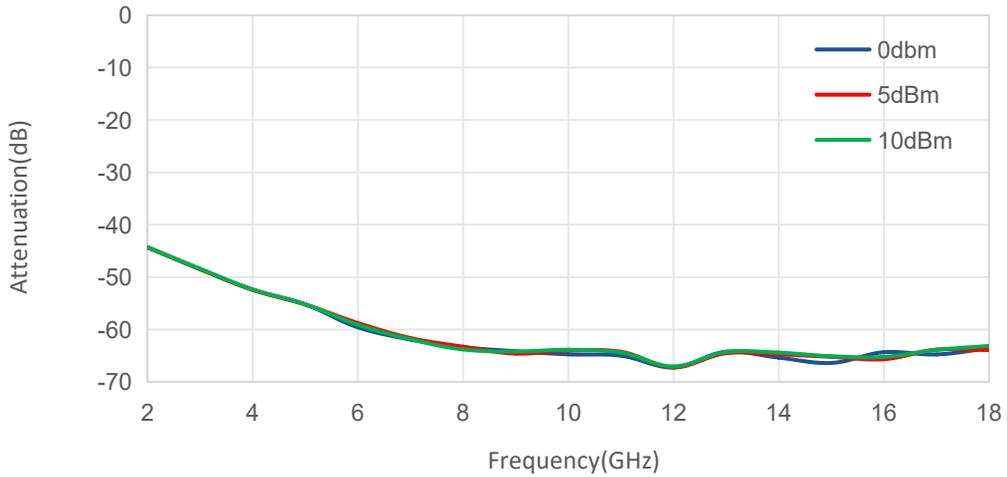


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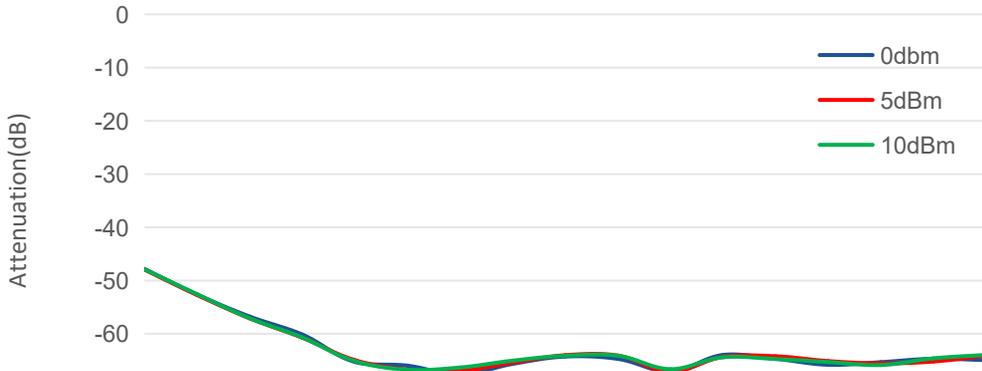
### Attenuation@Pin $V_T=4V$



### Attenuation@Pin $V_T=5V$

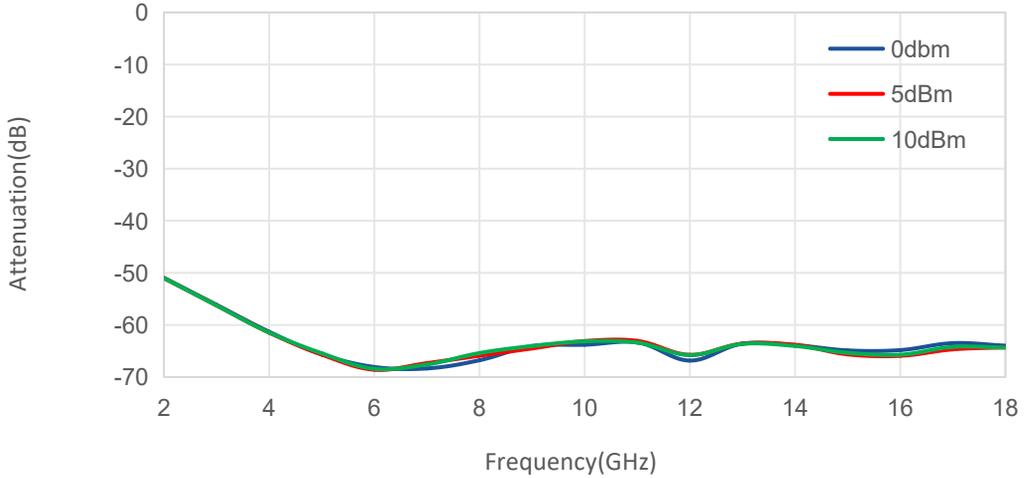


### Attenuation@Pin $V_T=6V$

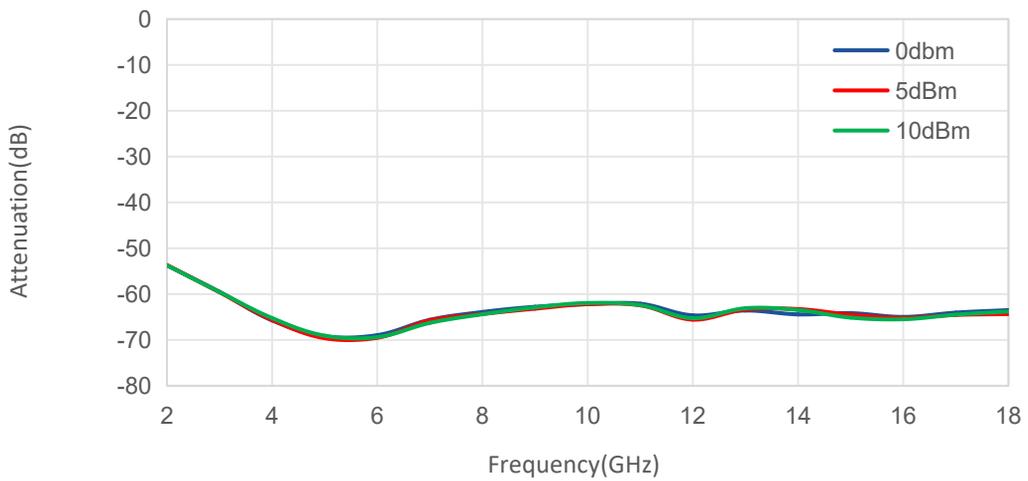


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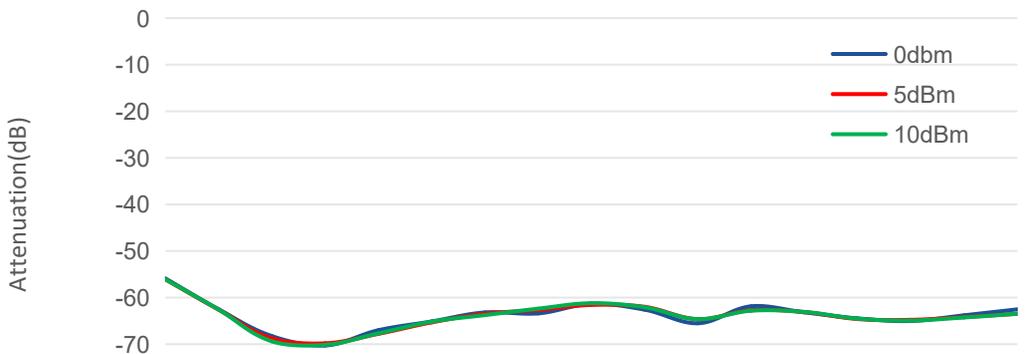
### Attenuation@Pin $V_T=7V$



### Attenuation@Pin $V_T=8V$

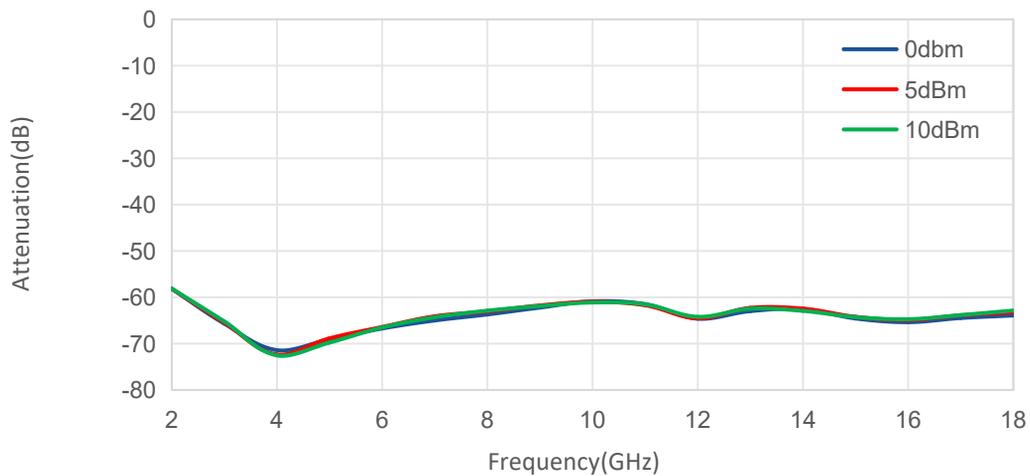


### Attenuation@Pin $V_T=9V$



## 典型曲线 Typical Performance Data:

### Attenuation@Pin $V_T=10V$



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.