

6-Bit Digital Attenuator

1dB LSB/6 Bit/ 0.1-50GHz

Model: TLDA0.1G50G-62-6

The TLDA0.1G50G-62-6 is an broadband digitally controlled electrical attenuator operating from 1 to 50 GHz. The attenuator offers 62 dB nominal attenuation control range in 1 dB steps under a 6-bit digital control. The control speed of the attenuator is typically 100 ns. The RF input and output ports are female 2.4 mm coax connectors, and a male J30J-9ZKP port is employed for providing the control signal and DC bias.

Features:

- Ultra Wide Band: 0.1-50GHz
- 2 channel, 6-Bit, 1 dB LSB, 62 dB Range
- Low Insertion Loss
- 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		0.1-50			GHz
插损 Insertion Loss	@0.1-20GHz		10		dB
	@20-40GHz		15		
	@40-50GHz		20		
衰减范围 Attenuation Range		62			dB
控制位数 Control Bit TTL		6			Bit
衰减步进 Attenuation Step		1			dB
切换速度 Switch Speed			100		ns
输入驻波 Input VSWR			2.2	2.5	:1
输出驻波 Output VSWR			2.2	2.5	:1
最大输入功率 Input Max Power				25	dBm
直流电压 DC Voltage		J30J-9ZKP			V DC
阻抗 Impedance		50			Ohms

机械特性 Mechanical Specifications:

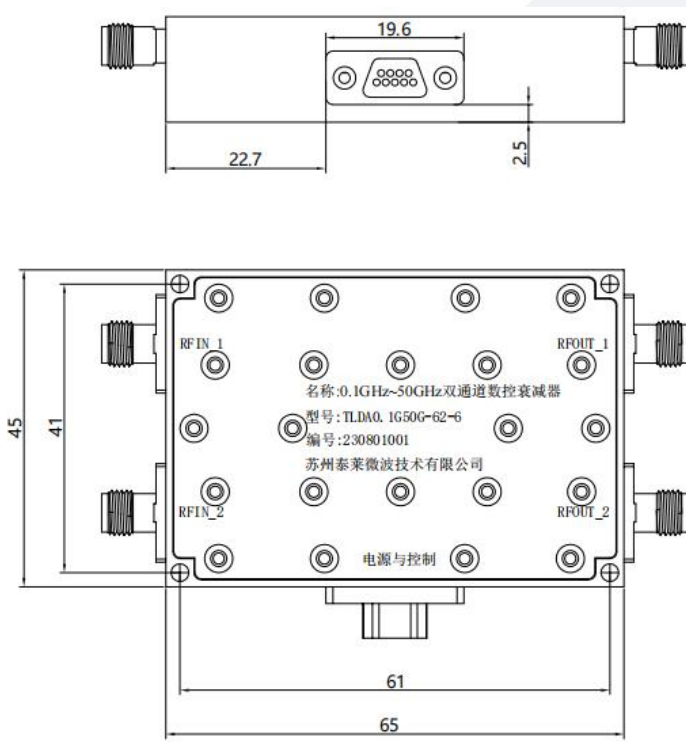
描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	2.4mm Female/2.4mm Female	
DC控制接口 DC control interface	J30J-9ZKP	
尺寸 Size	65*45*15	mm
重量 Weight	70	g

绝对最大值 Absolute Maximum Ratings :

描述 Description	参数 Parameter	单位 Units
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

外形图 Outline Drawing:

Unit:mm



上位机软件:



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

加电接口 Supply Conector(J30J-15ZKP):

J30J-9ZKP			
引脚Pin#	功能Function	引脚Pin#	功能Function
1	+12 V	6	+12 V
2	GND	7	GND
3	TX	8	NC
4	RX	9	GND
5	GND		

温度环境 Environmental Conditions:

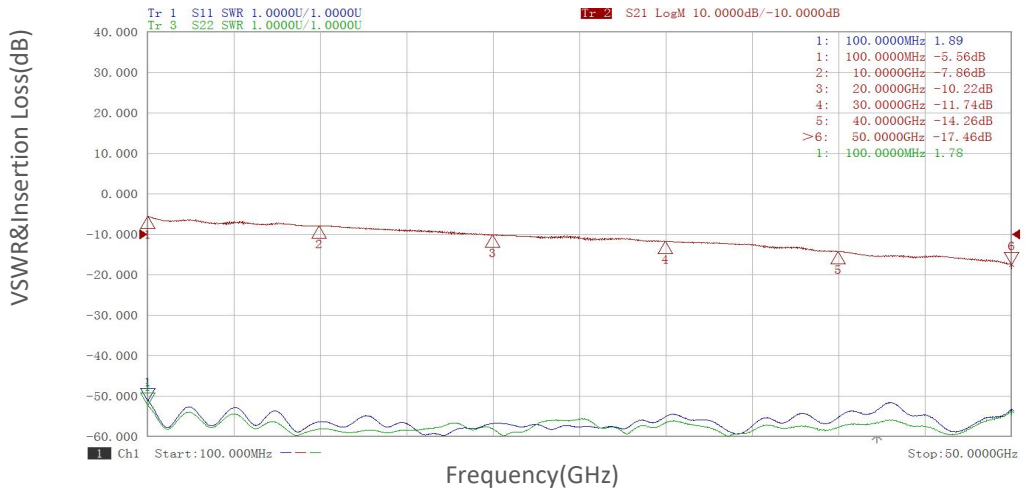
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	℃
存储温度 Non-operating Temperature	-45		+85	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLDA0.1G50G-62-6	10-Bit Digital Digital Attenuator,0.1-40GHz,2.92mm Female	Rev.1.1

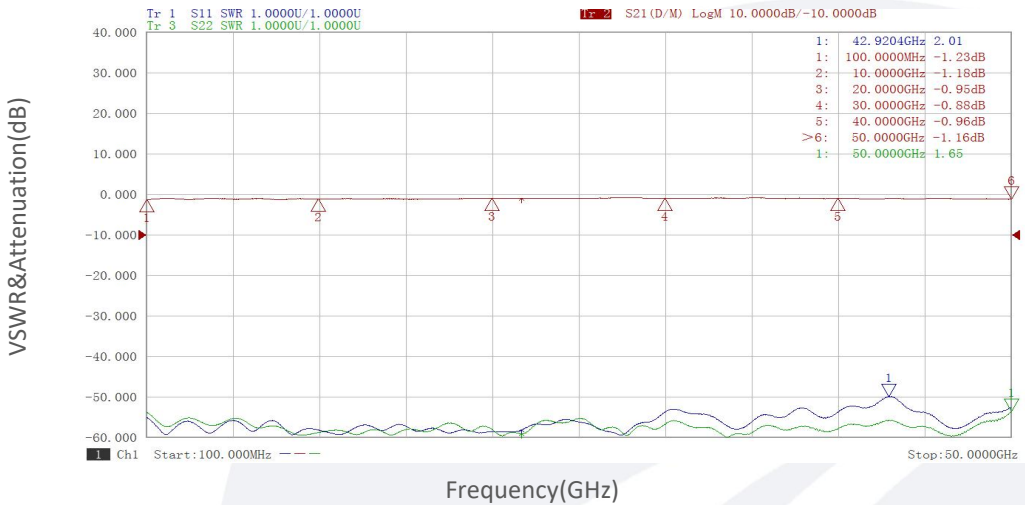
典型曲线 Typical Performance Data:

VSWR&Insertion Loss vs Frequency



1dB:

VSWR&Attenuation vs Frequency



2dB:

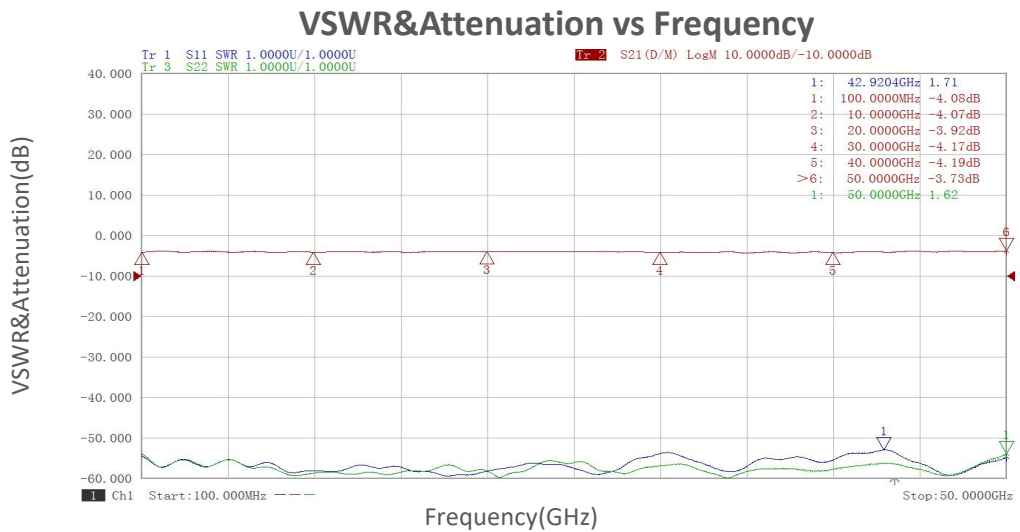
VSWR&Attenuation vs Frequency



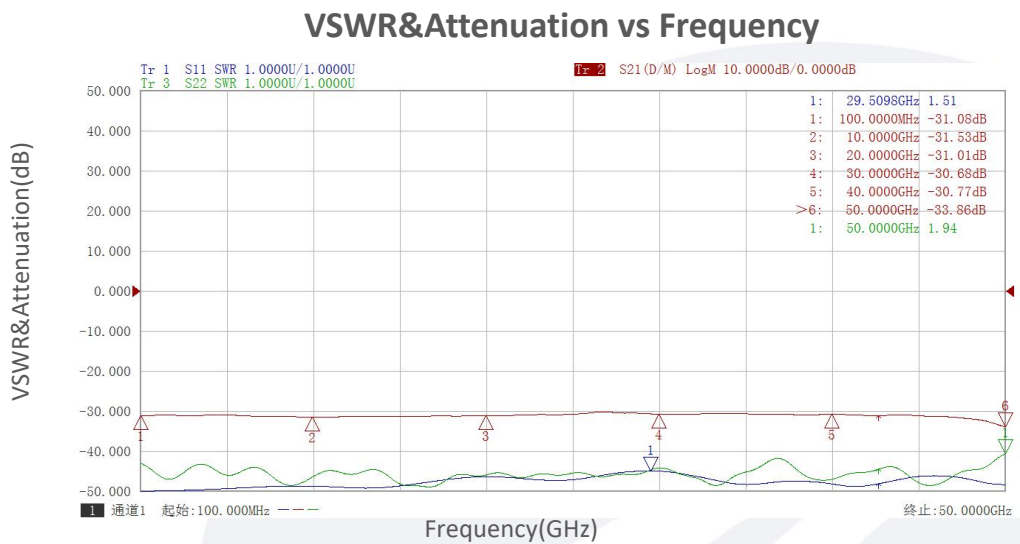
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

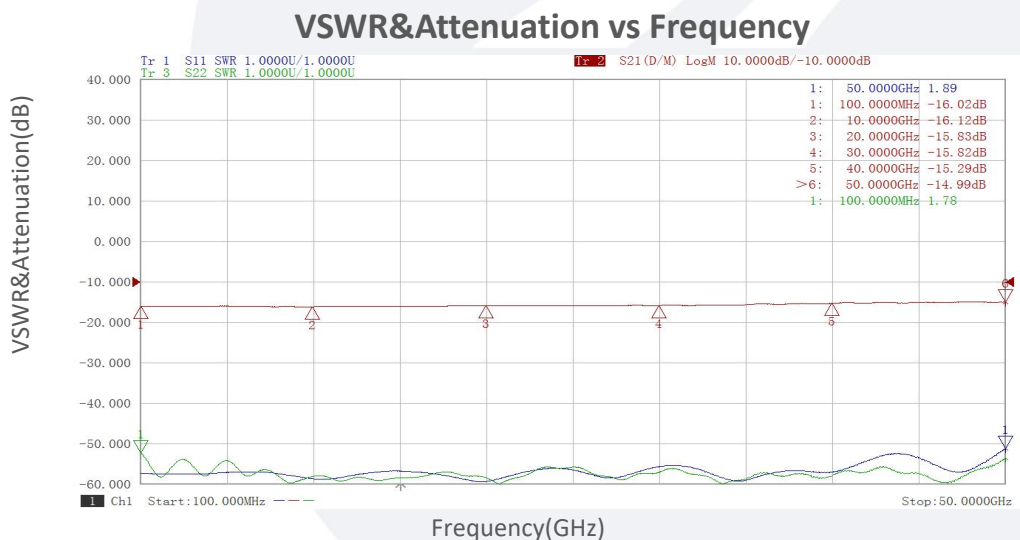
4dB:



8dB:



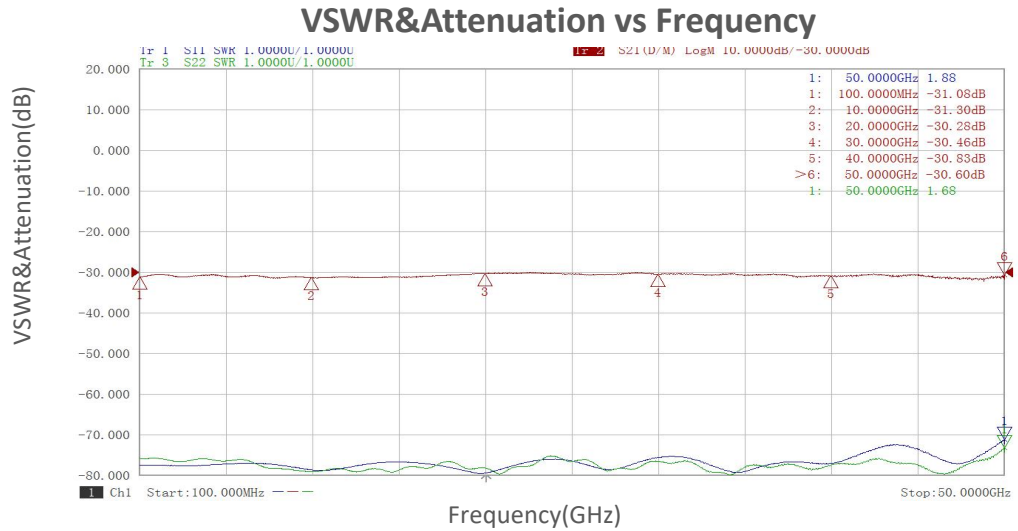
16dB:



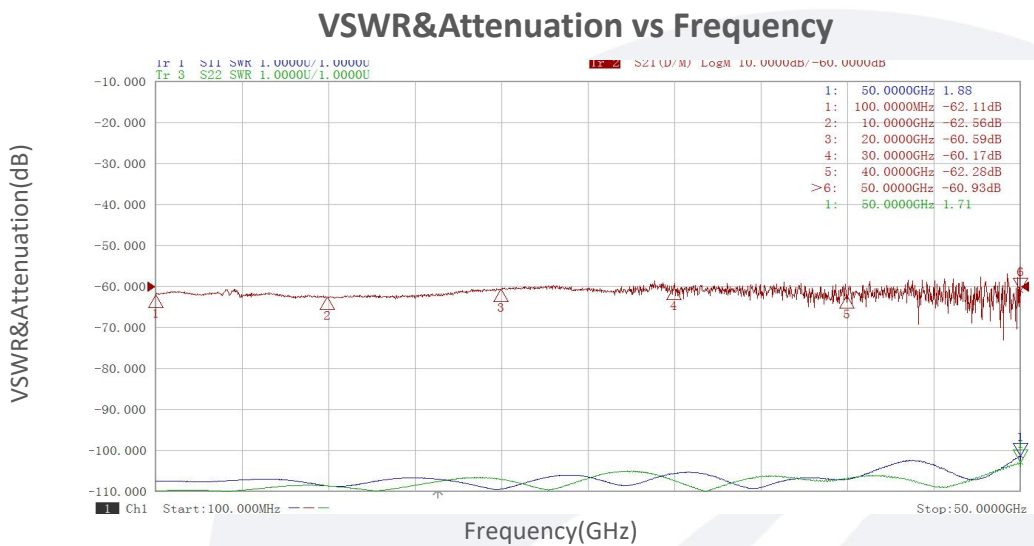
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典型曲线 Typical Performance Data:

31dB:



62dB:



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