

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

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range		0.1-50			GHz
Insertion Loss	@0.1-20GHz		10		dB
	@20-40GHz		15		
	@40-50GHz		20		
Attenuation Range		62			dB
Control Bit TTL		6			Bit
Attenuation Step		1			dB
Switch Speed			100		ns
Input VSWR			2.2	2.5	:1
Output VSWR			2.2	2.5	:1
Input Max Power				25	dBm
DC Voltage		J30J-9ZKP			V DC
Impedance		50			Ohms

Mechanical Specifications:

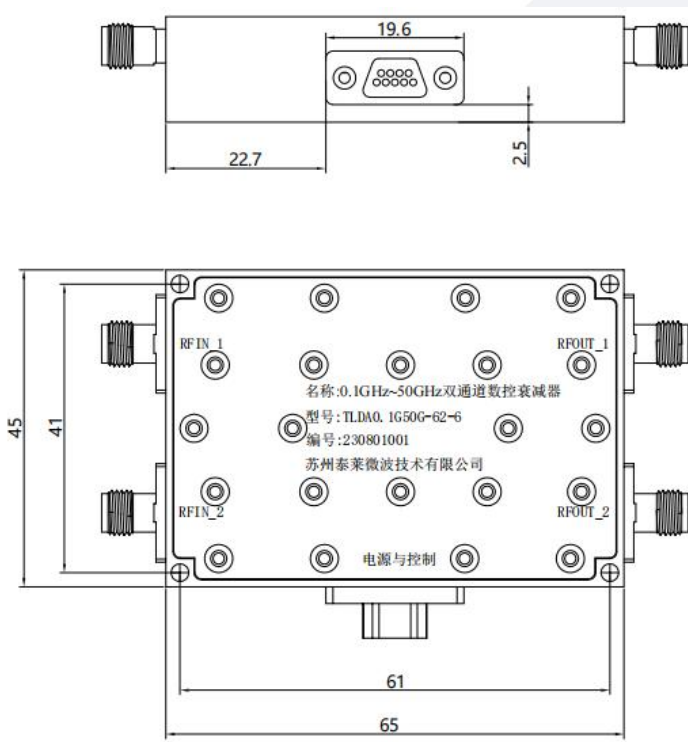
Description	Parameter	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC control interface	J30J-9ZKP	
Size	65*45*15	mm
Weight	70	g

Absolute Maximum Ratings :

Description	Parameter	Units
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Outline Drawing:

Unit:mm



Upper computer software:



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Supply Conector(J30J-15ZKP):

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

Environmental Conditions:

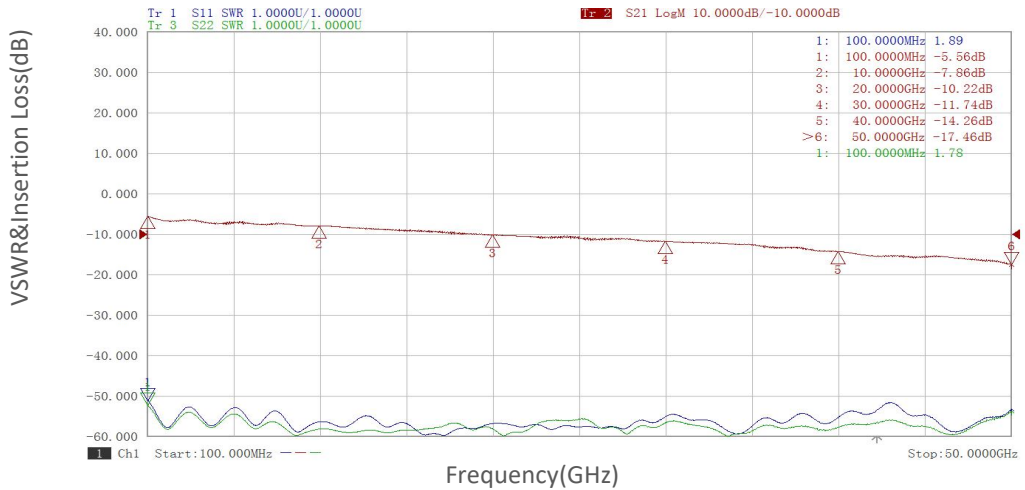
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLDA0.1G50G-62-6	10-Bit Digital Digital Attenuator,0.1-40GHz,2.92mm Female	Rev.1.1

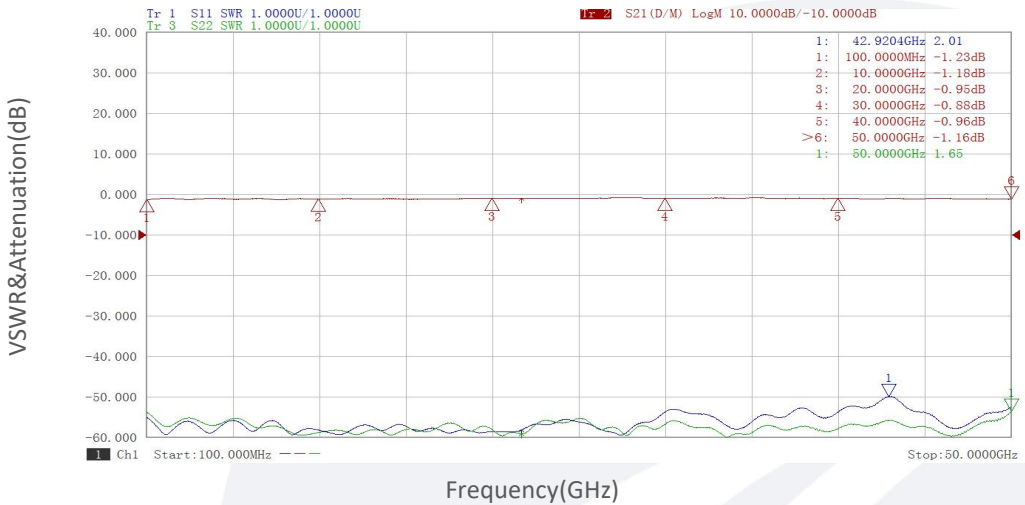
Typical Performance Data:

VSWR&Insertion Loss vs Frequency



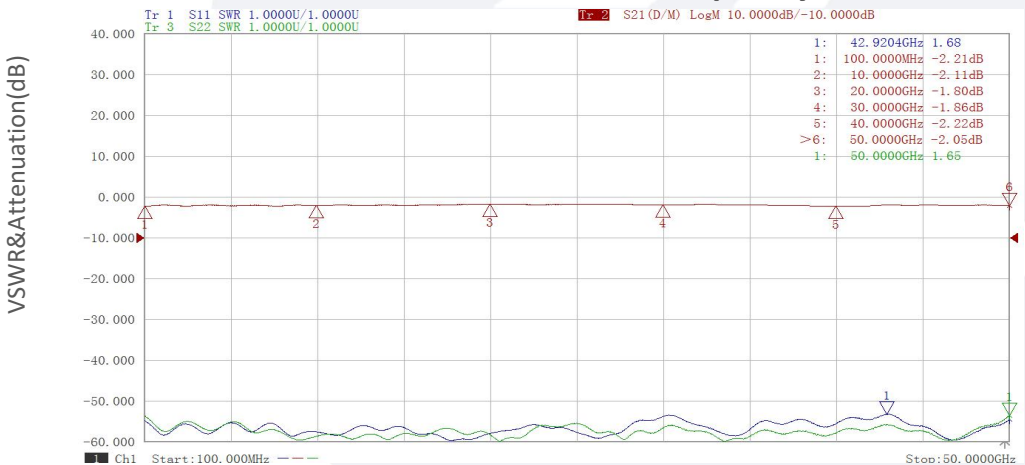
1dB:

VSWR&Attenuation vs Frequency



2dB:

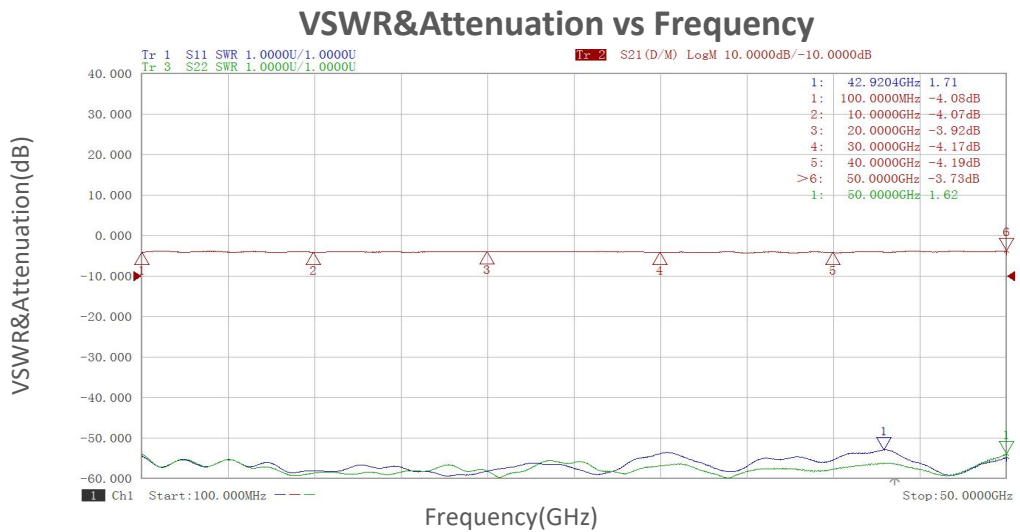
VSWR&Attenuation vs Frequency



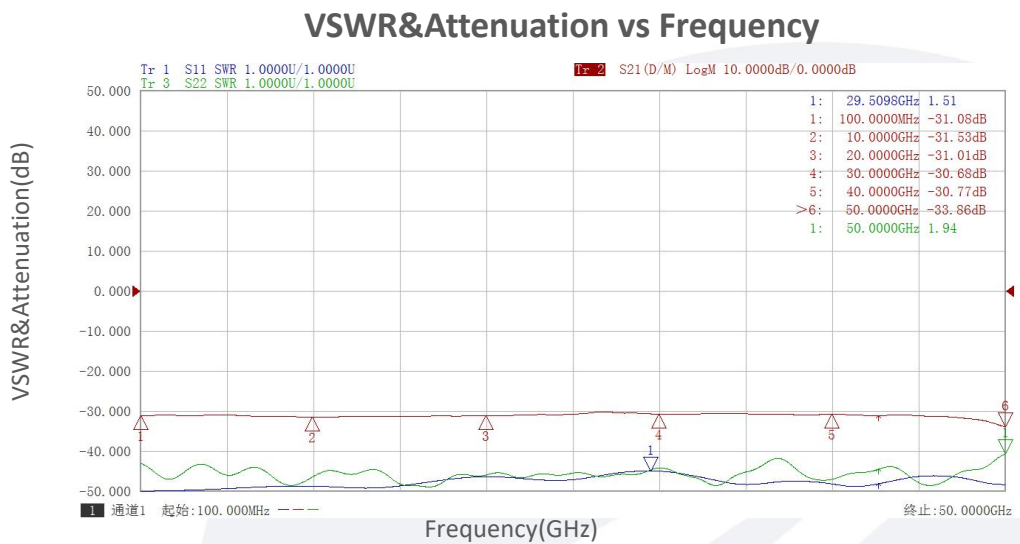
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

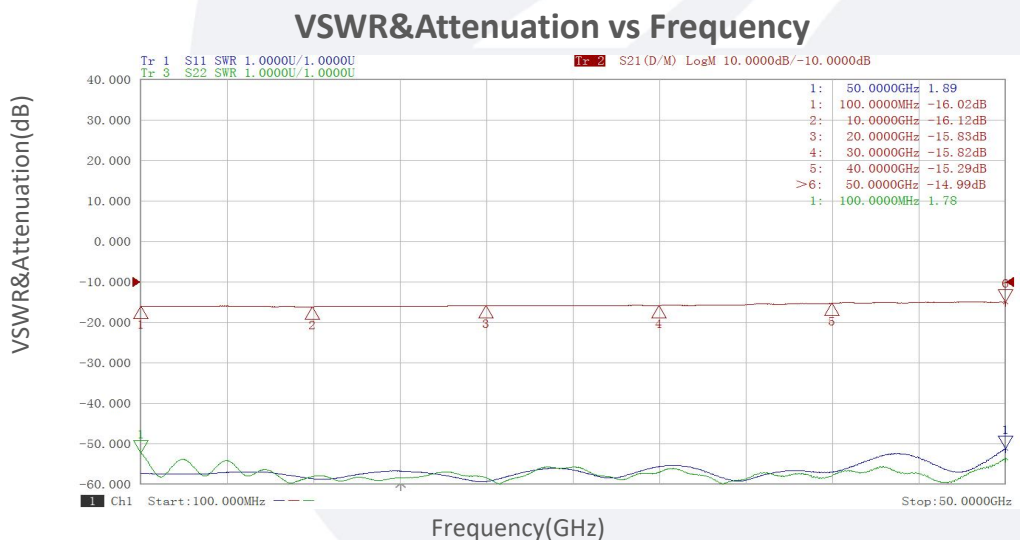
4dB:



8dB:



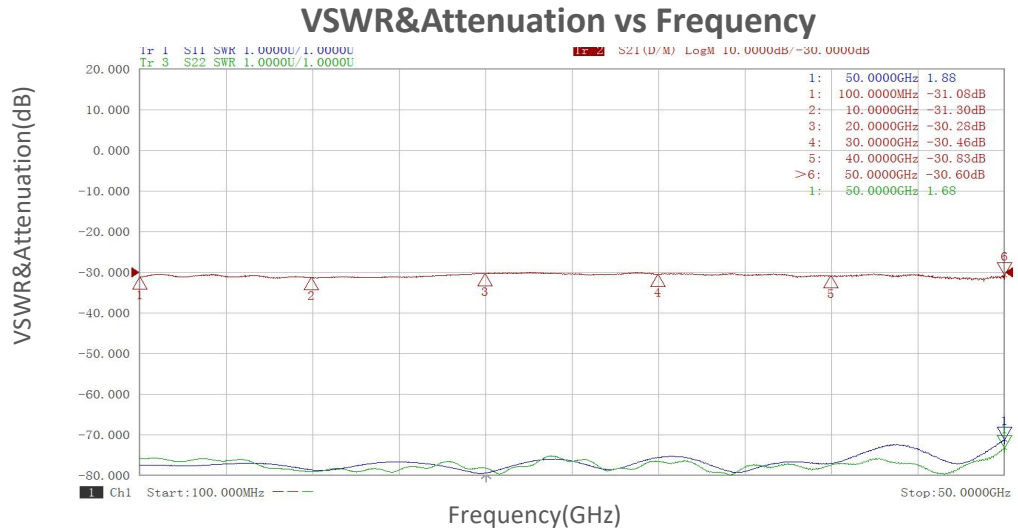
16dB:



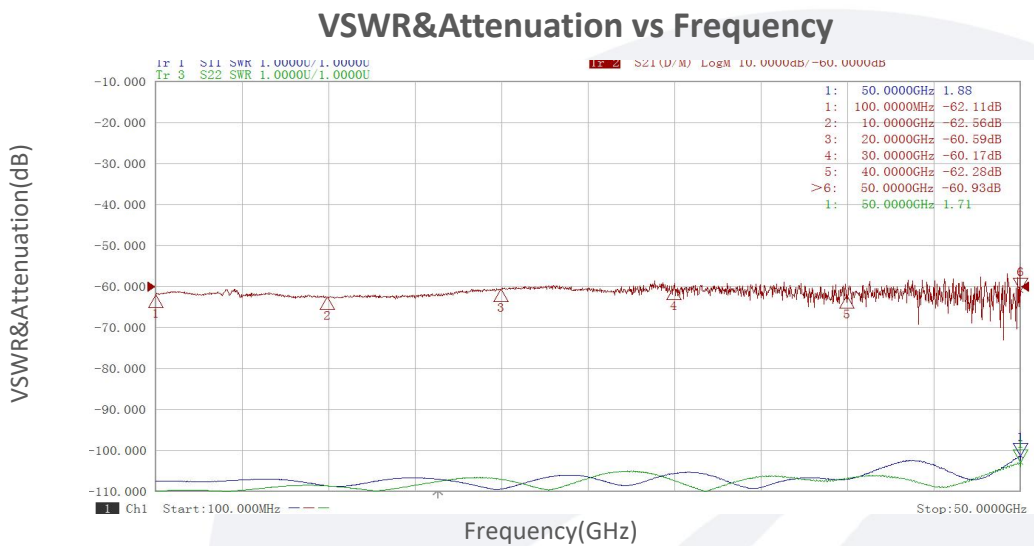
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

31dB:



62dB:



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