Suzhou Talent Microwave,Inc
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7-Bit Digital Step Attenuator

0.5dB LSB/7 Bit/0.1-40GHz

Model: TLDA0.1G40G-62-7

The TLDA0.1G40G-62-7 is an broadband digitally controlled electrical attenuator operating from 0.1 to 40 GHz. The attenuator exhibits 10 dB typical insertion loss and offers 62 dB nominal attenuation control range in 0.5 dB steps under a 7-bit digital control. The control speed of the attenuator is typically 1 us. The RF input and output ports are female 2.92 mm coax connectors, and a male J30J-9ZKP port is employed for providing the control signal and DC bias.

Features:

- Frequency range: 0.1-40GHz
- 7-Bit, 0.5 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		0.1-40		GHz
Insertion Loss	6	10	15	dB
Attenuation Range		62		dB
Control Bit TTL		7		Bit
Attenuation Step		0.5		dB
Switch Speed			1	us
Input VSWR		2.2	2.5	:1
Output VSWR		2.2	2.5	:1
Input Max Power		25	27	dBm
DC Voltage		5		V DC
DC Supply Current		10		mA
Impedance		50		Ohms

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Mechanical Specifications:

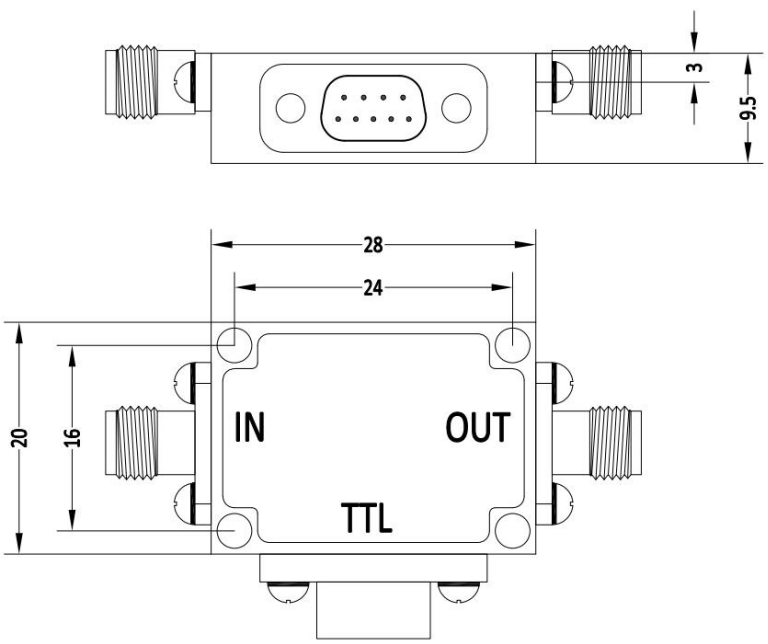
Description	Parameter	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC control Connector	J30J-9ZKP	
Size	28*20*5	mm

Absolute Maximum Ratings :

Description	Parameter	Units
Supply Bias Voltage	TBD	V
RF Input Power	27	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Outline Drawing:

Unit:mm



Regulatory Compliance:

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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Supply Conector(J30J-9ZKP)/Truth Table:

J30J-9ZKP			
Pin#	Function	Pin#	Function
1	+5V	6	C4
2	GND	7	C5
3	C1	8	C6
4	C2	9	C7
5	C3		

Truth Table							
TTL Control Input							Signal Path State
C1	C2	C3	C4	C5	C6	C7	
1	1	1	1	1	1	1	0dB
0	1	1	1	1	1	1	0.5dB
1	0	1	1	1	1	1	1dB
1	1	0	1	1	1	1	2dB
1	1	1	0	1	1	1	4dB
1	1	1	1	0	1	1	8dB
1	1	1	1	1	0	1	16dB
0	0	0	0	0	0	1	31.5dB
1	0	0	0	0	0	0	62dB
“0”: Low level 0V; “1”: High level 5V							

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
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	Desciption	Revision
TLDA0.1G40G-62-7	7-Bit Digital Step Attenuator,0.1-40GHz,2.92mm Female	Rev.1.1

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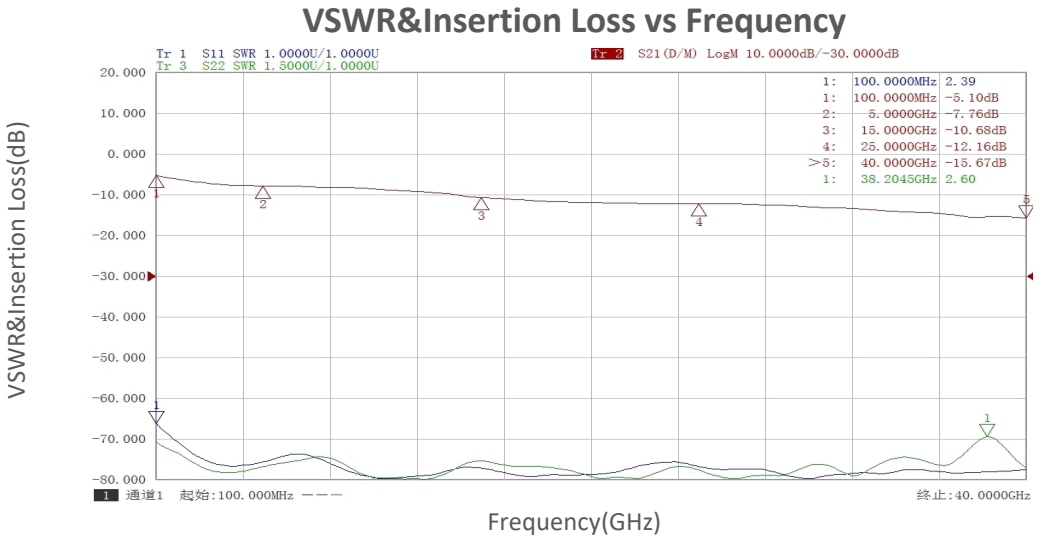
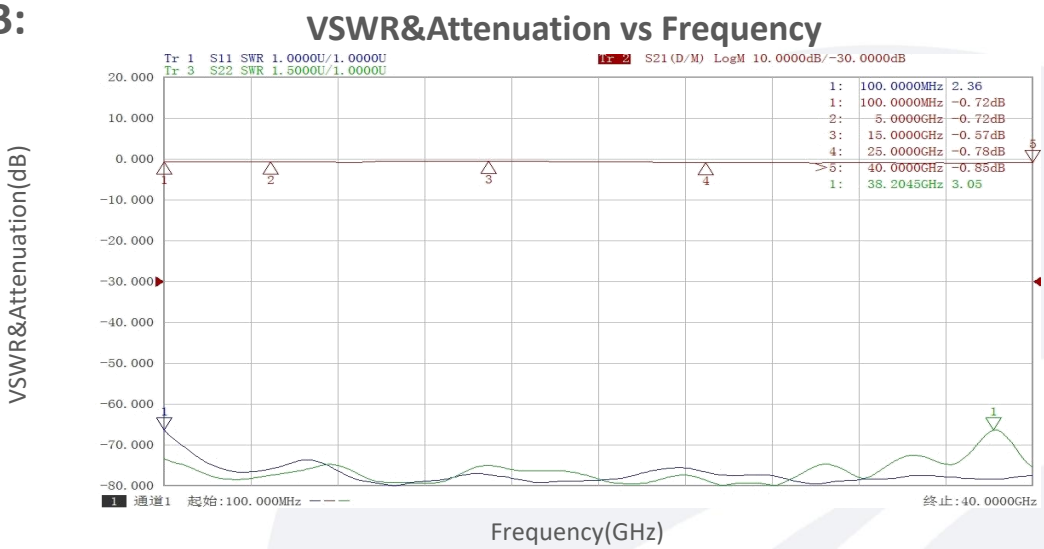
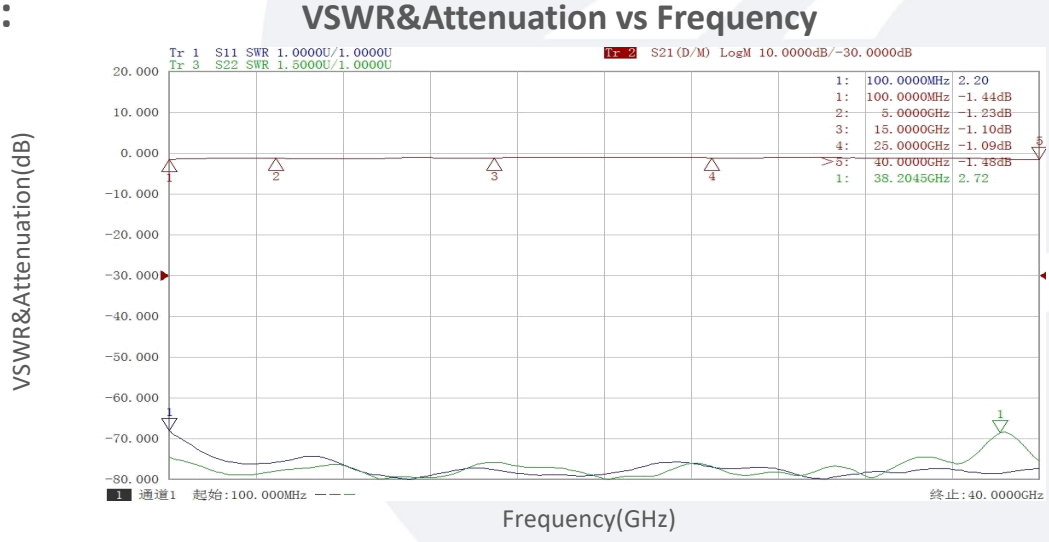
Typical Performance Data:



0.5dB:



1dB:



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.

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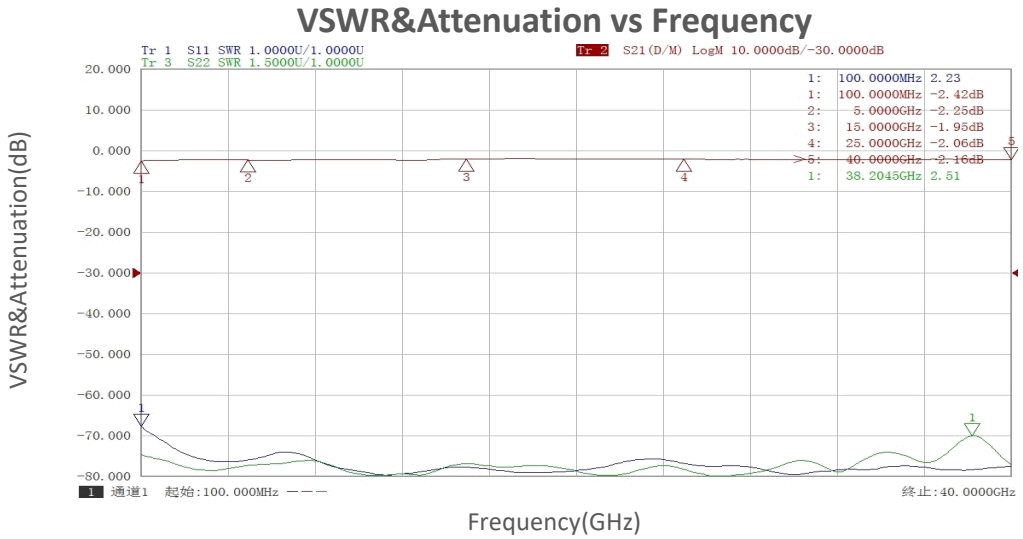
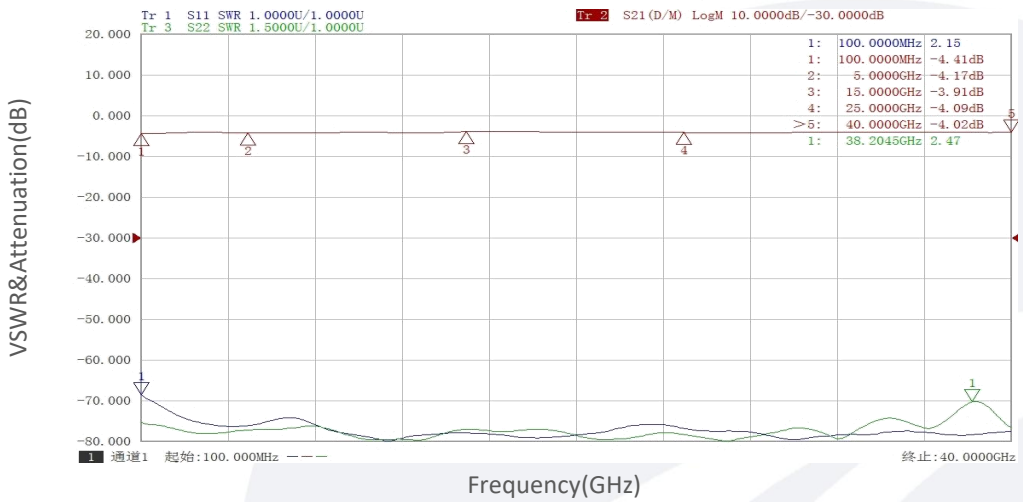
Typical Performance Data:

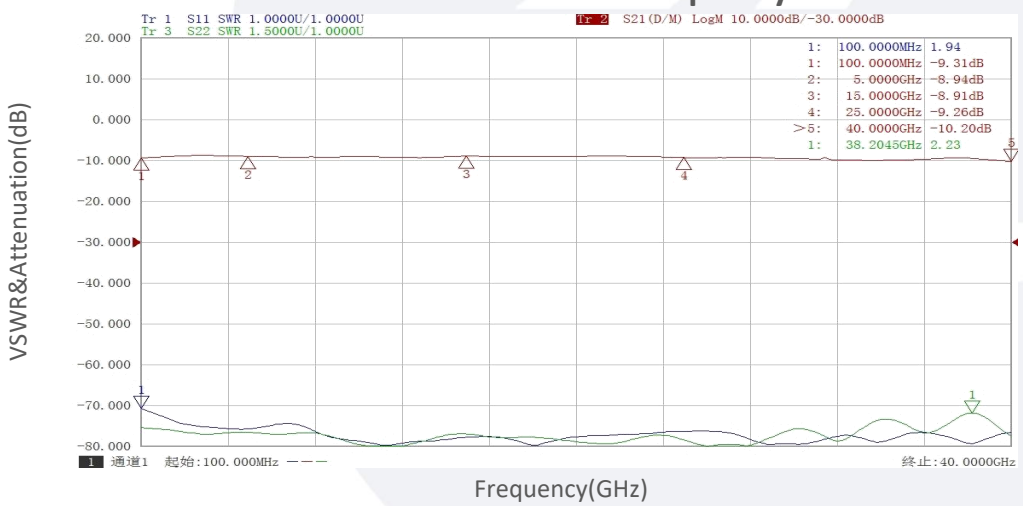
2dB:



4dB:



8dB:



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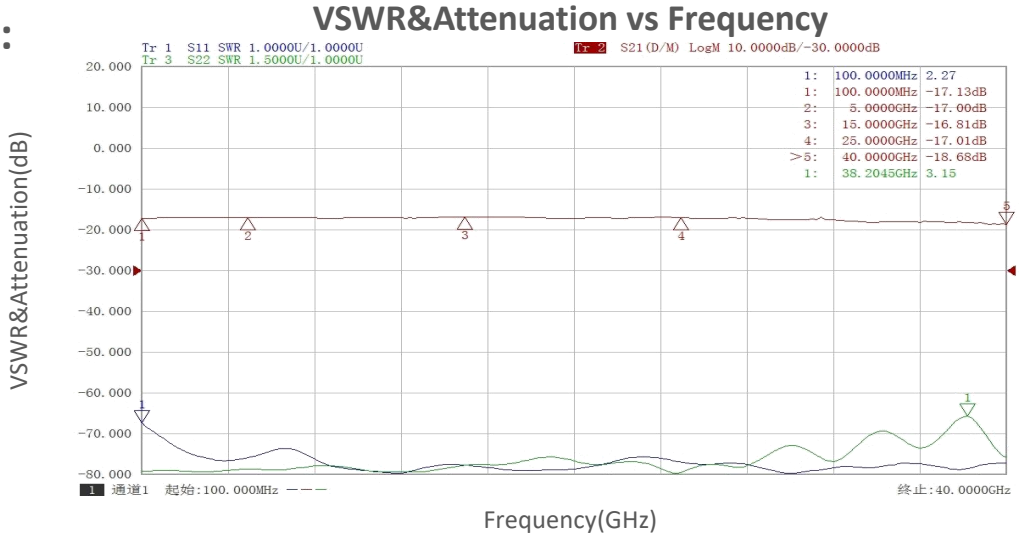
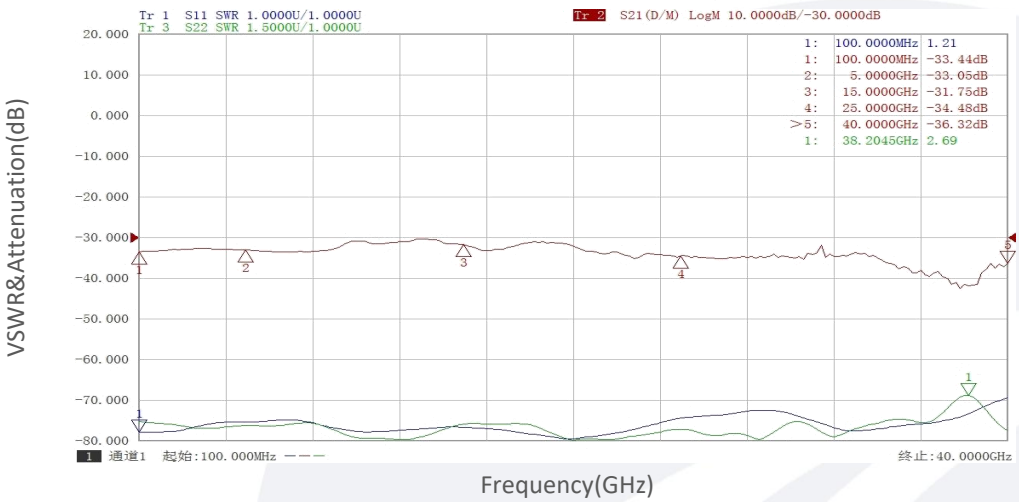
16dB:



31.5dB:



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