泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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4-Steps Program Controlled Attenuator

10dB LSB/4 Steps/ DC-26.5GHz

Model: TLDADC26.5G-110-4

The TLDADC26.5G-110-4 is an broadband Program controlled electrical attenuator operating from DC to 26.5 GHz. The attenuator exhibits 3.5 dB maximum insertion loss and offers 110 dB nominal attenuation control range in 10 dB steps under a 4 steps digital control. The RF input and output ports are female 3.5mm coax connectors.

Features:

- Frequency range: DC-26.5GHz
- 4 steps, 10 dB LSB, 110 dB Range
- Low Insertion Loss
- High Attenuator Accuracy

Applications:

- Radar Systems
- Communication Systems
- Testing Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		DC-26.5		GHz
Insertion Loss(@0dB)			3.5	dB
Attenuation Range		110		dB
Attenuation Accuracy		±1 dB (10dB,20dB); ±1.2 dB (40dB) ±3.5 dB (110dB)		dB
Control Step		4		Step
Attenuation Step		10		dB
Repeatability		0.05		dB
Input VSWR			2.0	:1
Operating Life (Per Switch)	1000000			cycles
Input Max Power			30	dBm
DC Voltage	20	24	28	V DC
DC Supply Current		126(every step)		mA
Impedance		50		Ohms

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Mechanical Specifications:

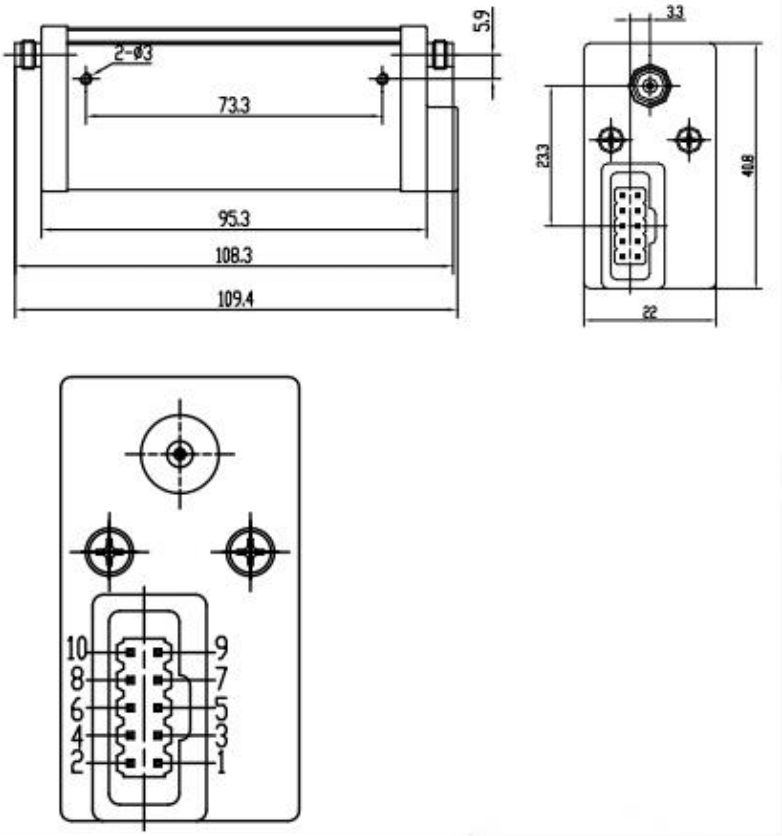
Description	Parameter	Units
Input /Output Connector	3.5mm Female/3.5mm Female	
Control Connector	517.076.003.010	
Size	108.3*40.8*22	mm
Weight	≤350	g

Absolute Maximum Ratings :

Description	Parameter	Units
RF Input Power	+30	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Outline Drawing:

Unit:mm



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

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Supply Conector(517.076.003.010):

Pin#	Function
1	Step1 Straight-through
2	Step1 10dB attenuation
3	GND
4	Step2 Straight-through
5	Step3 Straight-through
6	Step4 Straight-through
7	Step4 40dB attenuation
8	Step3 20dB attenuation
9	Step2 40dB attenuation
10	+20~+28V DC

Note:At same step,if the voltage of this pin drops from TTL high level to low level (0V to +1.0Vdc) and the low level lasts for more than 20ms, while other pins (except pins 3 and 10) remain at TTL high level (+4.2V to +5Vdc), their respective functions will be implemented.

Truth Table				
Step1	Step2	Step3	Step4	Attenuation
○	○	○	○	0dB
X	○	○	○	10dB
○	○	X	○	20dB
X	○	X	○	30dB
○	X	○	○	40dB
X	X	○	○	50dB
○	X	X	○	60dB
X	X	X	○	70dB
○	X	○	X	80dB
X	X	○	X	90dB
○	X	X	X	100dB
X	X	X	X	110dB

Note:○ represents signal transmission through a straight-through patch, X represents signal transmission through an attenuating patch.
For example, to achieve a 50dB attenuation, the connector should be powered as follows:
Pin 1: TTL high level
Pin 2: TTL high level changes to low level and the low level lasts for more than 20ms
Pin 3: Ground
Pin 4: TTL high level
Pin 5: TTL high level changes to low level and the low level lasts for more than 20ms
Pin 6: TTL high level changes to low level and the low level lasts for more than 20ms
Pin 7: TTL high level
Pin 8: TTL high level
Pin 9: TTL high level changes to low level and the low level lasts for more than 20ms
Pin 10: +24Vdc

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-55		+75	℃
Non-operating Temperature	-55		+85	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	5g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	10G for 6msc half sin wave,3 axis both directions			

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Ordering Information:

Base Number	Description	Revision
TLDADC26.5G-110-4	4-Steps Program Controlled Attenuator, DC-26.5GHz,110 dB, 10 dB Step Size,3.5mm Female	Rev.1.1