

## 4-Steps Program Controlled Attenuator

DC-26.5GHz/11dB Range/ 1dB Step Size

Model: TLDADC26.5G-11-4

The TLDADC26.5G-11-4 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 11 dB nominal attenuation control range in 1 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, 1 dB LSB, 11 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	DC-26.5			GHz
插损 Insertion Loss			3.5	dB
衰减范围 Attenuation Range	11			dB
控制位数 Control Step	4			Bit
衰减步进 Attenuation Step	1			dB
衰减精度 Attenuation Accuracy	±0.8dB (1dB,2dB,4dB); ±1.6 dB (11dB)			dB
重复性 Repeatability		0.05		dB
驻波 Input VSWR			2.0	:1
最大输入功率 Input Max Power			30	dBm
寿命 Operating Life(Per Switch)	1000000			cycles
直流电压 DC Voltage	20	24	28	V DC
直流电流 DC Supply Current		126		mA
阻抗 Impedance	50			Ohms

### 机械特性 Mechanical Specifications:

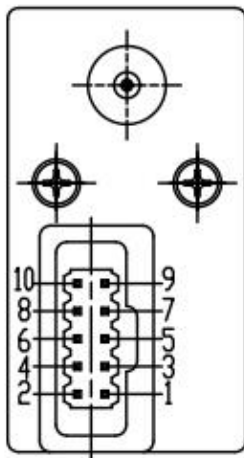
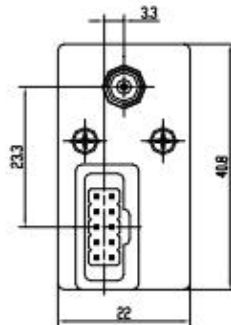
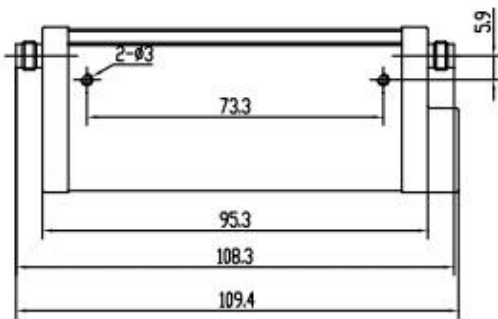
描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	3.5mm Female/3.5mm Female	
控制连接器 Control Connector	517.076.003.010	
尺寸 Size	108.3*40.8*22	mm
重量 Weight	≤350	g

### 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	30	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

### 外形图 Outline Drawing:

Unit:mm



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

## 加电接口和真值表 Supply Connector and Truth Table(517.076.003.010):

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

**Control:**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.

真值表 Truth Table				
Step1	Step2	Step3	Step4	衰减 Attenuation
O	O	O	O	0dB
x	O	O	O	1dB
O	O	x	O	2dB
x	O	x	O	3dB
O	x	O	O	4dB
x	x	O	O	5dB
O	x	x	O	6dB
x	x	x	O	7dB
O	x	O	x	8dB
x	x	O	x	9dB
O	x	x	x	10dB
x	x	x	x	11dB

Note:○ represents signal transmission through a straight-through patch, X represents signal transmission through an attenuating patch.

For example, to achieve a dB 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

## 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-55		+75	°C
存储温度 Non-operating Temperature	-55		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	5g 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
TLDADC26.5G-11-4	4-Steps Program Controlled Attenuator DC-26.5GHz,11 dB, 1 dB Step Size	Rev.1.1