

International invention patent

## **Manual Step Attenuator**

- ◆ DC to 5.8GHz
- ◆ 0 to 15dB in 1dB Step
- ◆ 2 Watt
- ◆ Connector Type: SMA,N,TNC,F,BNC etc. available
- Low PIM

#### **Features**

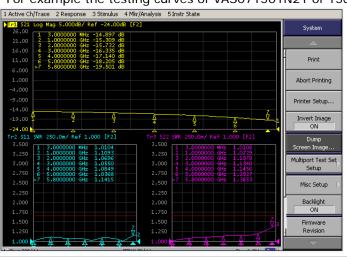
- Using advanced microstrip technology, ultra-small size
- Attenuation values are adjustable in a power-on state, no sudden big reflection.

It adopts an innovative technology, and thus it eliminates sudden big reflection in attenuators when attenuation is being adjusted, preventing the preliminary RF circuit from being burnt, and keeping the system stable

- Step values: 1dB, 2dB, 4dB, 8dB
- 16 attenuation values
- High attenuation accuracy, low insertion loss
- High adjustment accuracy
- Low cost High Performance
- Adjusting the transmitting (receiving) distance of RF signal precisely. Adjusting accuracy is limited to 5cm.
- Switch repeatability avg.> 10000 operations (5000 cycles) per switch.
- PC(Polycarbonate) Switch, operating temperature of 120°C is available.
- Attenuation values are adjustable in a power-on state, test data can be read continuously, no interruption.

#### Characteristic

For example the testing curves of VAS071501N21 of 15dB







**Specifications** 

Frequency Range DC to 5.8GHz
Attenuation 0 to 15dB
Step Value 1dB
Insertion loss at 0dB (typ.)
1.8dB DC to 4 GHz

1.8dB DC to 4 GHz 2.0dB 4 to 5 GHz 2.5dB 5 to 5.8 GHz

**Attenuation Accuracy (typ.)** 

-0.2dB~2.5dB in DC to 4 GHz +3.5dB in 4 to 5 GHz +5.5dB in 5 to 5.8 GHz

Nominal Impedance 50 Ohm
Average Power 2 Watt

Operating Temperature -40°C to +85°C

Freq. Range (GHz)	VSWR(:1)	
	Тур.	Max.
DC to 4	1.2	1.4
4 to 5.8	1.3	1.55

#### 3rd Order Intermodulation

Two Input Signals	Reflected IM3
925MHz & 960MHz	-115dBc @ 2x33dBm
1805MHz & 1880MHz	-115dBc @ 2x33dBm
2620MHz & 2695MHz	-115dBc @ 2x33dBm



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## **Model No. Description**

<u>VAS</u>: Step Variable Attenuator
<u>Type</u>: 07 represents type number

Attenuation Range: Maximum attenuation.

<u>Connector Type</u>: S and N available. S is SMA and N is N type connector. <u>Max. Power</u>: 2 and 5 are available, currently 2W and 5W are available.

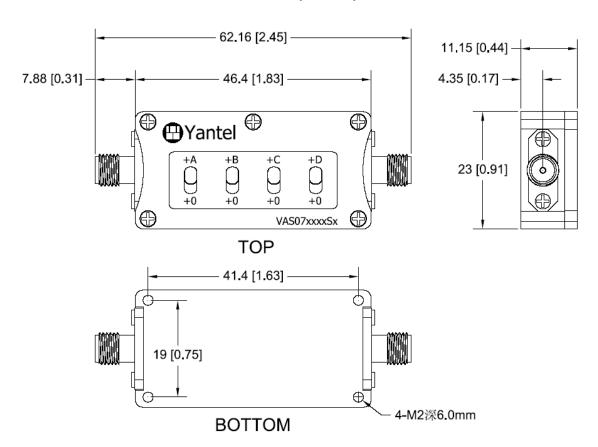
#### **Connector Options:**

Options	Ю
1	Female/Female
2	Male/Female
3	Male/Male

Connector Position: "A" represents back connectors, without "A" represents left and right connectors.

### **Package Outlines**

#### SMA Connector Unit:mm(inch)

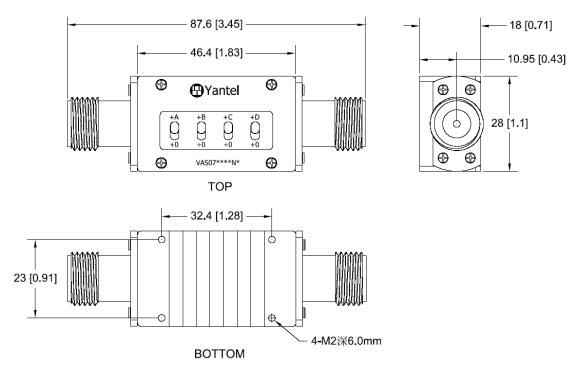


Package type: S21



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### N-type Connector

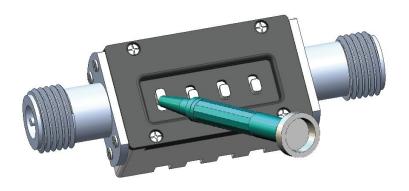


#### Package type: N21

#### NOTE:

- 1. ALL dimensions shown in mm(tolerance: +/-0.2mm) unless stated otherwise
- RoHS Compliant in accordance with EU Directive(2011/65/EU)

### **Attention**



It is much easier to adjust the switch by tools like plastic screw driver.

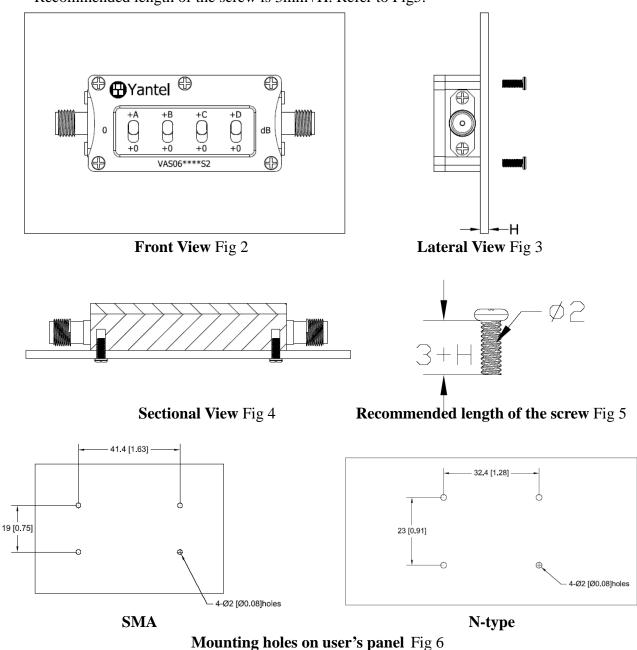


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#### Mounting Instructions: Unit: mm(inch)

This product is panel-mountable via screws.

- Four mounting holes on the product plate. Refer to Fig2, Fig6.
- H represents the thickness of panel. Refer to Fig3, Fig4.
- Recommended length of the screw is 3mm+H. Refer to Fig5.



#### Note:

Attempt to disassemble the product can damage it and void your warranty. In case of any malfunction, please contact your local representative, distributor or the factory immediately.