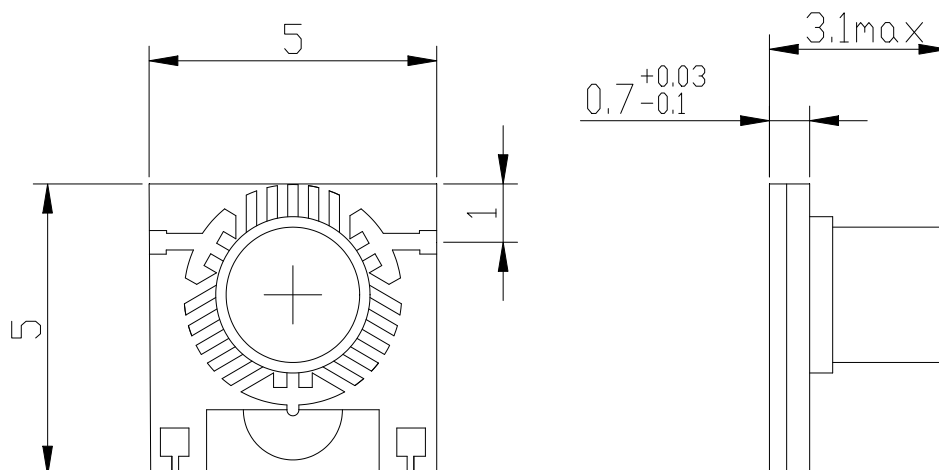




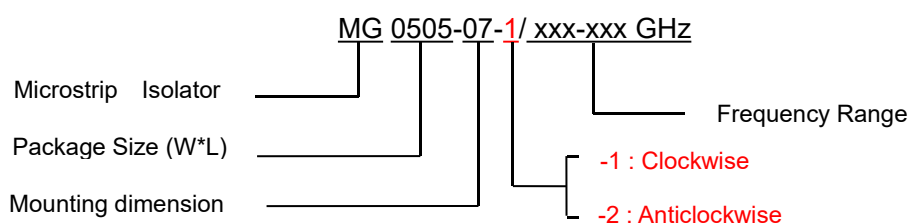
## 10.7 to 12.7GHz Microstrip Isolator

### MG0505-07 Strip Line Type

#### Outline Drawing (mm):



#### Order Examples:



#### Basic Specifications:

Impedance	50 $\Omega$
Connector Type	Micro strip
Size(mm)	5.0*5.0*3.1
Operating Temp	-55~+85 $^{\circ}$ C



## Specifications:

Model No. (X=1: →Clockwise) (X=2: ←Anticlockwise)	Freq. Range GHz	IL. dB (max)	Isolation dB (min)	VSWR (max)	Forward Power CW	Reflected Power W
MG0505-07-X/10.7-12.7GHz	10.7-12.7	0.5	20	1.25	10	1

## Instructions:

One: Long-term storage conditions of microstrip isolators:

- 1, Temperature range: +15°C~+25°C
- 2, Relative temperature: 25%~60%
- 3, Should not be stored next to strong magnetic fields or ferromagnetic substances. And the safe distance between products should be maintained:

Microstrip isolators with frequencies above the X-band should be separated by more than 3mm

The detection interval between C-band microstrip isolators is more than 8mm

Microstrip isolators below the C-band frequency should be separated by more than 15mm

Two: Second, the selection of microstrip isolators refer to the following principles:

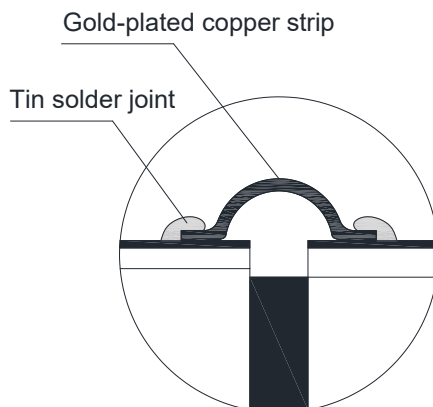
1. When decoupling and matching between circuits, microstrip isolators can be selected; The microstrip isolator can be used when the circuit plays a duplex or circular role
2. Select the corresponding microstrip isolator type according to the frequency range, installation size and transmission direction used.
- 3, When the working frequency of the two sizes of microstrip isolators can meet the warranty requirements, the larger general power capacity is higher.

Three: Third, installation of microstrip isolator

1. When using the microstrip isolator, do not clamp the microstrip electrical route at each port to avoid mechanical damage.
2. The flatness of the installation plane in contact with the bottom of the microstrip isolator should not be greater than 0.01mm.
3. Do not remove the installed microstrip isolator. It is recommended that the removed microstrip isolator not be used again.
4. When using screws, the bottom should not be cushioned with soft base materials such as indium or tin to avoid the deformation of the product bottom plate resulting in the rupture of the ferrite substrate; Tighten screws in diagonal sequence, installation torque: 0.05-0.15N.m.
5. When the adhesive is installed, the curing temperature should not be greater than 150°C. When the user has special requirements (should be informed first), the welding temperature should not be greater than 220°C.
6. The circuit connection of the microstrip isolator can be connected by manual soldering of copper strip or gold strip/bonding
  - A. Copper belt manual welding interconnect into the copper belt should be  $\Omega$  bridge, the leak should not infiltrate into the copper belt forming place as shown in the following figure. The surface temperature of ferrite



should be maintained between 60-100°C before welding.



b, the use of gold belt/wire bonding interconnect, the width of the gold belt is less than the width of the microstrip circuit, no multiple bonding is allowed, the bonding quality should meet the requirements of GJB548B method 2017.1 Article 3.1.5, the bonding strength should meet the requirements of GJB548B method 2011.1 and 2023.2.

Four, the use of microstrip isolator and precautions

1. Cleaning of microstrip circuit includes cleaning before circuit connection and welding spot cleaning after copper strip interconnection. Cleaning should use alcohol, acetone and other neutral solvents to clean the flux, to avoid the cleaning agent infiltration into the bonding area between the permanent magnet, ceramic sheet and circuit substrate, affecting the bonding strength. When the user has special requirements, the flux can be cleaned by ultrasonic cleaning with neutral solvents such as alcohol and deionized water, and the temperature should not exceed 60 ° C and the time should not exceed 30 minutes. After cleaning with deionized water, heat and dry, the temperature does not exceed 100°C.

2, should pay attention to use

- a. Exceeding the operating frequency range and operating temperature range of the product, the product performance will be reduced, or even have no non-reciprocal characteristics.
- b. The microstrip isolator is recommended to be derated. The actual power is recommended to be less than 75% of the rated power.
- c. There should be no strong magnetic field near the installation of the product to avoid the strong magnetic field changing the product bias magnetic field and causing the product performance to change.