

# Stick Coupler

## HD-02103AST Series



### ■Features

#### 1.High Performance

Low insertion loss: 0.1 dB max. (Typical)

#### 2.High Power Handling

200 W max. power handling capability. Efficient heat dissipation characteristic.

#### 3.Extremely Small Size and Lightweight

Innovative Hirose Electric design of the case and cover is behind the extremely small size and lightweight.

#### 4.Simple installation

Standard screw mounting and solder tabs allows direct mounting to planar circuits.

### ■Specifications

Ratings	Frequency range Characteristic impedance Maximum Input Power	1800 ~ 2200 MHz 50 ohms 200 W	Operating temperate range Operating relative humidity	0°C to +80°C 95% Max.
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Note: The frequency range and the maximum input power will differ depending on the products.

Characteristic	Requirement	Conditions
1.Insulation resistance	1000M ohms Min.	DC 250V
2.Vibration	No electrical discontinuity of 1 $\mu$ s or more No damage, cracks, or parts dislocation	Frequency of 10 to 2000 Hz, overall amplitude of 1.52 mm, acceleration of 98 m/s <sup>2</sup> for 2 hours in each of 3 directions
3.Shock		Acceleration of 490 m/s <sup>2</sup> , sine half-wave waveform, 3 cycles in each of the 3 axis
4.Temperature cycle		Temperature: -55°C → +5°C to +35°C → +85°C → +5°C to +35°C
5.High temperature exposure	No damage, cracks, or parts dislocation	Time: 30 → 5 max. → 30 → 5 max. (Minutes) 100 cycles
6.Low temperature exposure		96 hours at 85°C
7.Corrosion resistance	No serious corrosion	96 hours at -55°C
8.Sulfur dioxide gas	No damage, cracks, or parts dislocation	Exposed to 20% salt water solution for 48 hours
		96 hours in 10 ppm concentration

●The test methods conform to MIL-STD-202.

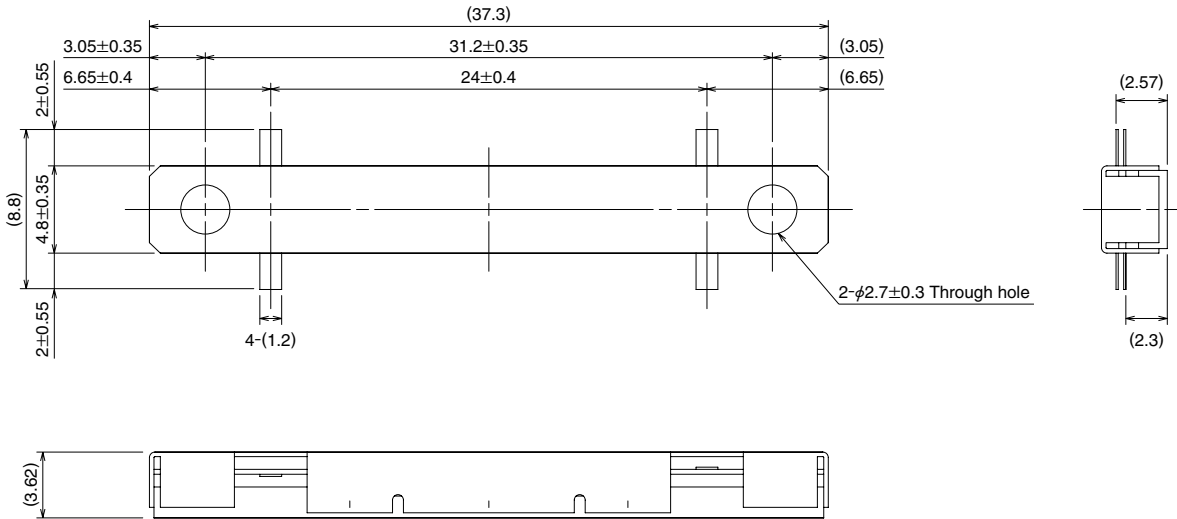
### ■Material

Component	Material	Finish
Cover	Aluminum	-----
Case	Brass	Nickel Plated
Board	Dielectric	Gold plated
Tabs	Phosphor bronze	Gold plated

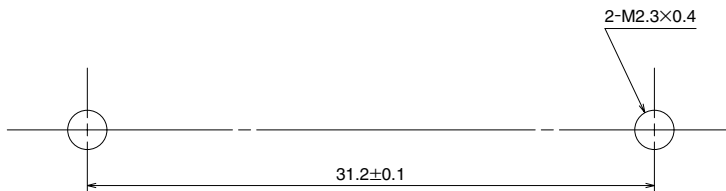
## ■ Specifications

Part Number	Frequency Range (GHz)	Coupling (dB)	Frequency Sensitivity (dB)	Isolation (dB Min)	V.S.W.R. (Max)	Weight (g)	Power (W)	Fig.
HD-02103AST	1.8~2.2	$3^{+0.15}_0$	$\pm 0.3$	23	1.2	2	200	1

## ■ Dimensions

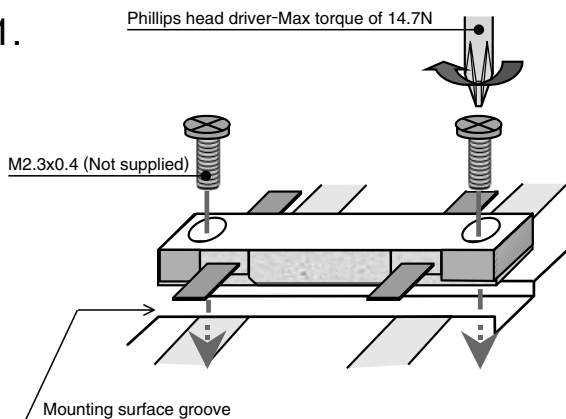


## ■ PCB Mounting Pattern

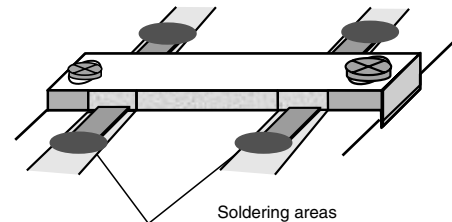


## ■ Mounting Sequence

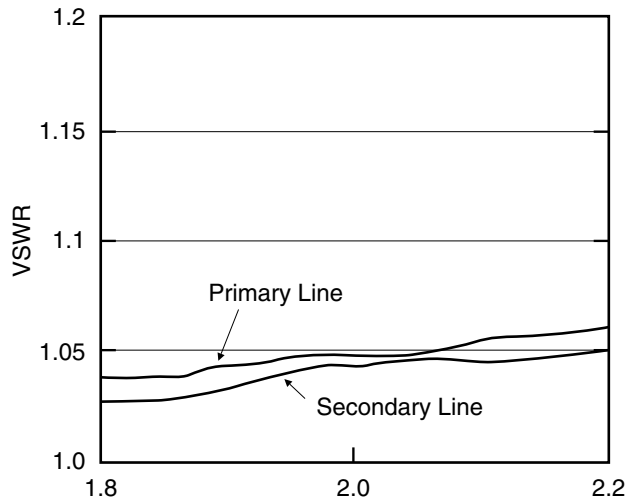
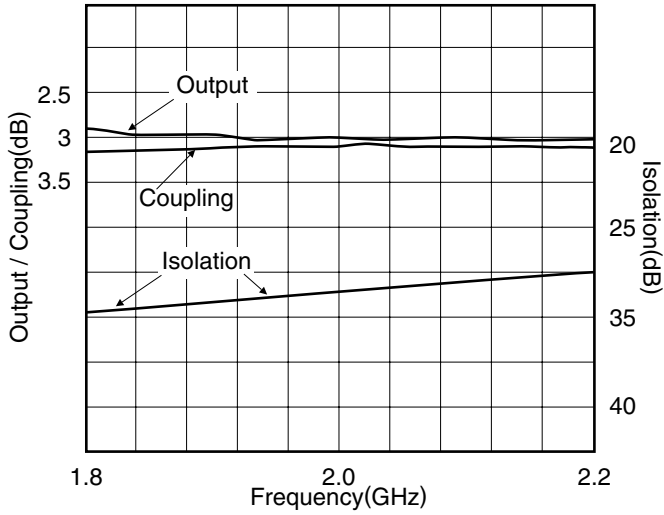
Step 1.



Step 2.  
Tab soldering



## Typical Data



## 200 W Power Test

Test fixture

Thermal resistance value

[Thermal resistance value : 9.0°C/W]

Frequency : 2.155GHz

Test Circuit

