# **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℃ to +80℃ 95% Max.
---------	--	-------------------------------------	--	------------------------

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 Vibratian		Frequency of 10 to 2000 Hz, overall amplitude of 1.52 mm,			
2. VIDIALION	No electrical discontinuity of 1 $\mu$ s or more	acceleration of 98 m/s <sup>2</sup> for 2 hours in each of 3 directions			
2 Shook	No damage, cracks, or parts dislocation	Acceleration of 490 m/s <sup>2</sup> , sine half-wave waveform,			
3.SHUCK		3 cycles in each of the 3 axis			
4 Temperature avale		Temperature: -55℃→+5℃ to +35℃→+85℃→+5℃ to +35℃			
4. Temperature cycle	No domago, oracle, or parts dislocation	Time: 30→5 max.→30→5 max. (Minutes)100 cycles			
5.High temperature exposure	no damage, clacks, or parts dislocation	96 hours at 85℃			
6.Low temperature exposure		96 hours at -55℃			
7.Corrosion resistance	No serious corrosion	Exposed to 20% salt water solution for 48 hours			
8.Sulfur dioxide gas	No damage, cracks, or parts dislocation	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 <sup>+0.15</sup>	±0.3	23	1.2	2	200	1

# Dimensions





# ■PCB Mounting Pattern



# Mounting Sequence



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** 



