# YT-FHC10292



6 to 18GHz

**Quadrature Hybrid Coupler** 

### **DESCRIPTION**

Yantel's Quadrature Hybrid Couplers offer unmatched size and wideband performance in a surface mount configuration. These 3 dB couplers offers excellent phase and amplitude balance with low loss and good isolation. As catalog components, they are available in a variety of frequency bands which offers a drop in solution with highly repeatable performance.

## **FEATURES**

- Small Size
- 90° Phase Delta between Output Ports
- >50W Power Handling
- Solder Surface Mount Package
- Frequency Stable over Temperature
- Operating & Storage Temp: -55°C to +125°C
- Moisture Sensitivity Level: MSL1
  Characteristic Impedance: 50Ω

## **Electrical Specifications**

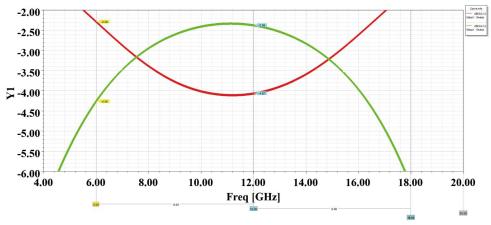
Parameter	Specification		
Frequency Range	6∼18GHz		
Typical Insertion Loss	0. 8dB		
Typical Return Loss	16. 5dB		
Isolation	20dB		
Amplitude Balance	0. 4dB		
Characteristic Impedance	50 Ω		
Package Size	0.35 x 0.25 x 0.01 in 8.89 x 6.35 x 0.25 mm		

<sup>\*</sup>Electrical specifications based on typical mounted performance at room temperature. Insertion loss may vary  $\pm 0.5 dB$  over temperature.

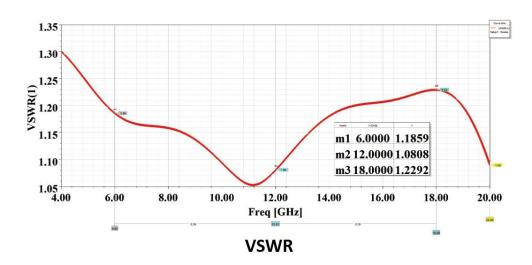
Quadrature Hybrid Coupler Port Configuration Options						
	Port 1	Port 2	Port 3	Port 4		
Configuration 1	lnput	lsolated	Coupled	Output		
Configuration 2	lsolated	lnput	Output	Coupled		
Configuration 3	Coupled	Output	lnput	lsolated		
Configuration 4	Output	Coupled	lsolated	lnput		

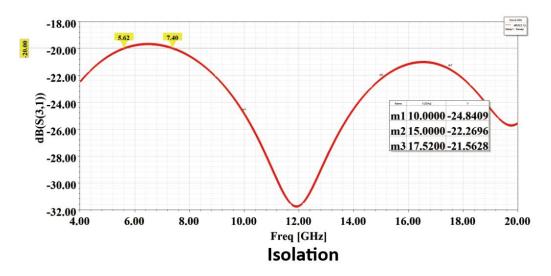
6 to 18GHz

## **Typical Measured Performance**



# Couple&Insertion





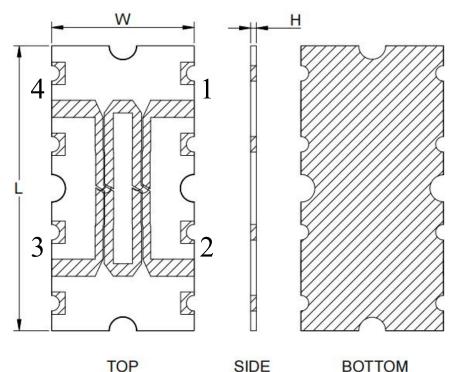
#### **Yantel Corporation**

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# **Physical Dimensions**

The product requires customers to make their own gold wire bonding.



TOP	SIDE	BOTTOM

Product Number	Length(in)	Width(in)	Height(in)	Length(mm)	Width(mm)	Height(mm)
YT-FHC10292	0.35	0.25	0.01	8.89	6.35	0.25

### **Recommended PCB Parameters:**

- 0.010 inch Rogers Board RO4350B
- 3.66 dK, Board Material design
- Dimensions of 50.0 Ohm CPWG:

0.016 in. RF trace width

0.007 in. spacing