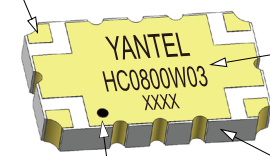


Description

High-power broadband surface-mounted and embedded coupler series, realizing the power synthesis and distribution of microwave high-power amplifier system, signal acquisition and other functions. Used in active phased array radar, microwave transceiver components, microwave amplifiers, radio stations, satellite communications and other projects, to provide standardized and customized high-quality and reliable products.

The performance and reliability indexes are in line with international products, and the pin definition and package size are compatible with international products, realizing 100% in-situ replacement.

Signal Pad



Part No.

GND

Orientation Marker

Features:

- 400-1200 MHz
- AMPS
- High Power
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Low VSWR
- Good Repeatability
- CTE compatible with FR4, G-10, RF-35, RO4350B and polyimide
- Immersion gold, prevent surface oxidation & scratch
- RoHS Compliant
- Tape & Reel Package available

Electrical Specifications

Frequency	Isolation	Insertion Loss	VSWR	Amplitude Balance
MHz	dB Min	dB Max	Max:1	dB Max
400-1200	20.0	0.3	1.25	±0.95
Phase Balance	Power Avg.CW.	Size	Thickness	Operating Temp.
Degrees	Watts	mm	mm	°C
90±4.0	200	14.22*8.89	2.5	-55 to+105

Notes:

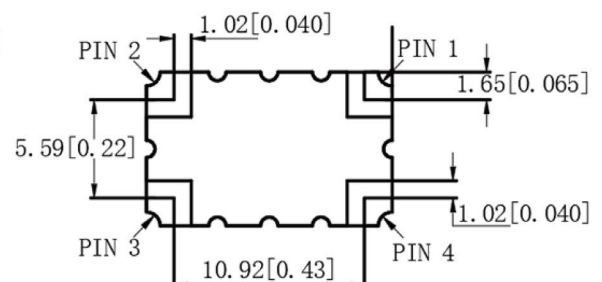
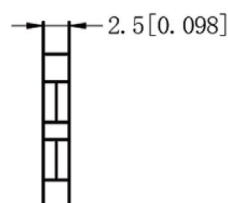
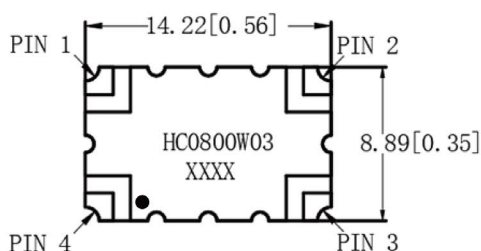
1. All the above data are based on specified demo board.
2. Insertion loss:Thru board loss has been removed.

Mechanical Outline

TOP VIEW

SIDE IEW

BOTTOM VIEW



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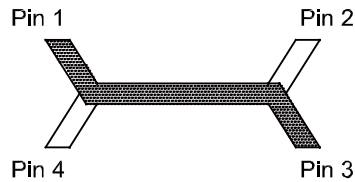
Add: No.308-322,3F,Building 1,Juchuang Jingu Innovation Park,Wenyuan Road 35,Xili Street,Nanshan,Shenzhen,China

Tel: 86-755-8355-1886 Fax: 86-755-8355-2533

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Hybrid Coupler Pin Configuration

The HC0800W03 has an orientation marker to denote Pin 1. Once port one has been identified the other ports are known automatically. Please see the chart below for clarification:

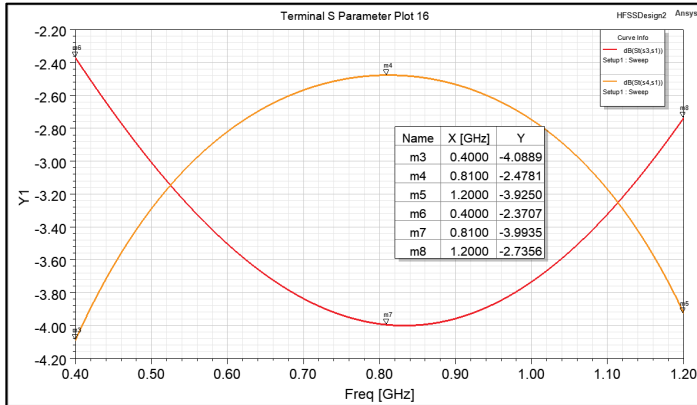


Configuration	Pin 1	Pin 2	Pin 3	Pin 4
Splitter	Input	Isolated	-3dB $\angle$ θ -90°	-3dB $\angle$ θ
Splitter	Isolated	Input	-3dB $\angle$ θ	-3dB $\angle$ θ -90°
Splitter	-3dB $\angle$ θ -90°	-3dB $\angle$ θ	Input	Isolated
Splitter	-3dB $\angle$ θ	-3dB $\angle$ θ -90°	Isolated	Input
Combiner	A $\angle$ θ -90°	A $\angle$ θ	Isolated	Output
Combiner	A $\angle$ θ	A $\angle$ θ -90°	Output	Isolated
Combiner	Isolated	Output	A $\angle$ θ -90°	A $\angle$ θ
Combiner	Output	Isolated	A $\angle$ θ	A $\angle$ θ -90°

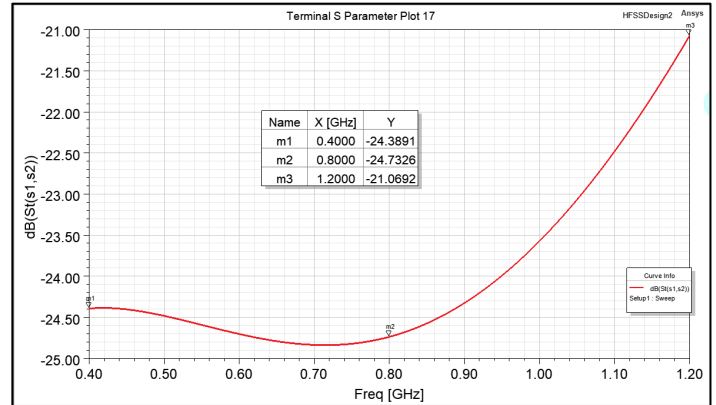
Note:

“A” is the amplitude of the applied signals. When two quadrature signals with equal amplitudes are applied to the coupler as described in the table, they will combine at the output port. If the amplitudes are not equal, some of the applied energy will be directed to the isolated port.

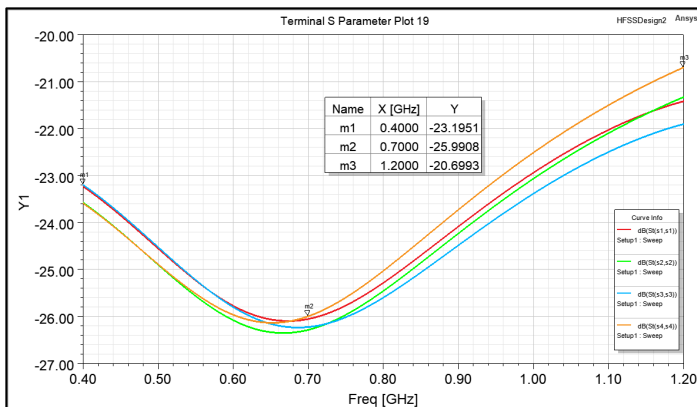
Typical Performance



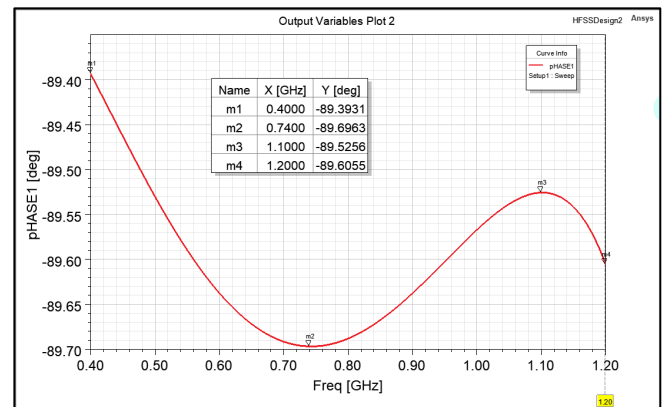
Coupling & Transmission



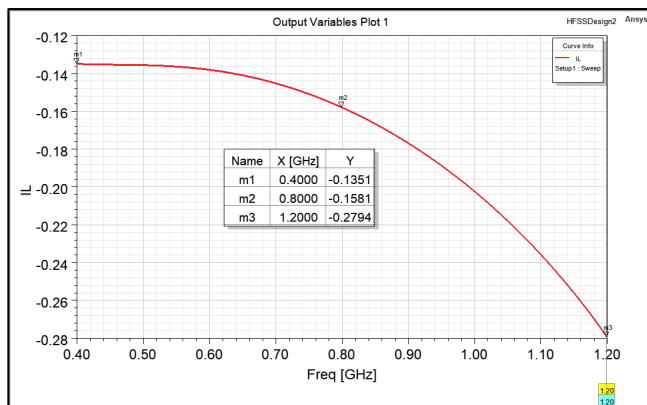
Isolation



Return Loss



Phase



Insertion Loss

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