

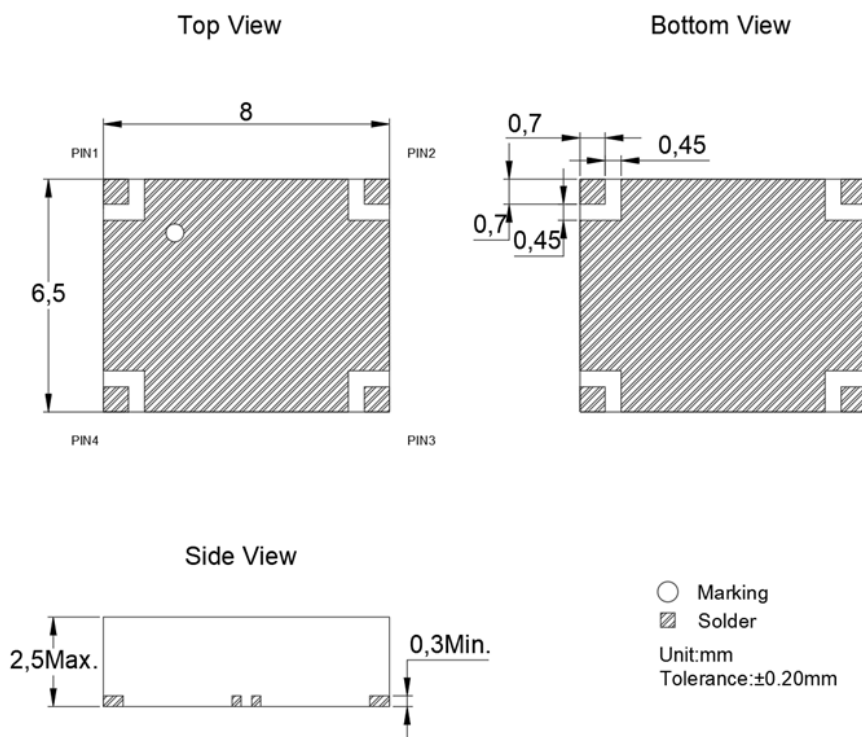
Features

- Low profile, high performance 3dB hybrid coupler
- Surface mount package
- Low insertion loss and tight amplitude and phase balance is required
- LTCC process

Specifications

NO.	Parameter		SPEC
1	Frequency range		1000~3000 MHz
2	Insertion Loss (avg of coupled outputs above 3.0 dB)	1000~3000 MHz	0.8 dB max.
3	Isolation	1000~3000 MHz	15 dB min.
4	Amplitude Unbalance	1000~3000 MHz	± 0.8 dB
5	Return Loss	1000~3000 MHz	10 dB min.
6	Phase Unbalance	1000~3000 MHz	90 ± 6 degree
7	Power		5W (CW AVG.)
8	Operation Temperature Range		-55°C ~ +95°C

Dimensions (mm)



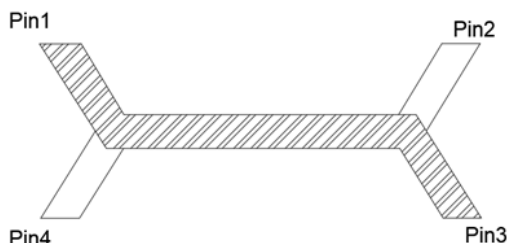
Yantel Corporation

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

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

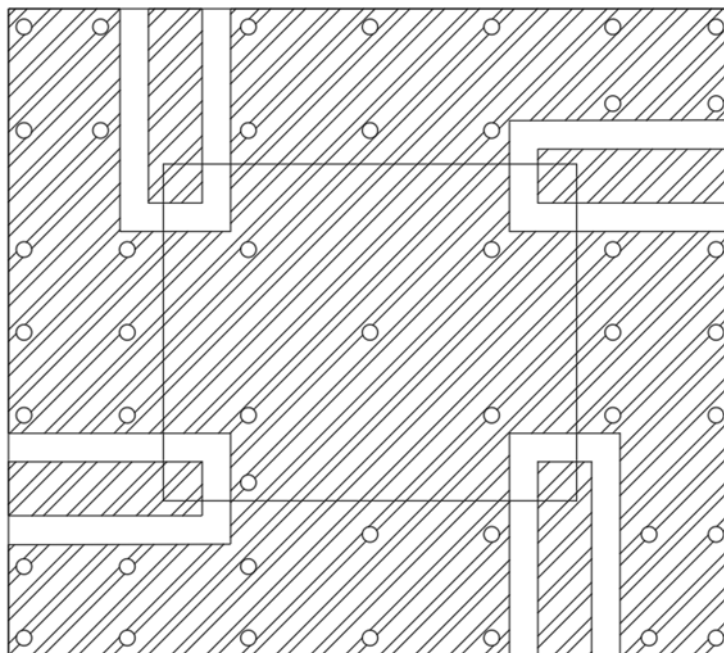
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Hybrid Coupler Pin Configuration:



Configuration	Pin1	Pin 2	Pin3	Pin 4
Splitter	Input	Isolated	$-3\text{dB} \angle \theta - 90$	$-3\text{dB} \angle \theta$
Splitter	Isolated	Input	$-3\text{dB} \angle \theta$	$-3\text{dB} \angle \theta - 90$
Splitter	$-3\text{dB} \angle \theta - 90$	$-3\text{dB} \angle \theta$	Input	Isolated
Splitter	$-3\text{dB} \angle \theta$	$-3\text{dB} \angle \theta - 90$	Isolated	Input
*Combiner	$A \angle \theta - 90$	$A \angle \theta$	Isolated	Output
*Combiner	$A \angle \theta$	Isolated	Output	Isolated
*Combiner	Isolated	Output	$A \angle \theta - 90$	$A \angle \theta$
*Combiner	Output	$A \angle \theta - 90$	$A \angle \theta$	$A \angle \theta - 90$

Mounting Considerations



Unit: mm

Line width to be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness

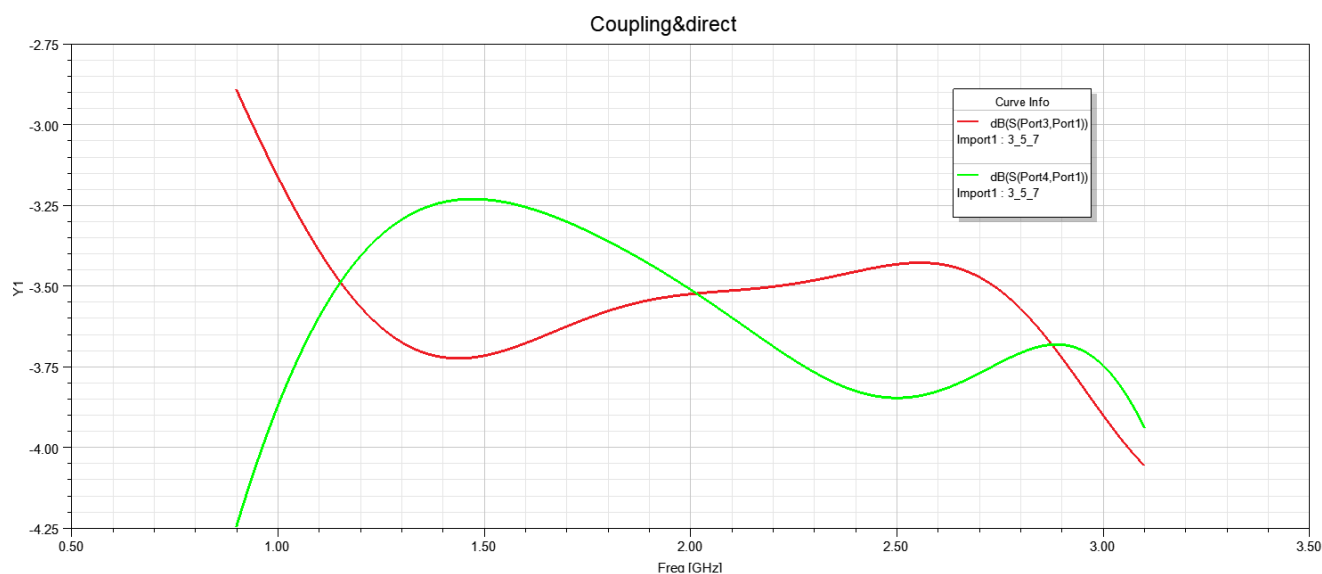
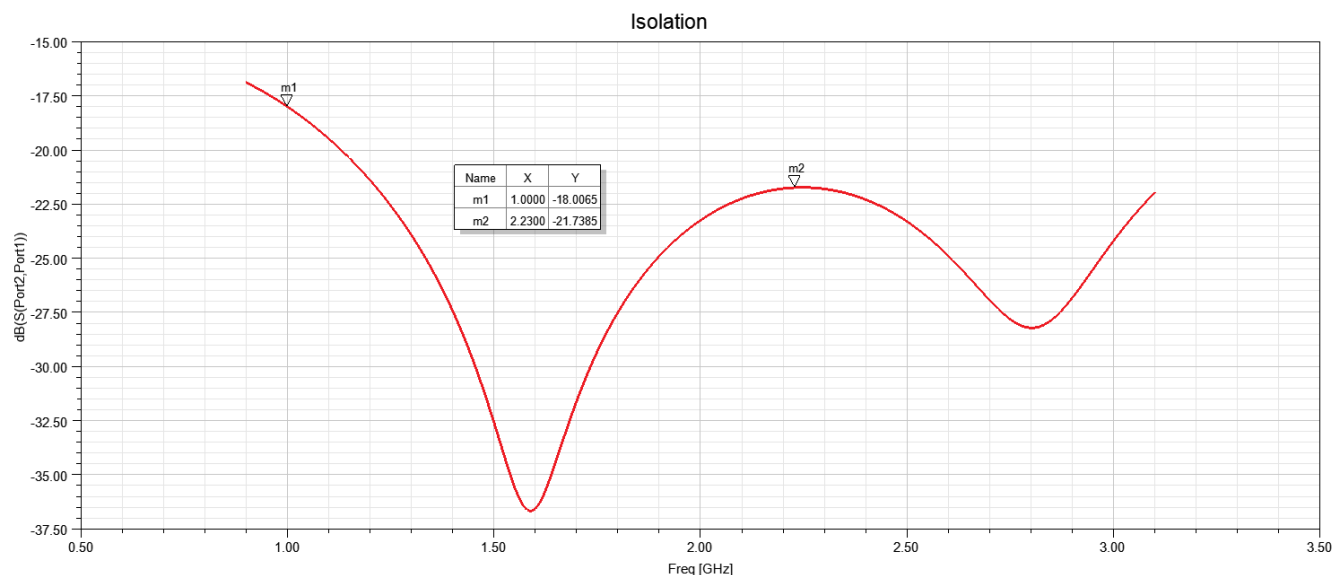
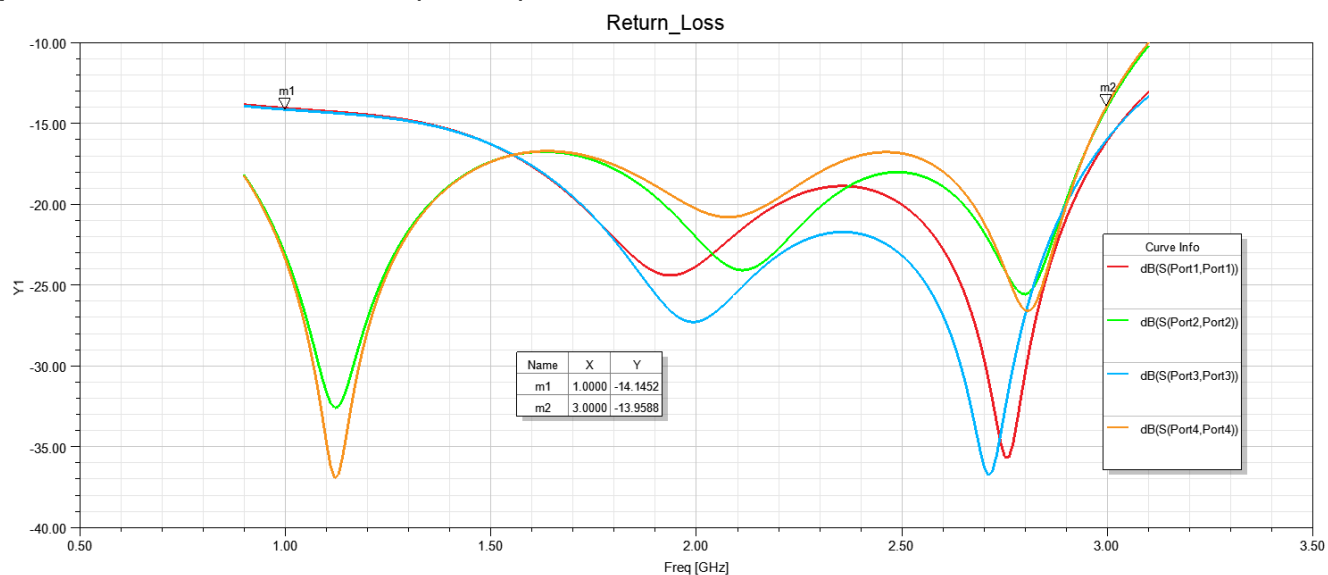
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Typical Electrical Characteristics (T=25°C)



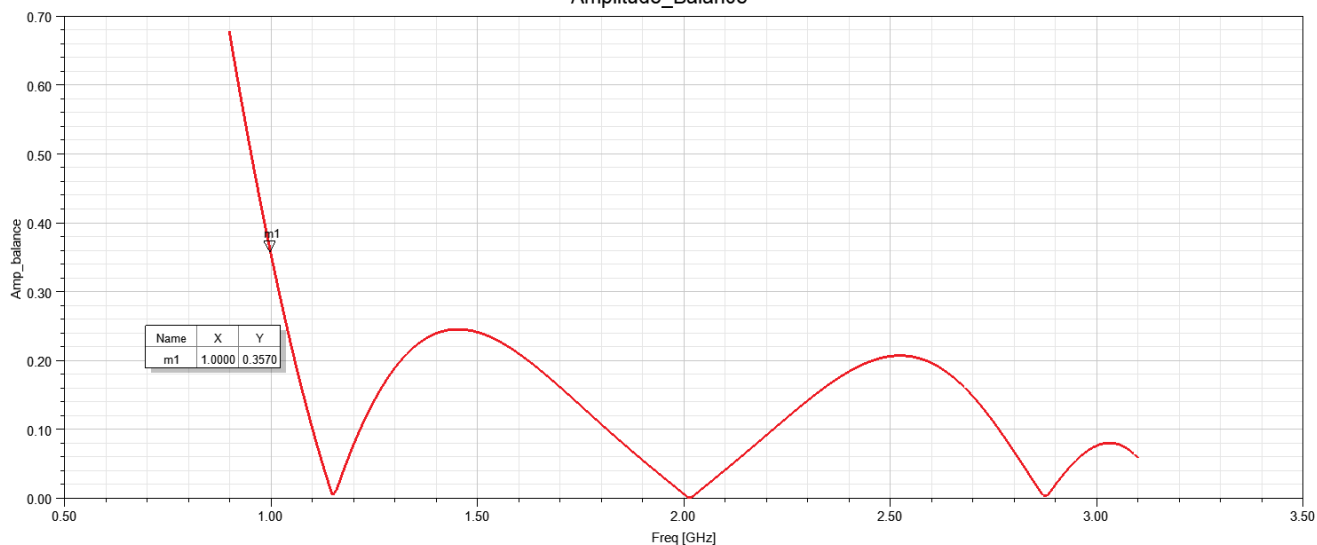
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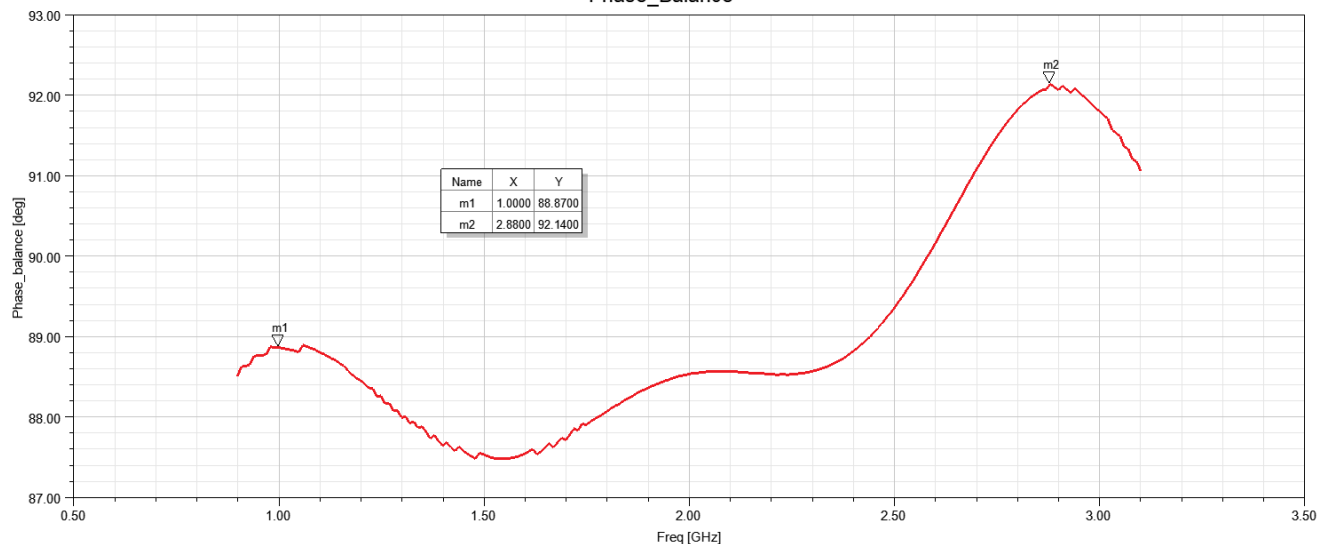
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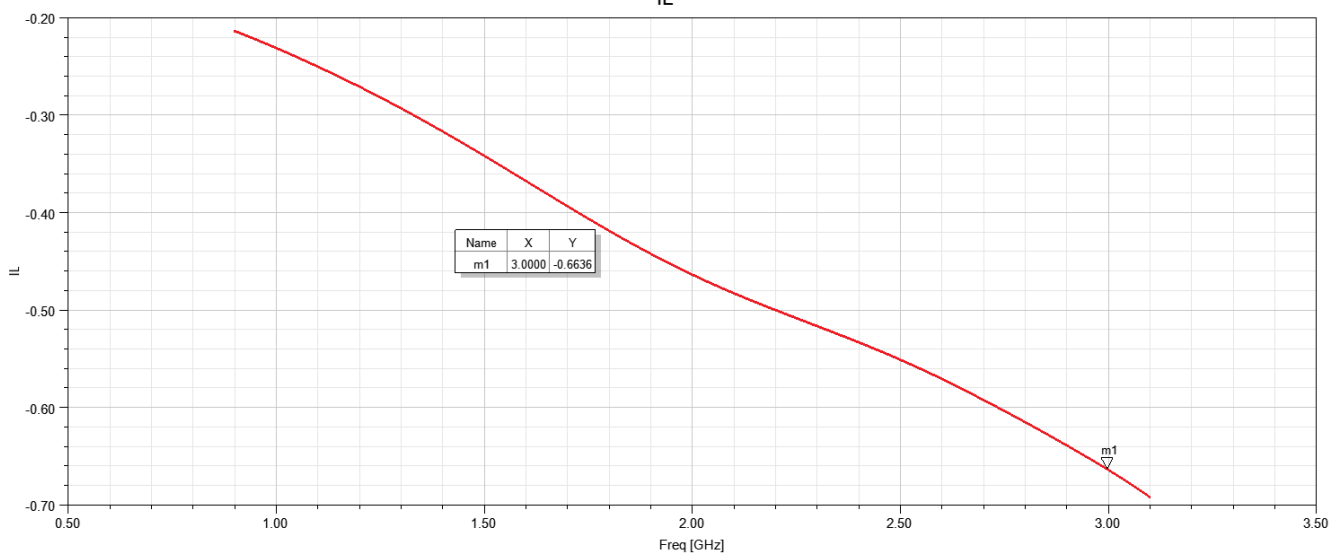
Amplitude_Balance



Phase_Balance



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