

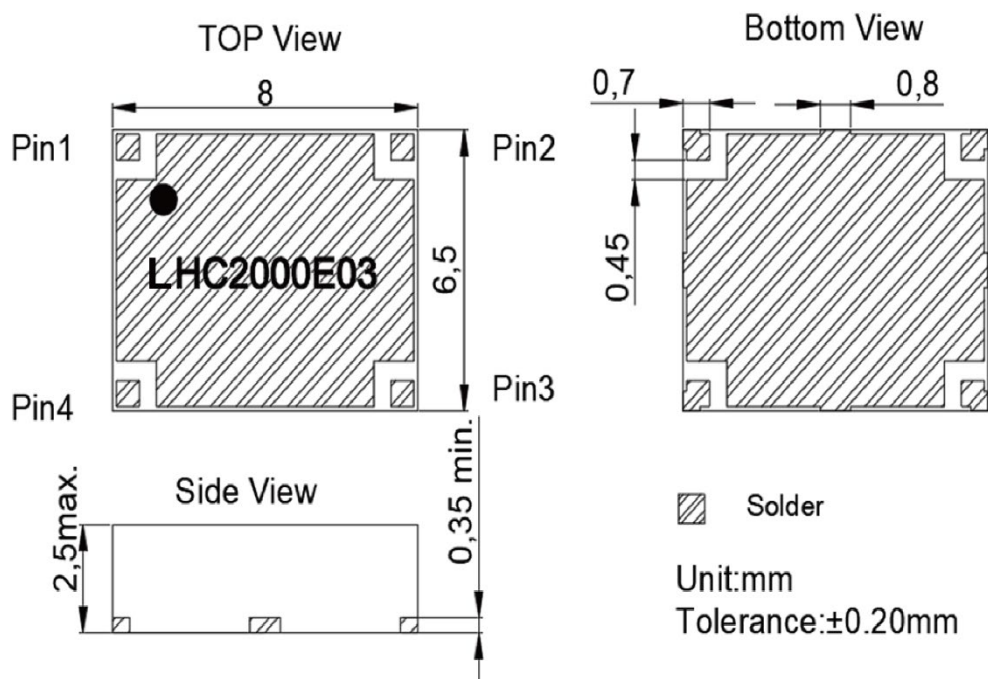
### Features

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

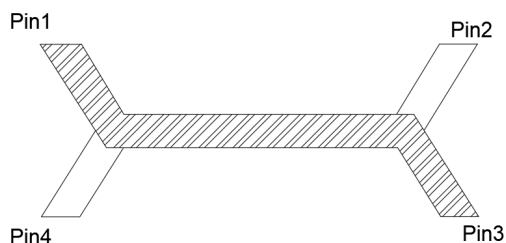
### Specifications

| 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 | $\pm 0.8$ dB      |
| 5   | Return Loss                                          | 1000~3000 MHz | 10 dB min.        |
| 6   | Phase Unbalance                                      | 1000~3000 MHz | $90 \pm 6$ degree |
| 7   | Power                                                |               | 5W (CW AVG.)      |
| 8   | Operation Temperature Range                          |               | -55°C ~ +95°C     |

### Dimensions (mm)

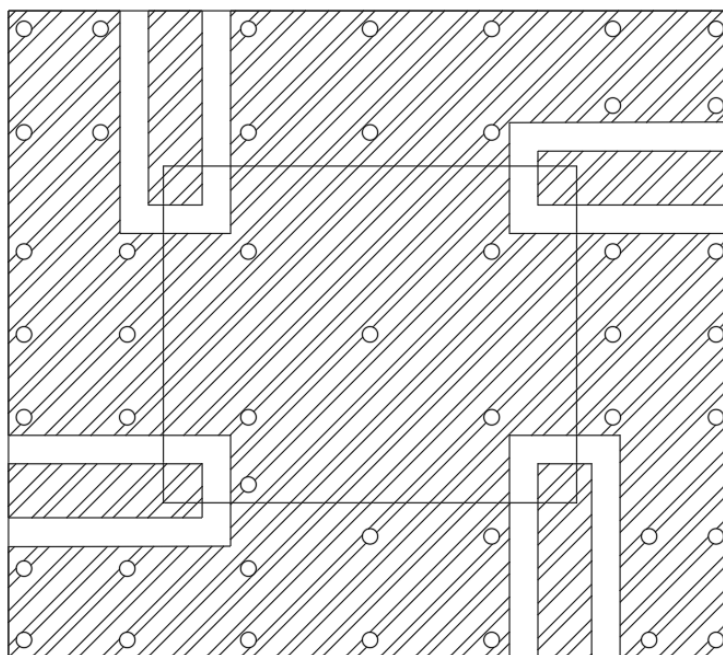


### Hybrid Coupler Pin Configuration:



| Configuration | Pin1                      | Pin 2                     | Pin3                      | Pin 4                     |
|---------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Splitter      | Input                     | Isolated                  | $-3dB \angle \theta - 90$ | $-3dB \angle \theta$      |
| Splitter      | Isolated                  | Input                     | $-3dB \angle \theta$      | $-3dB \angle \theta - 90$ |
| Splitter      | $-3dB \angle \theta - 90$ | $-3dB \angle \theta$      | Input                     | Isolated                  |
| Splitter      | $-3dB \angle \theta$      | $-3dB \angle \theta - 90$ | 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  $\Omega$  characteristic impedance, depending on PCB material and thickness

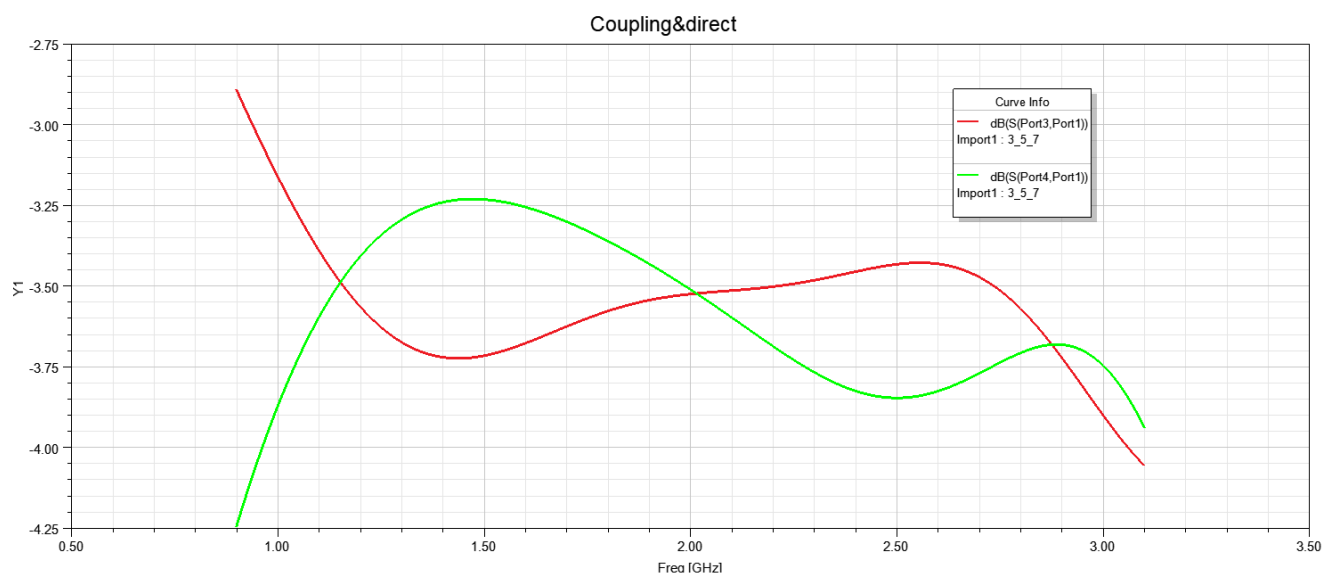
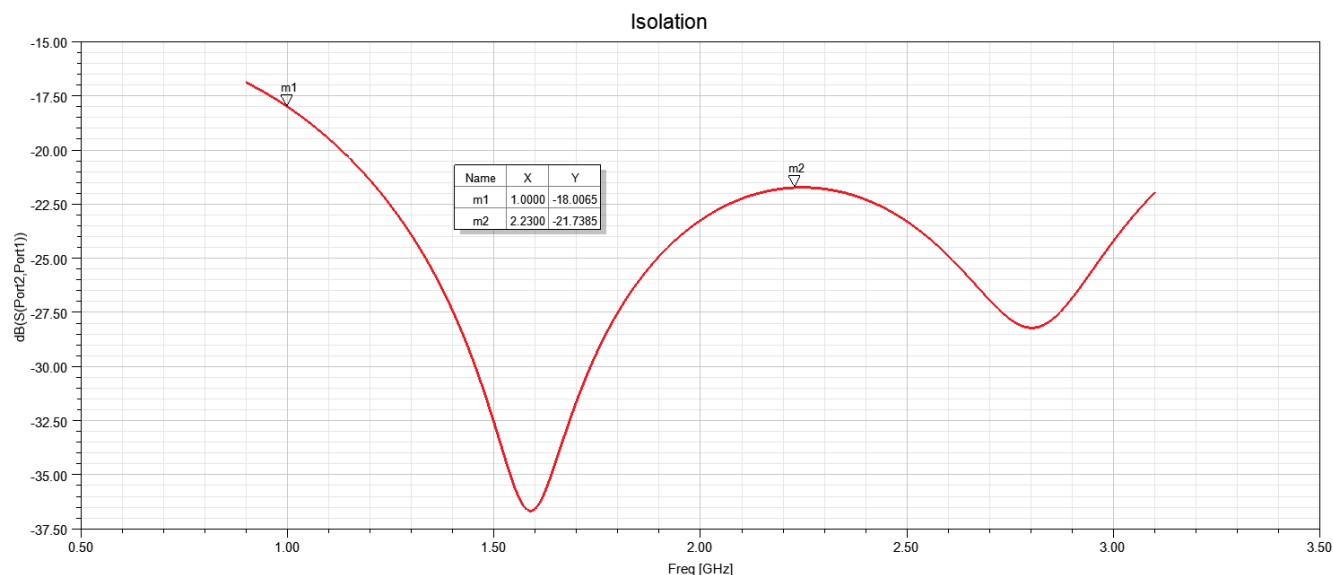
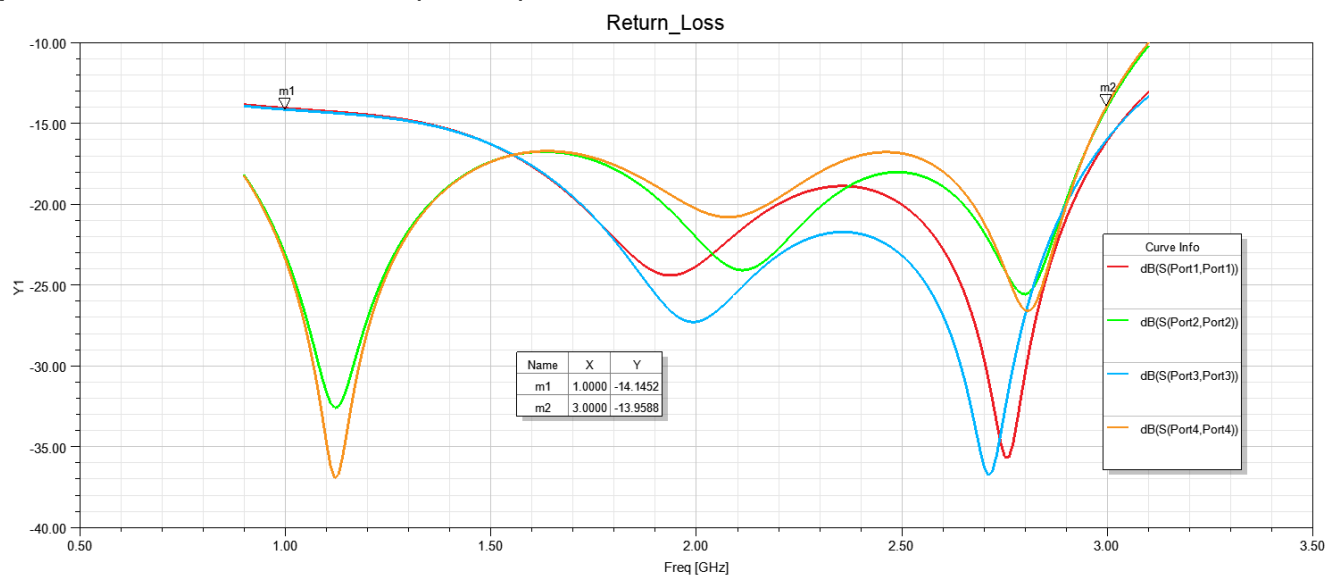
### Yantel Corporation

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

For detailed performance specs & shopping online see Yantel web site : [www.yantel-corp.com](http://www.yantel-corp.com)

### Typical Electrical Characteristics (T=25°C)



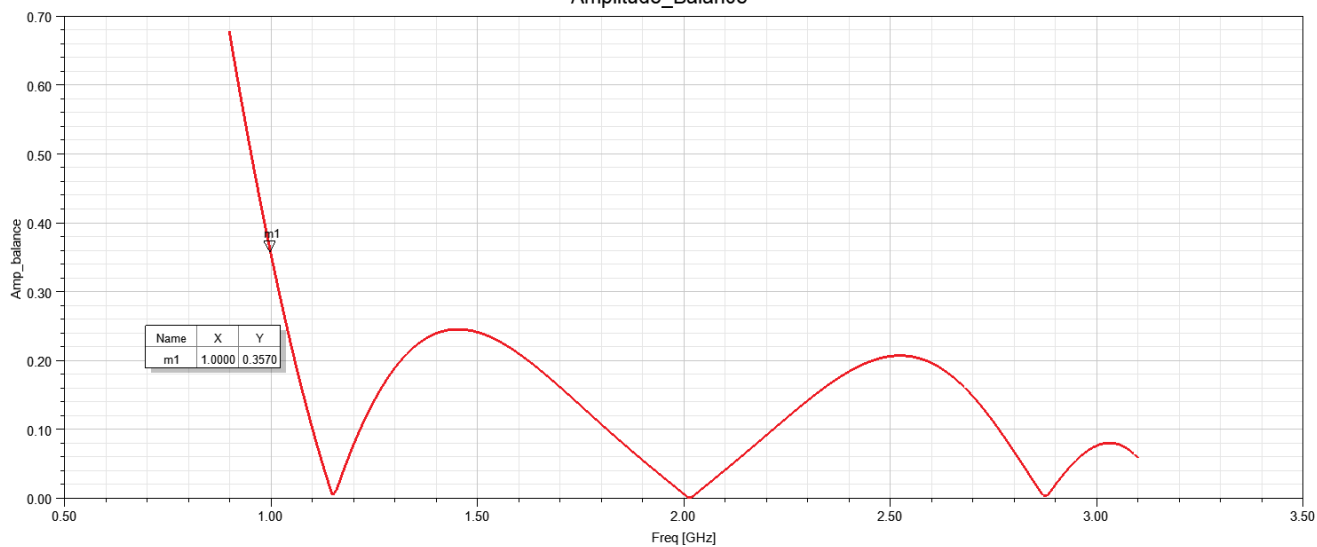
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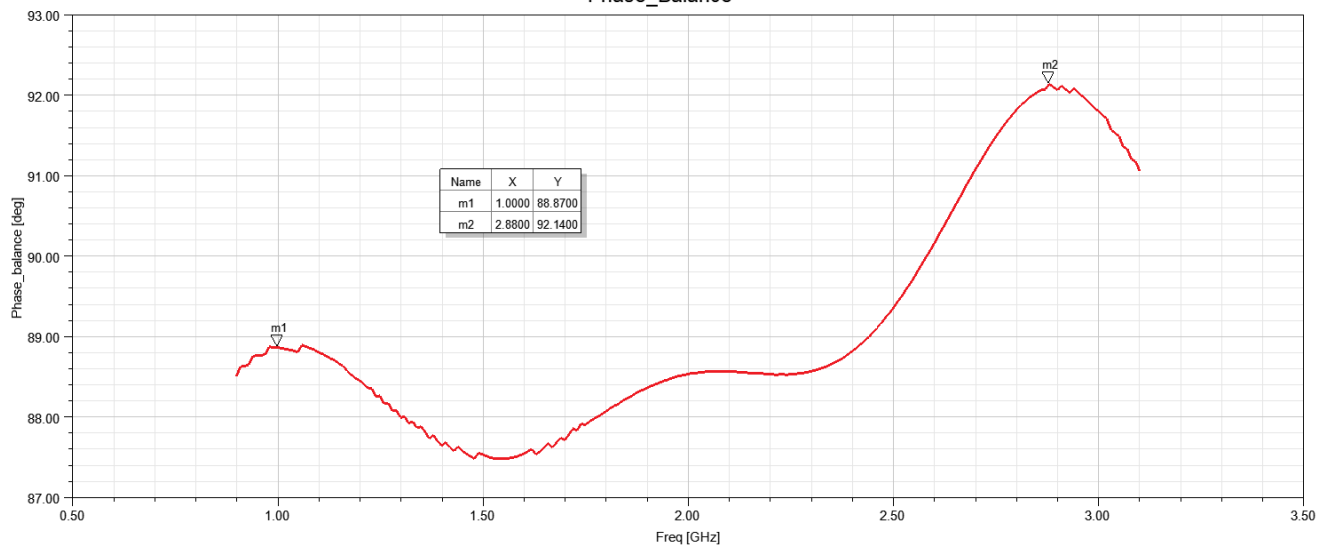
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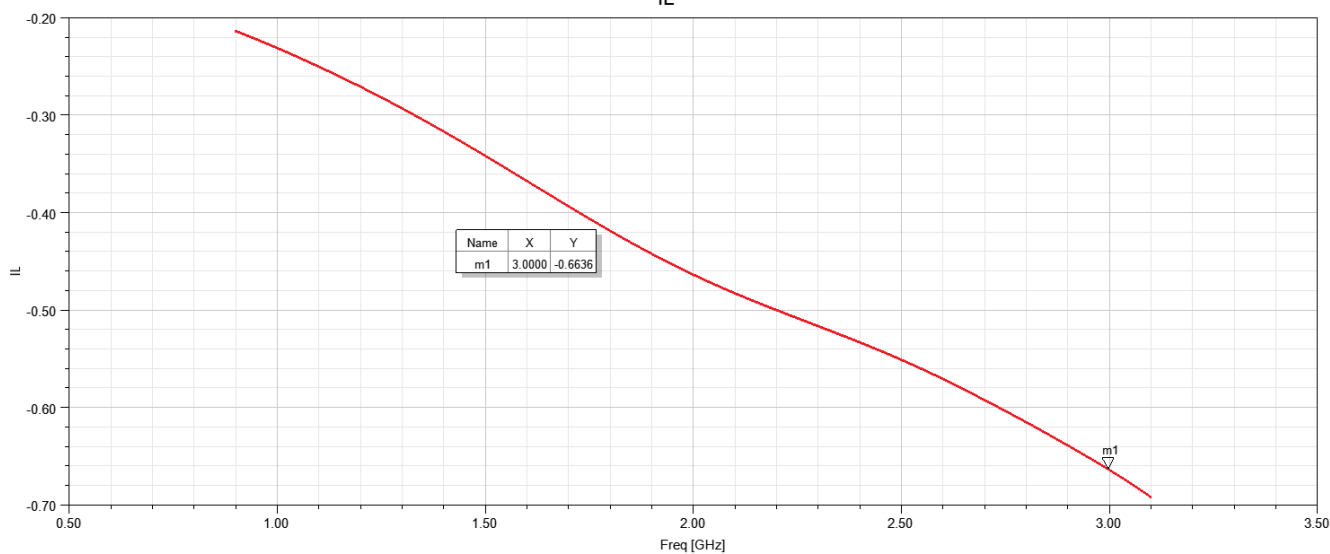
Amplitude\_Balance



Phase\_Balance



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