

# DIRECTIONAL COUPLER

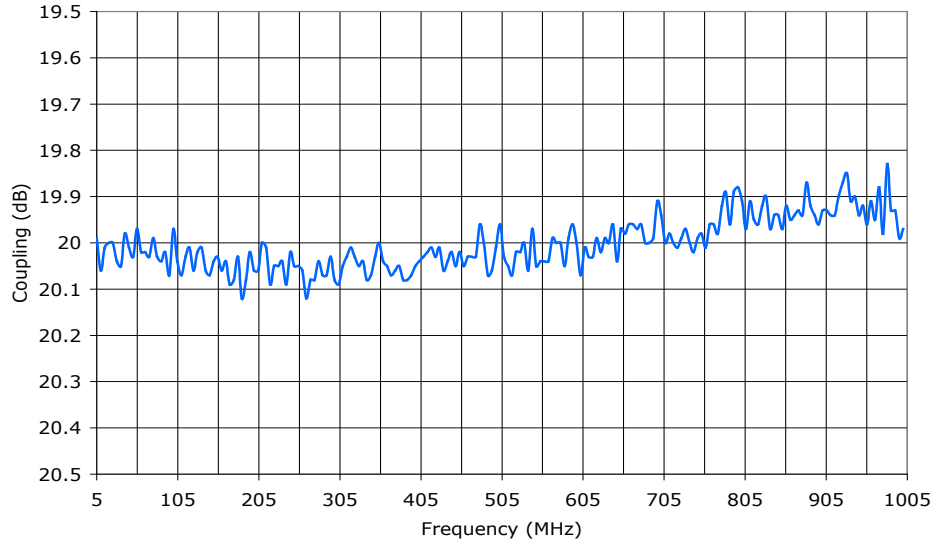
## SURFACE MOUNT MODEL: SDC5100D

**WIDE BANDWIDTH**

**5 - 1000 MHz**

**FEATURES:**

- ▶ Low Insertion Loss
- ▶ Excellent Coupling Flatness
- ▶ High Directivity
- ▶ Lead Free - RoHs Compliant
- ▶ Small Size, Surface Mount



**SPECIFICATIONS (Rev. C 11/08/11)**

|                                    |                           |           |          |
|------------------------------------|---------------------------|-----------|----------|
| <b>Frequency</b>                   | 5 - 1000 MHz              |           |          |
| <b>Coupling</b>                    | 20 dB $\pm$ 0.5 dB (Nom.) |           |          |
| <b>Coupling Flatness</b>           | dB (Typ.)                 | dB (Max.) |          |
|                                    | $\pm$ 0.1                 | $\pm$ 0.5 |          |
| <b>Mainline Loss</b>               | Freq. (MHz)               | dB(Typ.)  | dB(Max.) |
|                                    | 5-50                      | 0.30      | 0.60     |
|                                    | 50-500                    | 0.45      | 0.75     |
| <b>Directivity</b>                 | Freq. (MHz)               | dB(Typ.)  | dB(Min.) |
|                                    | 5-50                      | 27        | 23       |
|                                    | 50-500                    | 30        | 23       |
|                                    | 500-1000                  | 24        | 18       |
| <b>Input Power</b>                 | 1 Watt (Max.)             |           |          |
| <b>Output Impedance</b>            | 50 Ohms (Nom.)            |           |          |
| <b>VSWR:</b>                       | 1.2:1 (Typ.)              |           |          |
| <b>Operating Temperature Range</b> | -40 to +85 °C             |           |          |

**Package #** 357

**RECOMMENDED PCB LAYOUT**

TOLERANCES ON THREE DECIMAL PLACES=  $\pm$  0.015

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7301

| PORT CONFIGURATION |        |         |            |
|--------------------|--------|---------|------------|
| Input              | Output | Coupled | Gnd.       |
| 8                  | 4      | 6       | All Others |

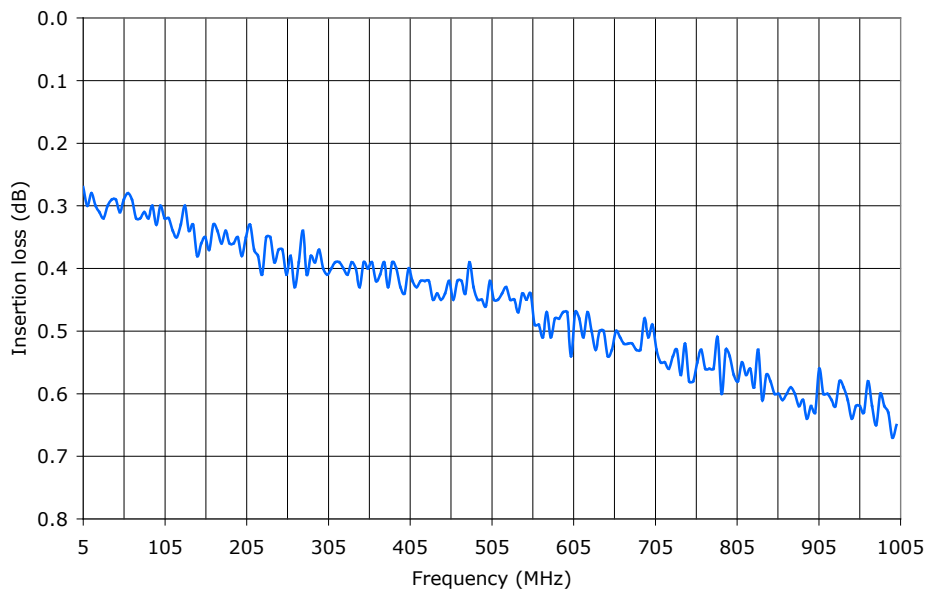
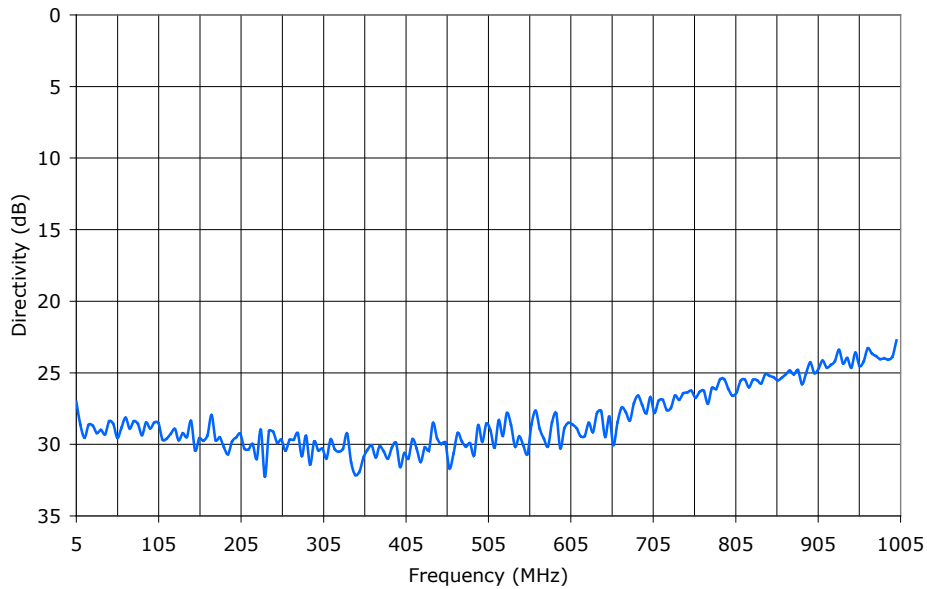
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PERFORMANCE PLOTS

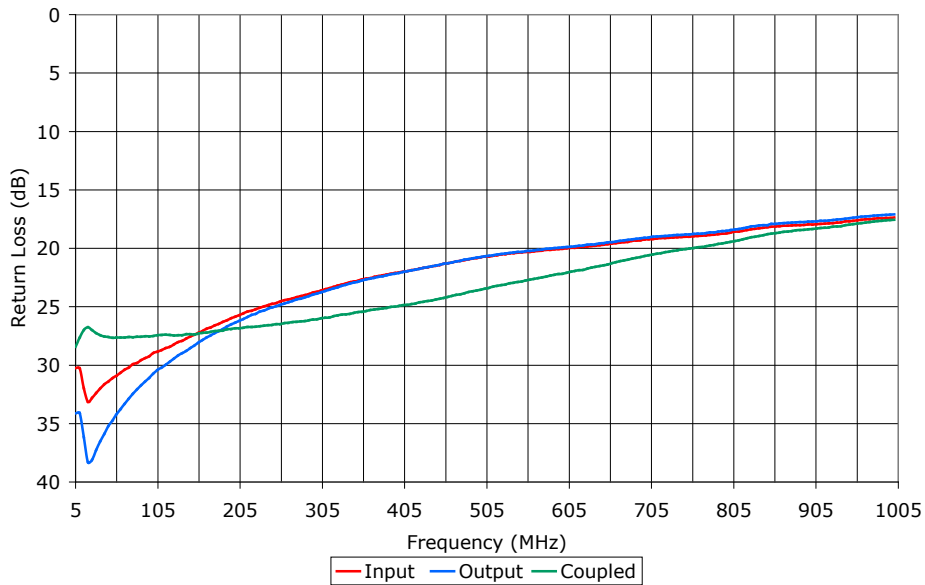


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