**GENERAL DESCRIPTION**

**RFAP TECHNOLOGY**

The DB0603N 3dB 90° Coupler is based on thin-film multilayer technology. The technology provides a miniature part with excellent high frequency performance and rugged construction for reliable automatic assembly.

The RFAP LGA 3dB 90° Coupler will be offered in a variety of frequency bands compatible with various types of high frequency wireless systems.

**APPLICATIONS**

- Balanced Amplifiers and Signal Distribution in Wireless Communications

**DIMENSIONS:**

| L    | 1.60±0.10 (0.063±0.004) |
| W    | 0.84±0.10 (0.033±0.004)  |
| T    | 0.60±0.10 (0.024±0.004)  |
| A    | 0.25±0.05 (0.010±0.002)  |
| B    | 0.20±0.05 (0.008±0.002)  |
| S    | 0.05±0.05 (0.002±0.002)  |

**FEATURES**

- Miniature 0603 size
- Low I. Loss
- High Isolation
- Surface Mountable
- RoHS Compliant
- Supplied on T&R

**LAND GRID ARRAY ADVANTAGES:**

- Inherent Low Profile
- Self Alignment during Reflow
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation

**ELECTRICAL PARAMETERS**

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**ORIENTATION IN TAPE**

- 50 OHM
- OUT 1
- IN
- OUT 2
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2040MHz to 2240MHz  DB0603N2140ANTR

Return Loss - Input

Insertion Loss

Amplitude Balance
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2040MHz to 2240MHz  DB0603N2140ANTR

Phase Balance

Isolation
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2200MHz to 2600MHz  DB0603N2400ANTR

Return Loss - Input

Insertion Loss

Amplitude Balance
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2200MHz to 2600MHz  DB0603N2400ANTR

Phase Balance

Isolation
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2850MHz to 3150MHz  DB0603N3000ANTR

Return Loss - Input

-10  -12  -14  -16  -18  -20

2800  2900  3000  3100  3200

Frequency (MHz)

Insertion Loss

-1.8  -1.2  0  0.6

2800  2900  3000  3100  3200

Frequency (MHz)

Amplitude Balance

-2  -1  0  1  2

2800  2900  3000  3100  3200

Frequency (MHz)
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

2850MHz to 3150MHz DB0603N3000ANTR

Phase Balance

Isolation

Frequency (MHz)
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

3200MHz to 3800MHz DB0603N3500ANTR

Return Loss - Input

Insertion Loss

Amplitude Balance
Thin-Film Directional Couplers
DB0603N 3dB 90° Couplers

3200MHz to 3800MHz  DB0603N3500ANTR

Phase Balance

Isolation
Thin-Film Directional Couplers
DB0805 3dB 90° Couplers

2325 ± 50MHz DB0805A2325AWTR

Frequency (MHz)

Frequency (MHz)

dB

dB

I. Loss 1

I. Loss 2

R. Loss

Isolation