

# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



### 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

### FEATURES

- Miniature 0603 size
- Low I. Loss
- High Isolation
- Surface Mountable
- RoHS Compliant
- Supplied on T&R
- Power Rating:  
10W RF  
Continuous

### LAND GRID ARRAY ADVANTAGES:

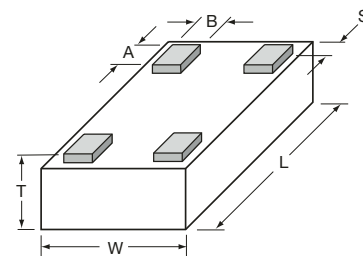
- Inherent Low Profile
- Self Alignment during Reflow
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation

### DIMENSIONS:

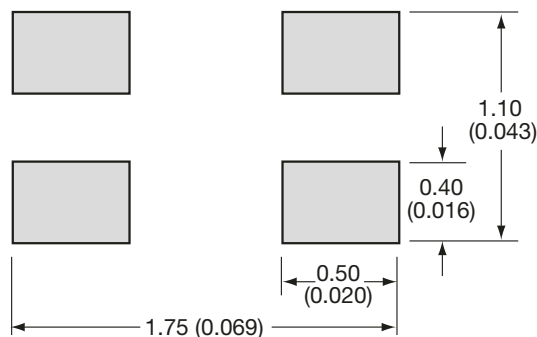
millimeters (inches)

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

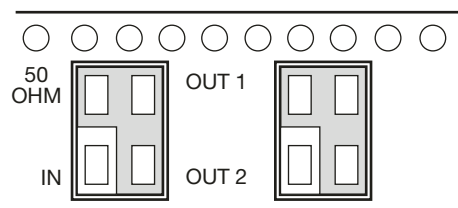
### Bottom View



### Recommended Pad Layout Dimensions mm (inches)



### ORIENTATION IN TAPE



### ELECTRICAL PARAMETERS

| Part Number     | Frequency MHz |      | Port Impedance $\Omega$ | Return Loss [dB] |      | Isolation [dB] |      | Insertion Loss [dB] |      | Amplitude Balance [dB] |      | Phase Balance (Relative to 90°) Deg |      | Power Handling Watts |
|-----------------|---------------|------|-------------------------|------------------|------|----------------|------|---------------------|------|------------------------|------|-------------------------------------|------|----------------------|
|                 | Min.          | Max. |                         | Min.             | Typ. | Min.           | Typ. | Typ.                | Max. | Typ.                   | Max. | Typ.                                | Max. |                      |
| DB0603N2140ANTR | 2040          | 2240 | 50                      | 15               | 26   | 15             | 23   | 0.30                | 0.40 | 0.50                   | 0.80 | 2                                   | 3    | 10                   |
| DB0603N2400ANTR | 2300          | 2500 | 50                      | 12               | 17   | 15             | 23   | 0.25                | 0.35 | 0.30                   | 0.80 | 2                                   | 3    | 10                   |
| DB0603N2600ANTR | 2400          | 2800 | 50                      | 12               | 17   | 15             | 23   | 0.25                | 0.35 | 0.30                   | 0.80 | 2                                   | 3    | 10                   |
| DB0603N3000ANTR | 2850          | 3150 | 50                      | 12               | 15   | 15             | 26   | 0.20                | 0.30 | 0.30                   | 0.80 | 2                                   | 3    | 10                   |
| DB0603N3500ANTR | 3300          | 3700 | 50                      | 12               | 15   | 15             | 26   | 0.20                | 0.30 | 0.30                   | 0.80 | 2                                   | 3    | 10                   |
| DB0603N4600ANTR | 4200          | 5000 | 50                      | 12               | 16   | 12             | 15   | 0.50                | 0.70 | 0.40                   | 1.00 | 1.5                                 | 3    | 10                   |
| DB0603N5500ANTR | 5100          | 5900 | 50                      | 12               | 16   | 10             | 14   | 0.60                | 0.80 | 0.80                   | 1.50 | 1                                   | 3    | 10                   |
| DB0603N5800ANTR | 5600          | 6000 | 50                      | 12               | 16   | 12             | 17   | 0.40                | 0.90 | 0.30                   | 0.90 | 2                                   | 3    | 10                   |

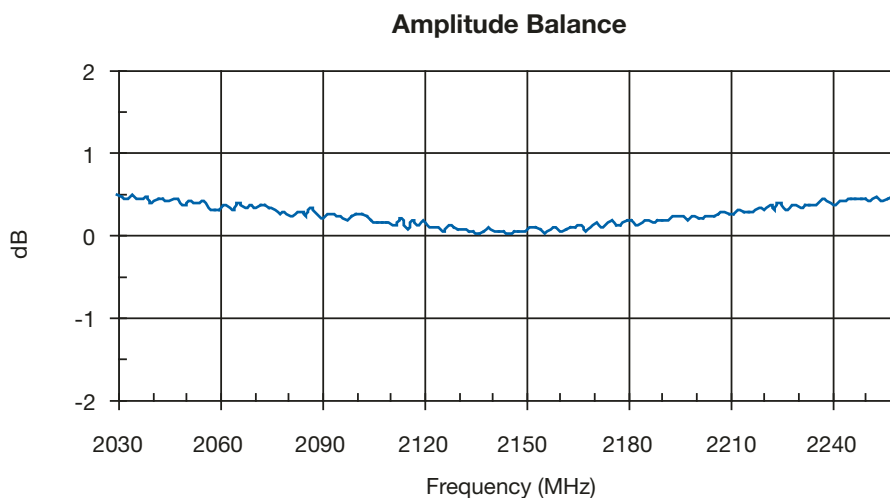
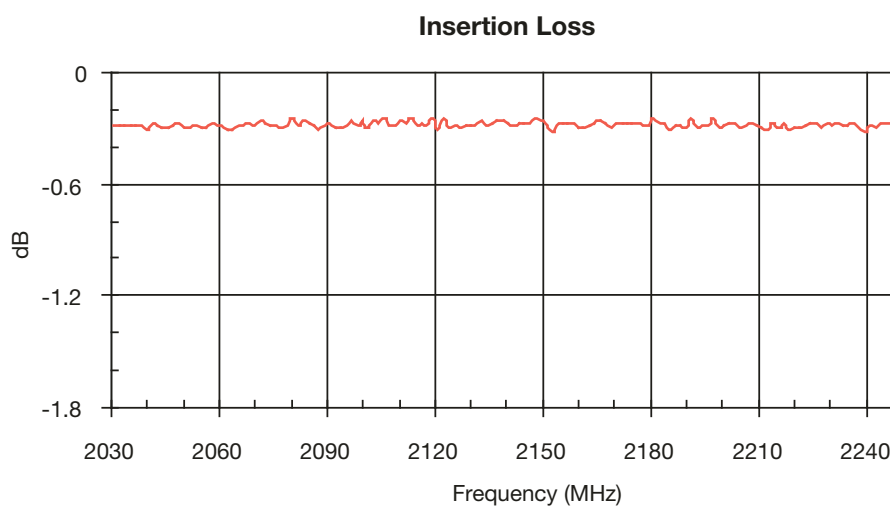
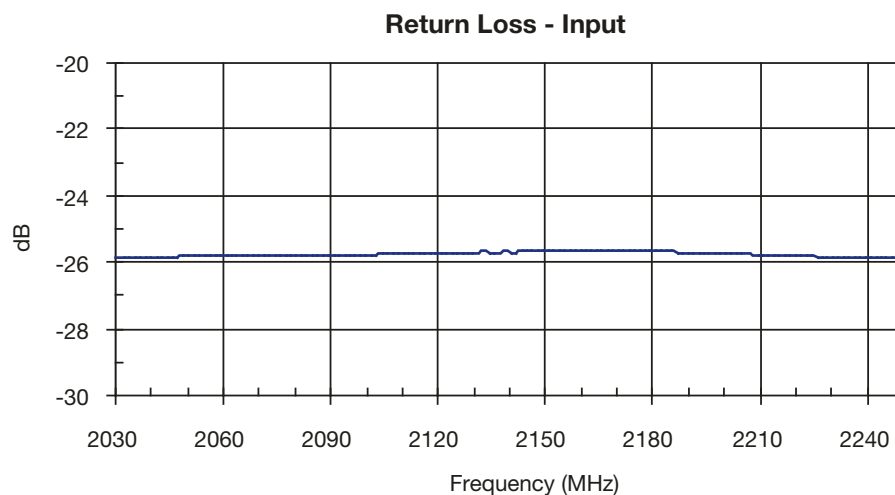
NOTE: Additional Frequencies Available Upon Request

# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



2040MHz to 2240MHz DB0603N2140ANTR



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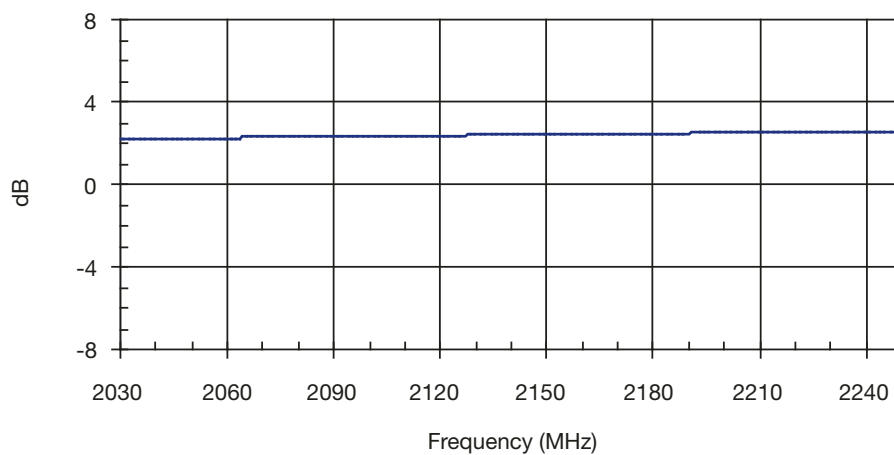
# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers

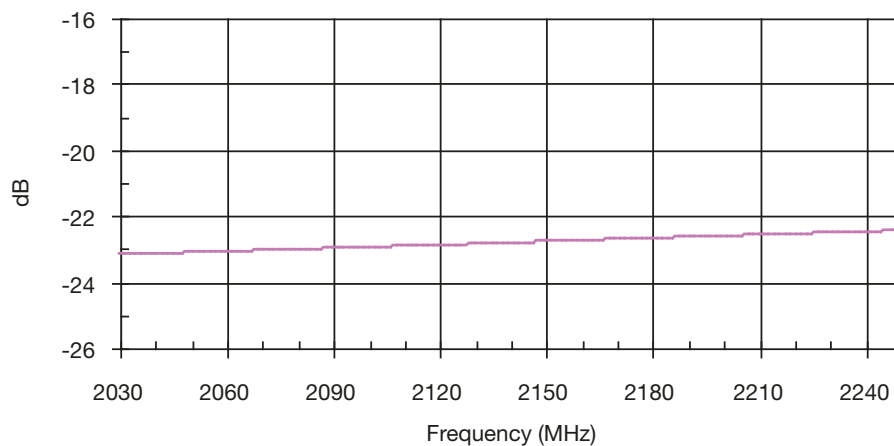


2040MHz to 2240MHz DB0603N2140ANTR

Phase Balance



Isolation



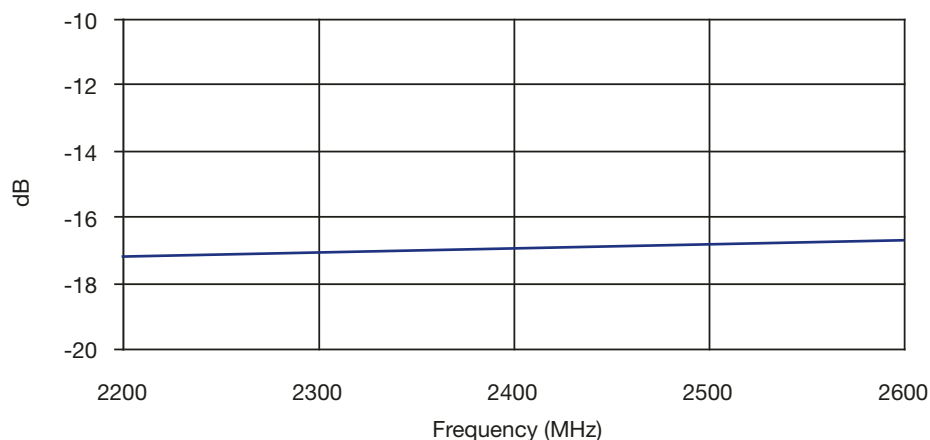
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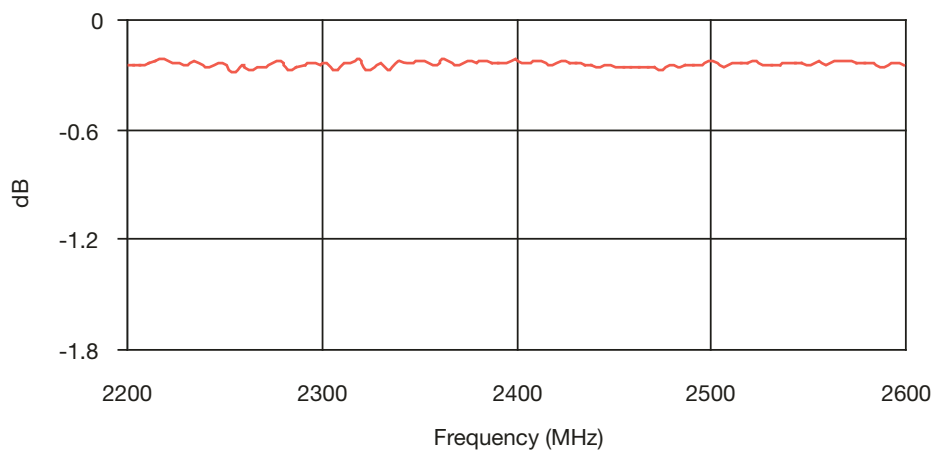


2200MHz to 2600MHz DB0603N2400ANTR

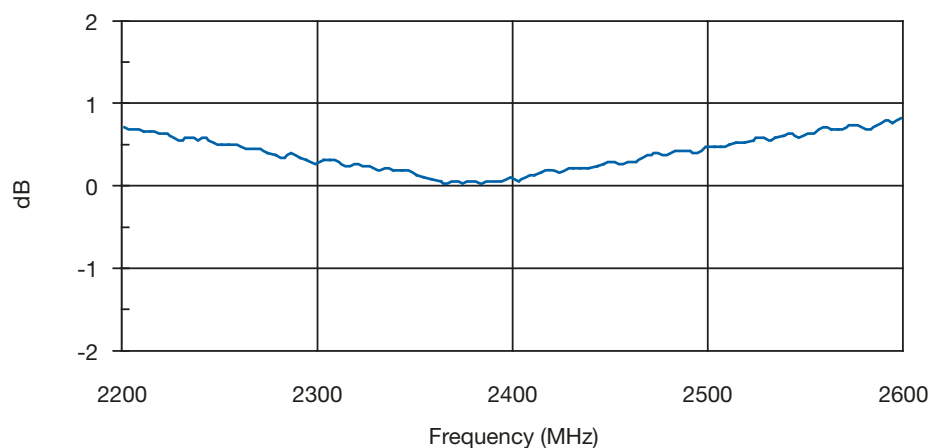
Return Loss - Input



Insertion Loss



Amplitude Balance



3

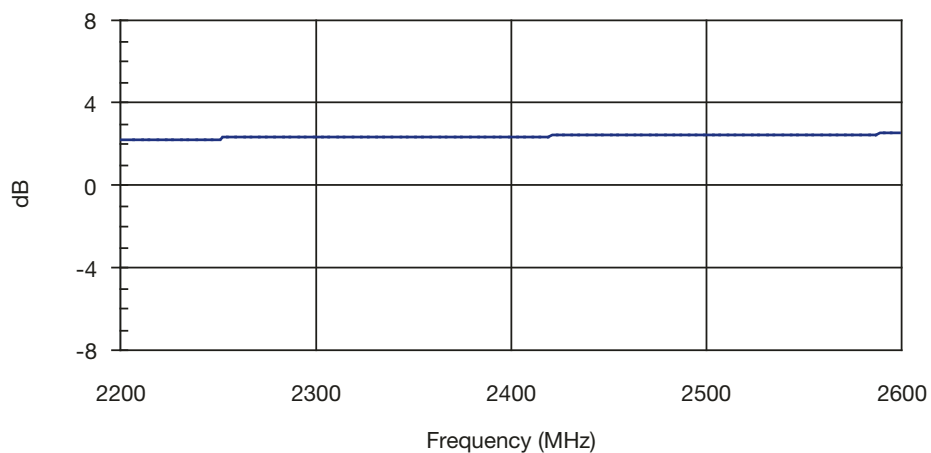
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## DB0603N 3dB 90° Couplers

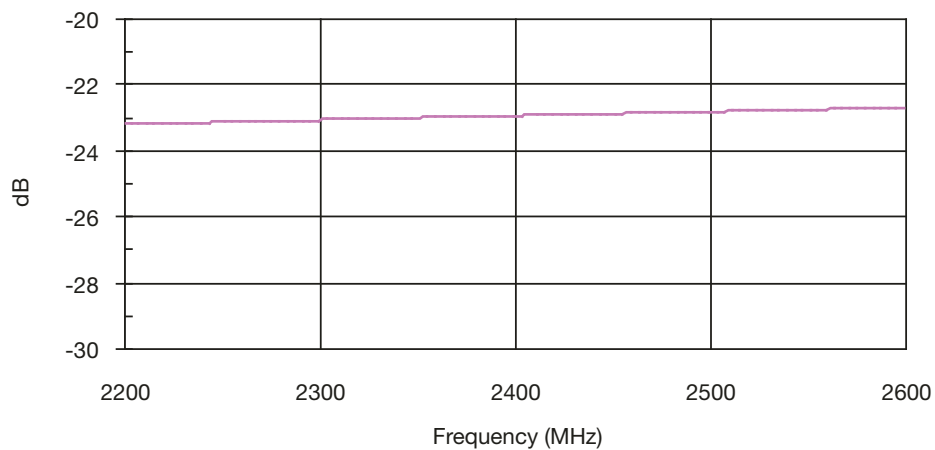


2200MHz to 2600MHz DB0603N2400ANTR

Phase Balance



Isolation

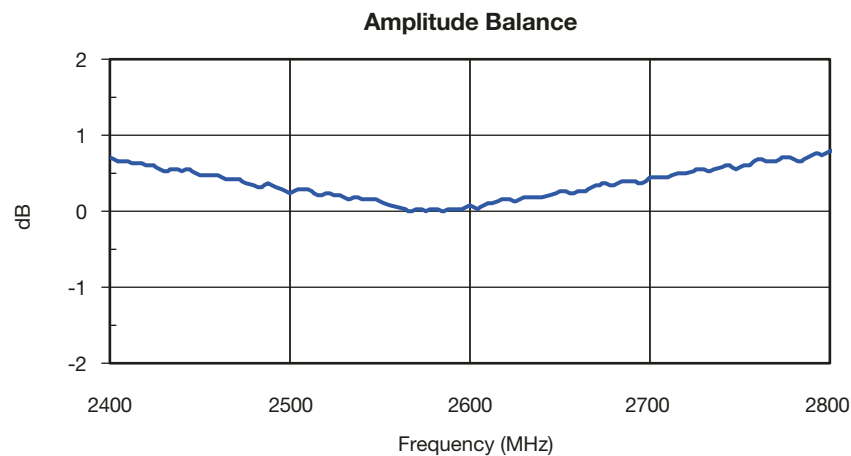
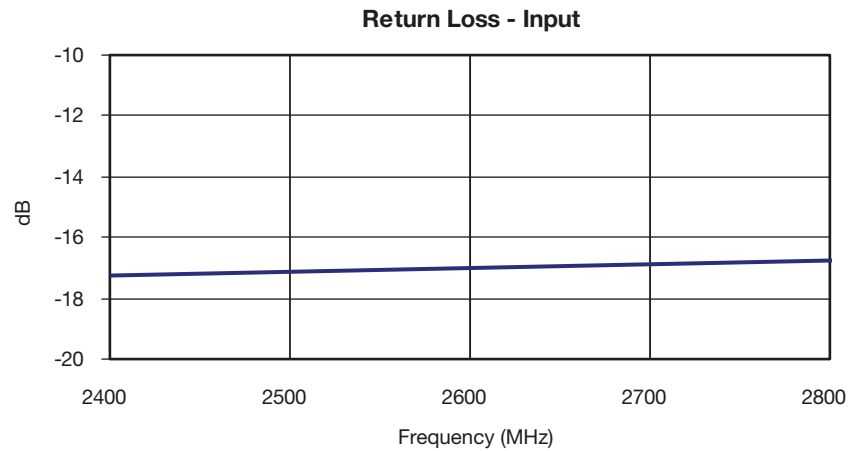


# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



### 2400MHz TO 2800MHz DB0603N2600ANTR



3

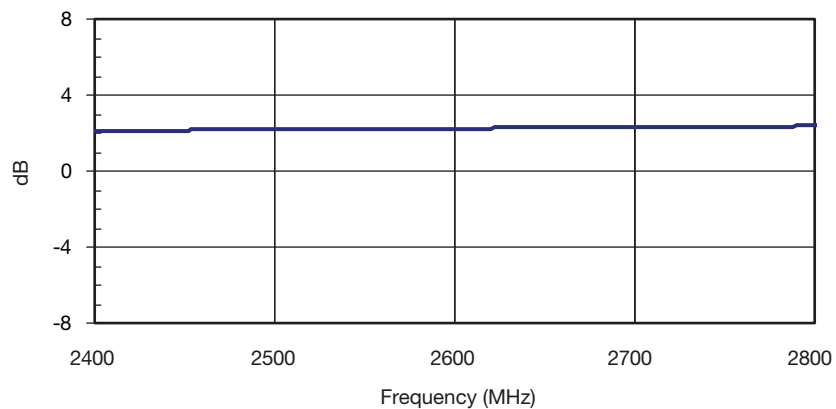
# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers

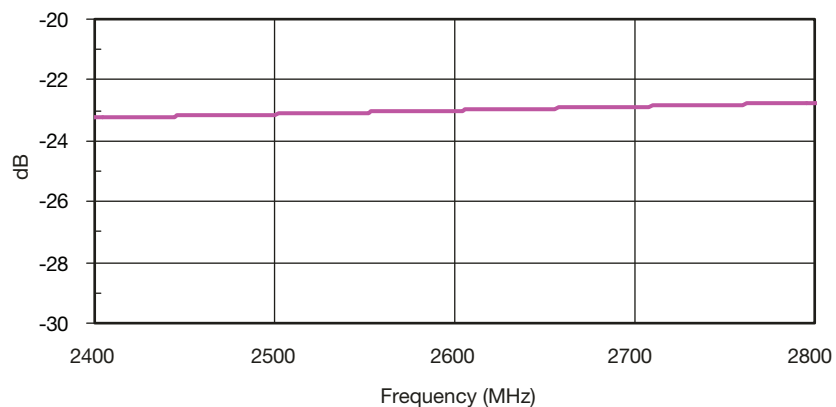


### 2400MHz TO 2800MHz DB0603N2600ANTR

Phase Balance



Isolation



3

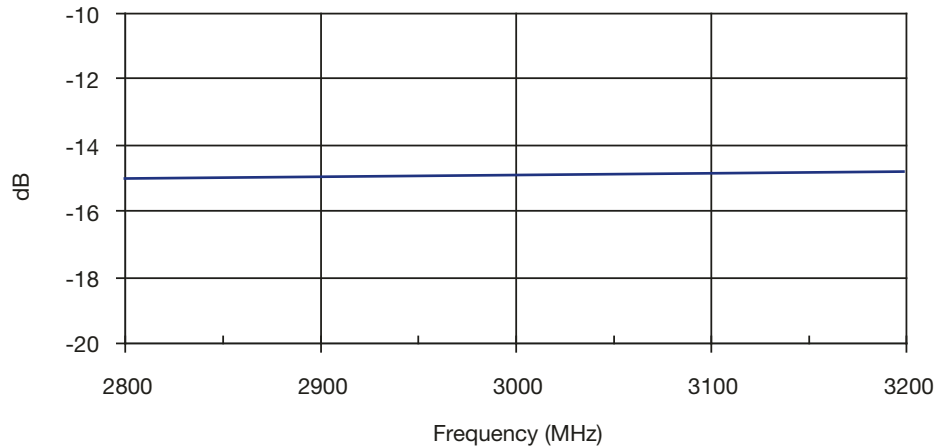
# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers

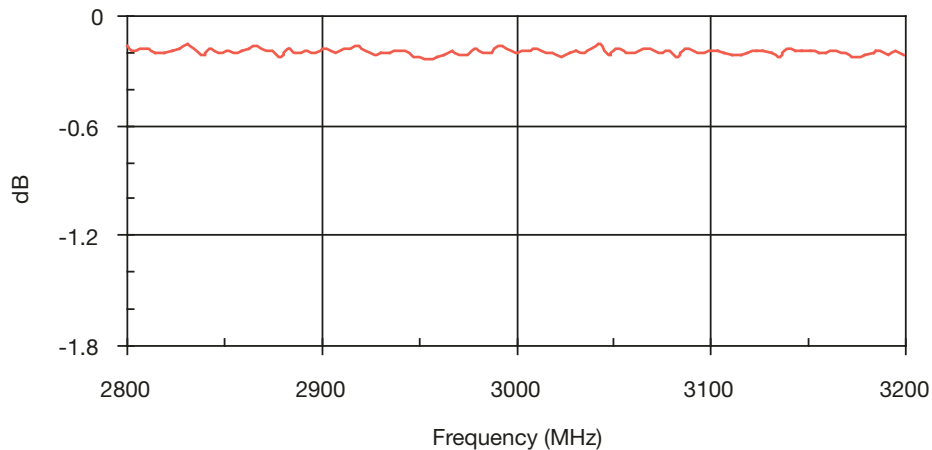


2850MHz to 3150MHz DB0603N3000ANTR

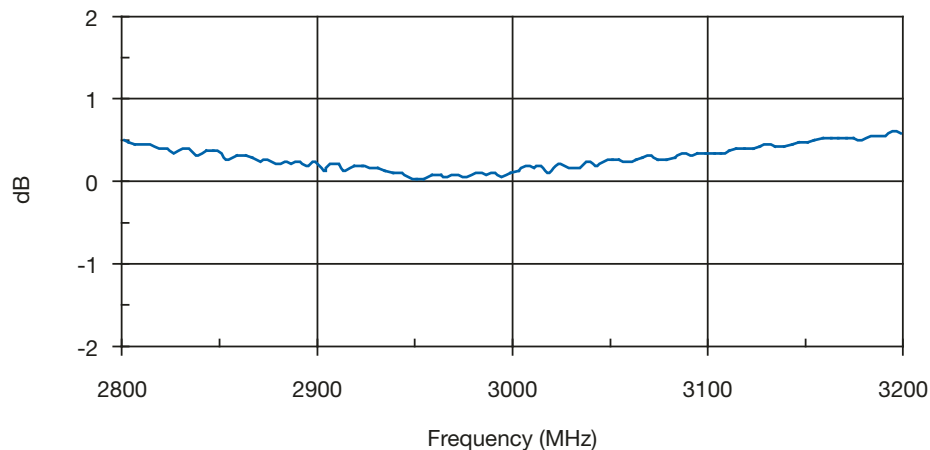
Return Loss - Input



Insertion Loss



Amplitude Balance



3

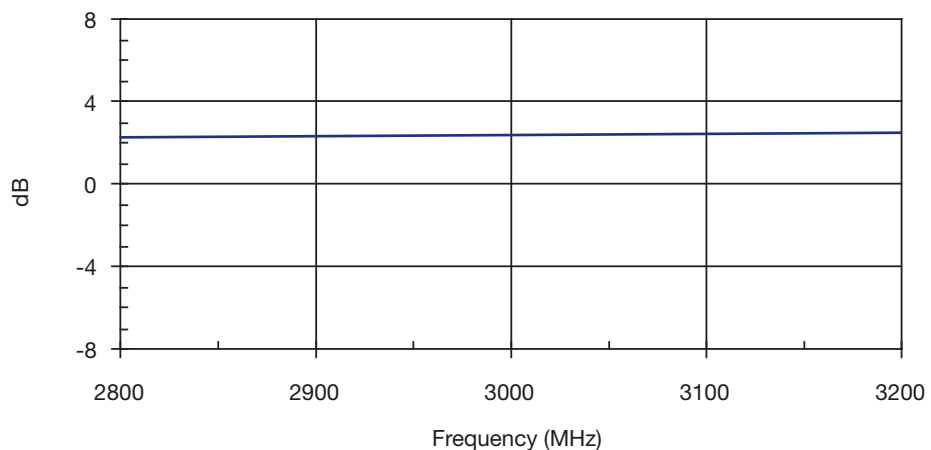
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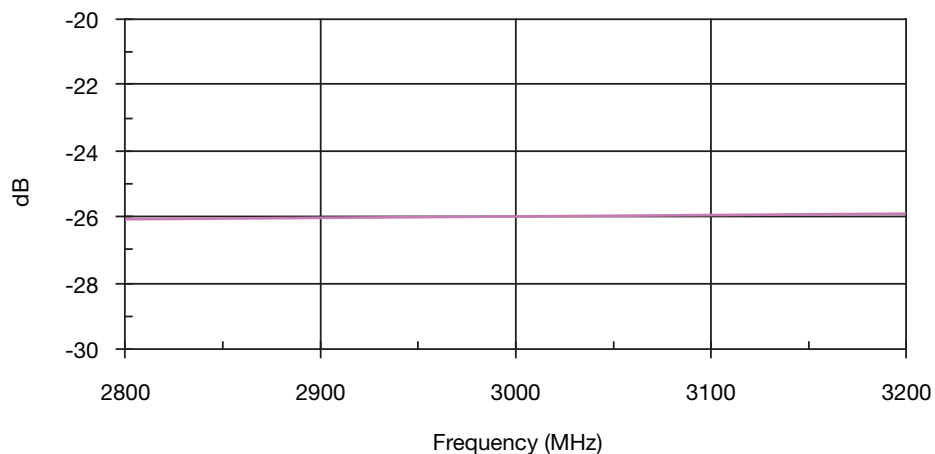


2850MHz to 3150MHz DB0603N3000ANTR

Phase Balance



Isolation



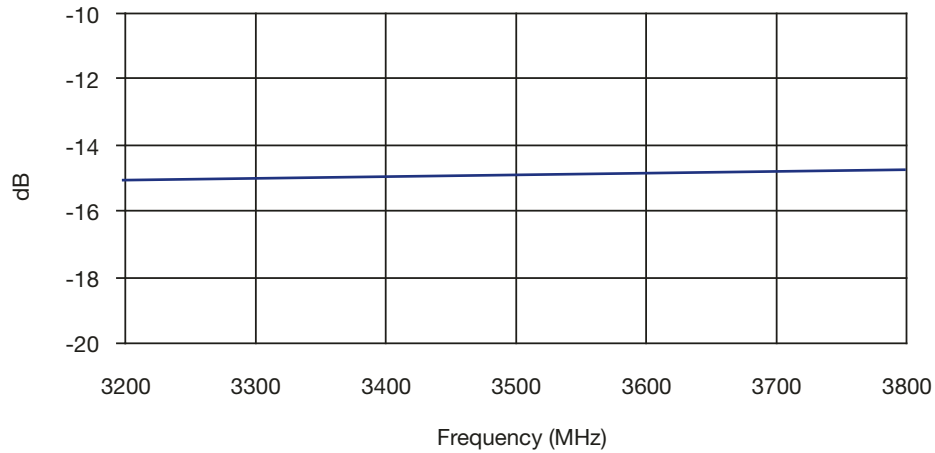
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## DB0603N 3dB 90° Couplers

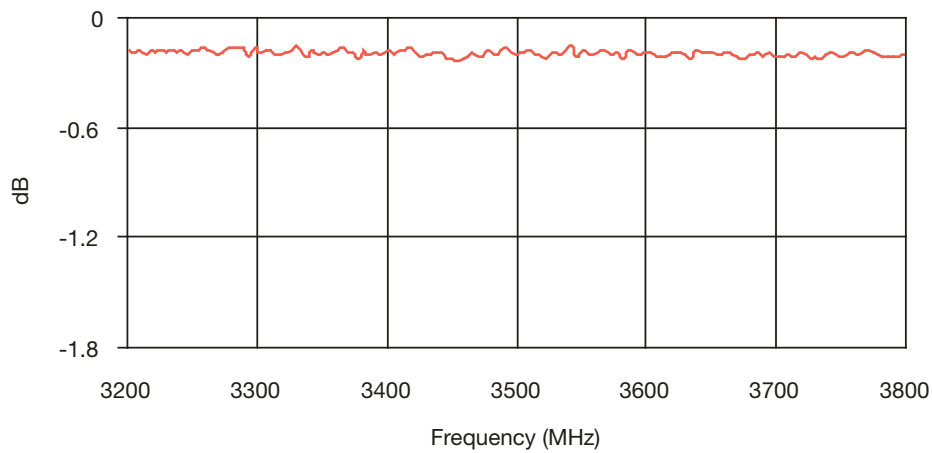


3200MHz to 3800MHz DB0603N3500ANTR

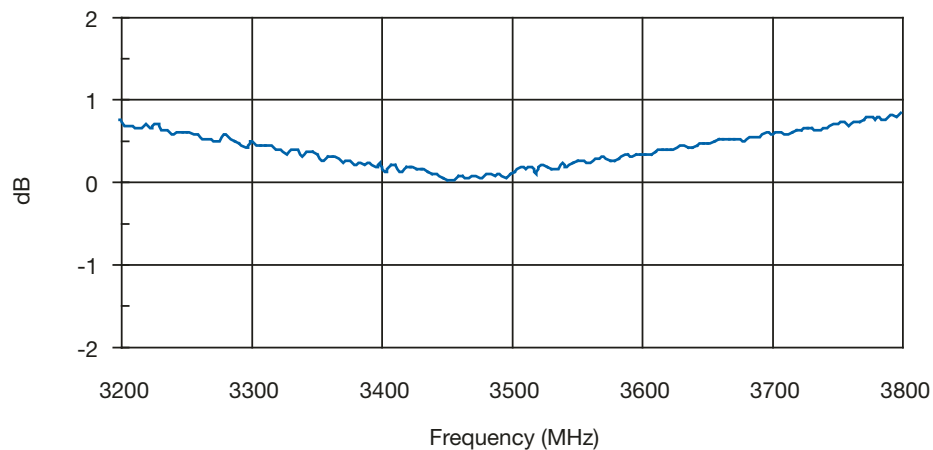
Return Loss - Input



Insertion Loss



Amplitude Balance



3

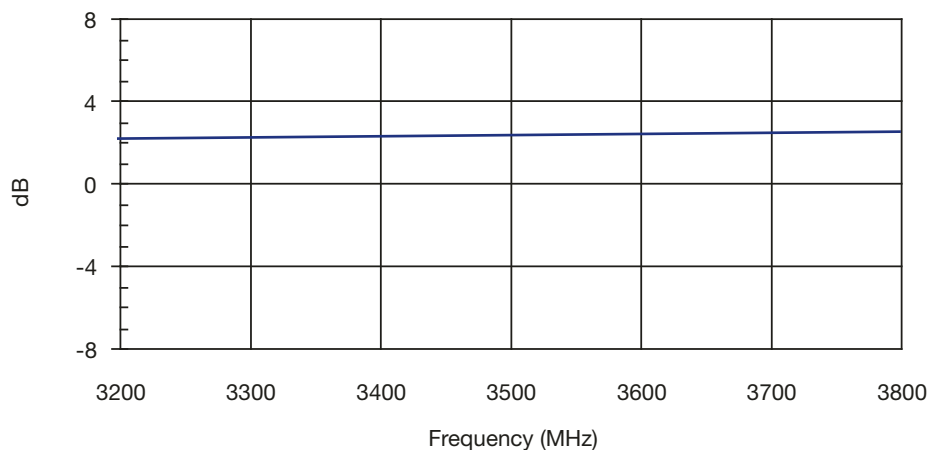
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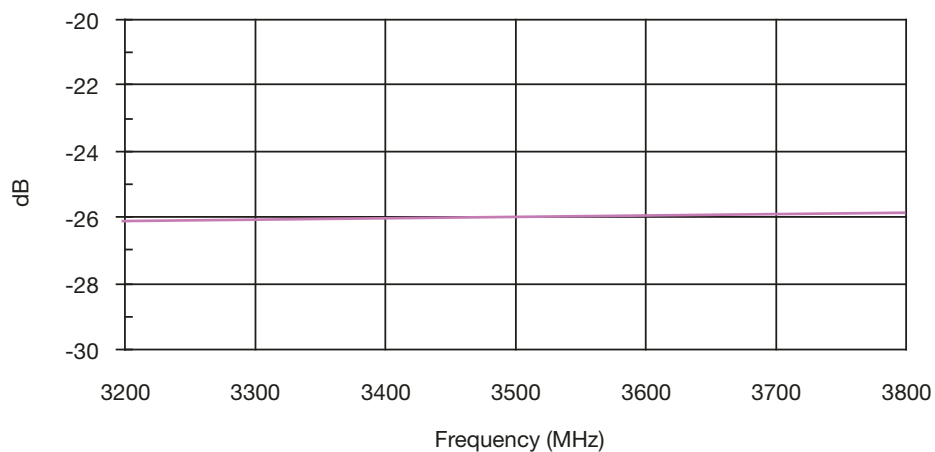


3200MHz to 3800MHz DB0603N3500ANTR

Phase Balance



Isolation

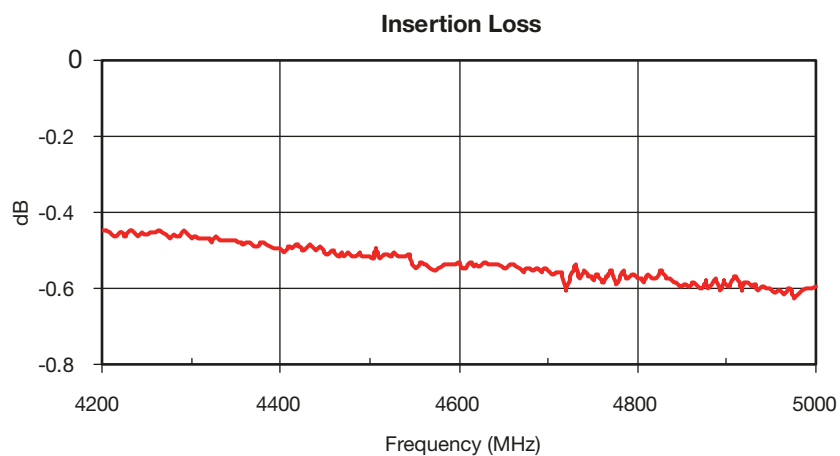
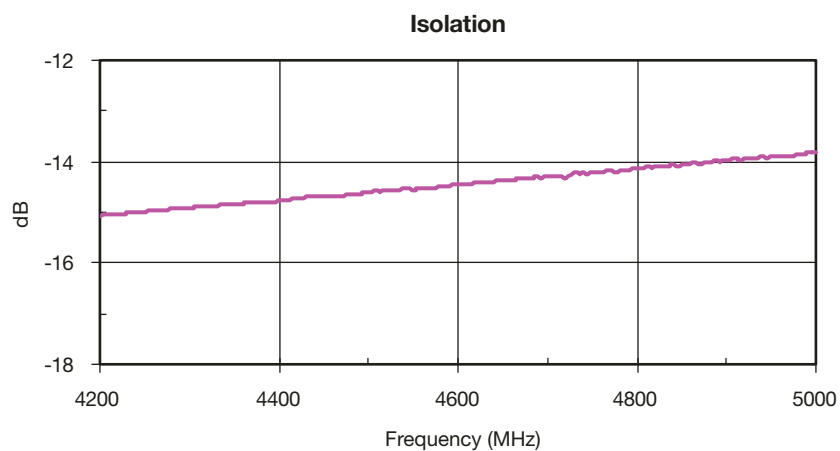
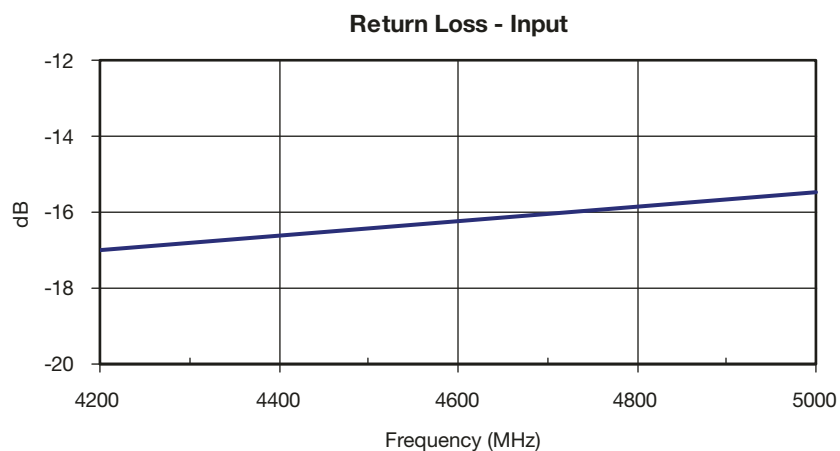


# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



### 4200MHz TO 5000MHz DB0603N4600ANTR



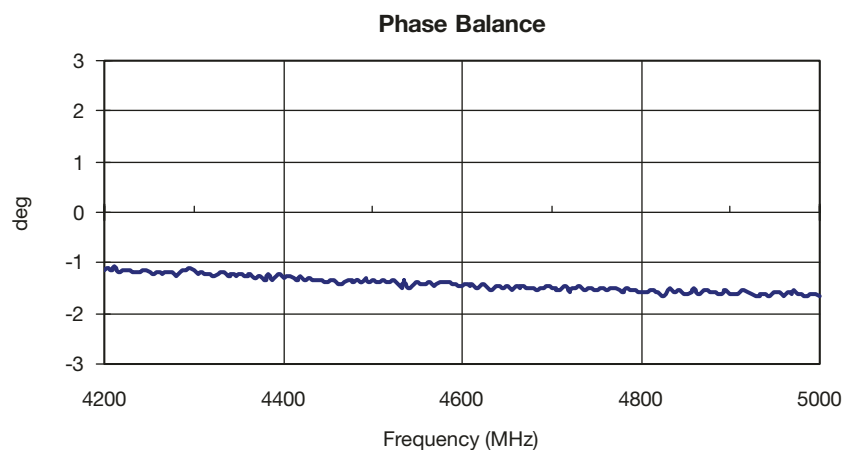
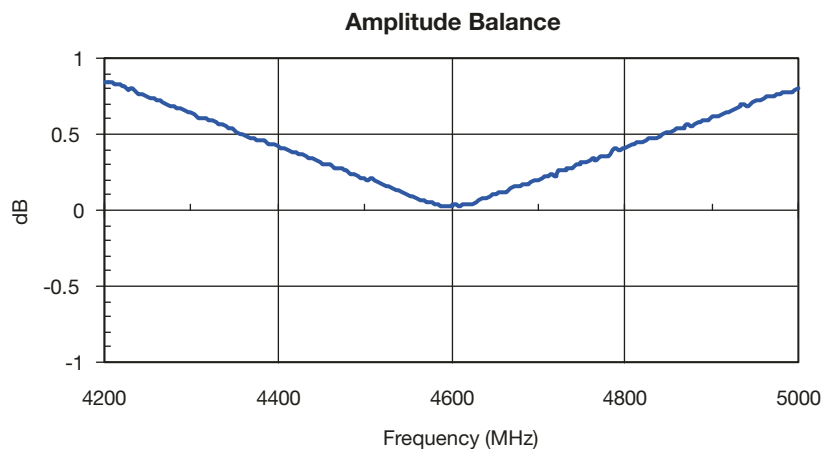
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# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



4200MHz TO 5000MHz DB0603N4600ANTR

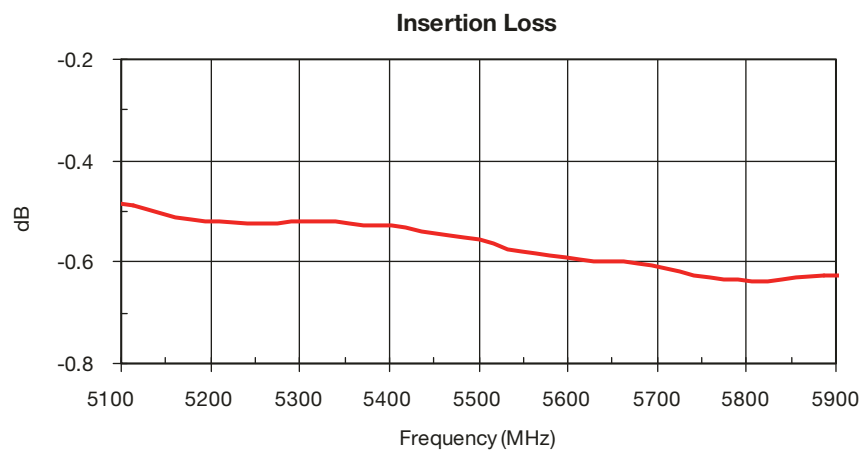
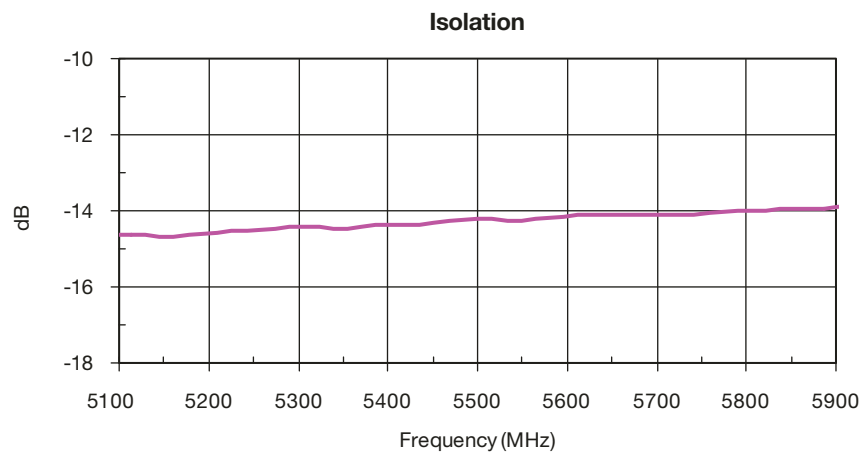
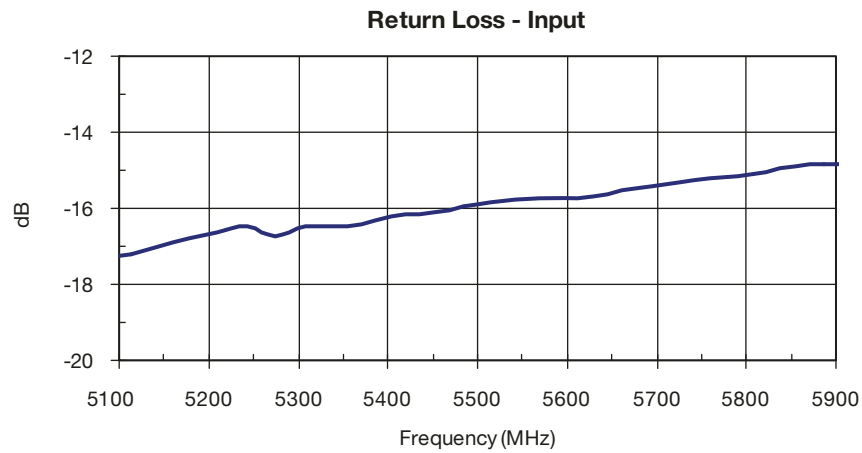


# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



### 5100MHz TO 5900MHz DB0603N5500ANTR



3

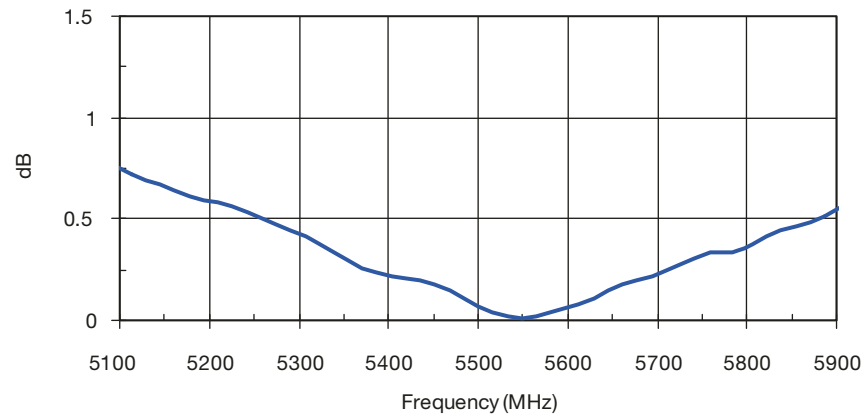
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## DB0603N 3dB 90° Couplers

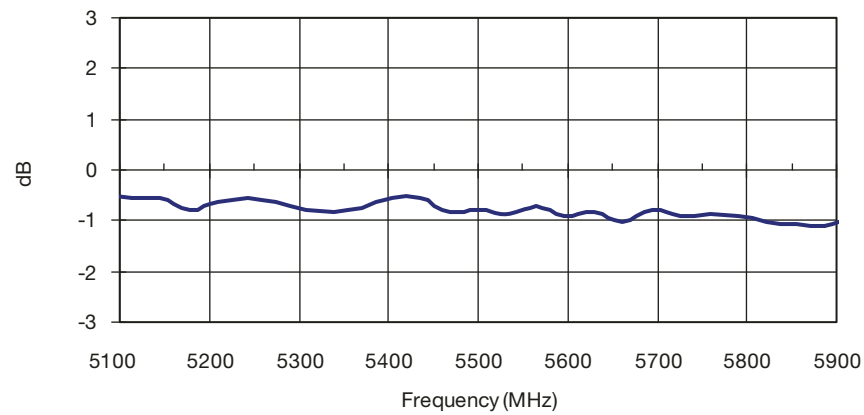


### 5100MHz TO 5900MHz DB0603N5500ANTR

Amplitude Balance



Phase Balance

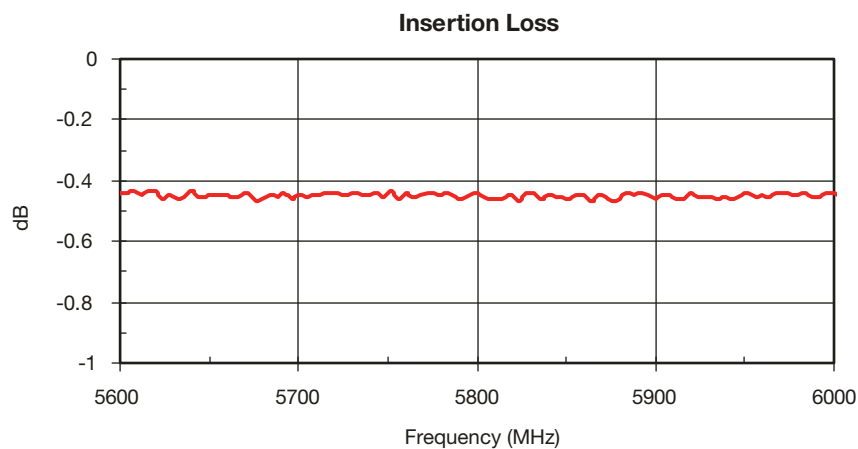
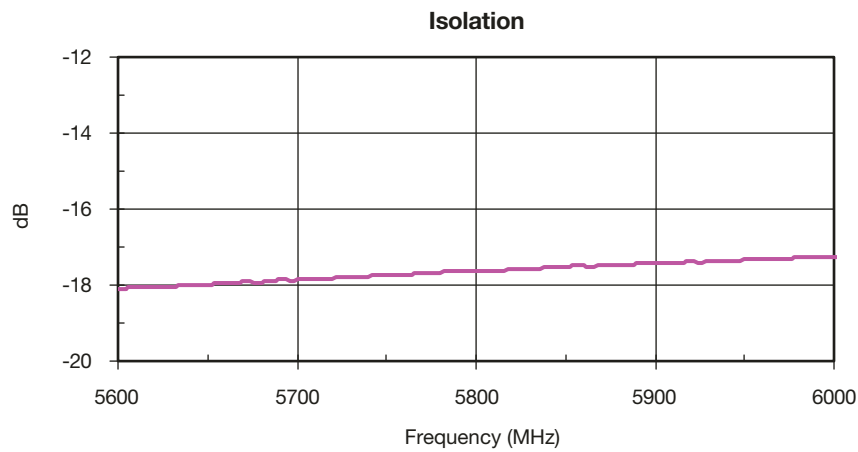
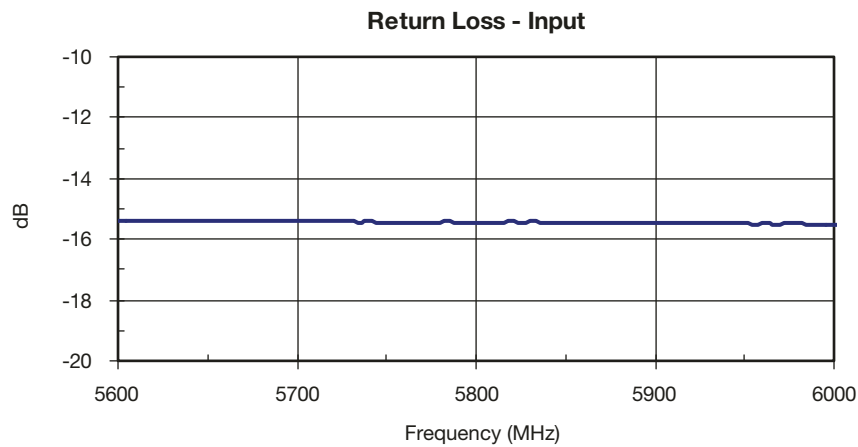


# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers



### 5600MHz TO 6000MHz DB0603N5800ANTR



3

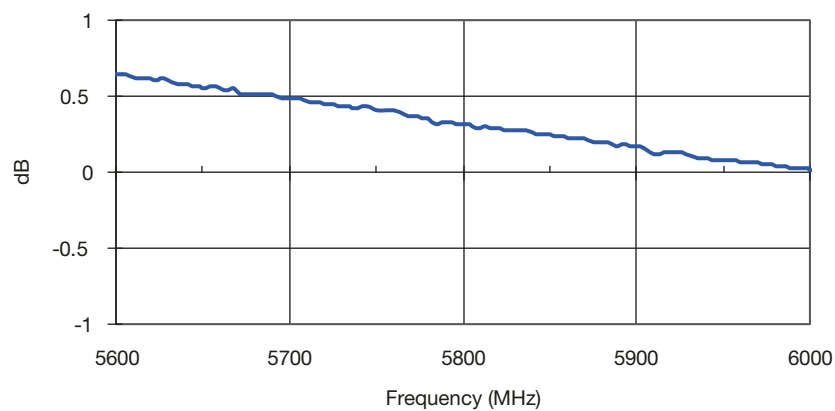
# Thin-Film Directional Couplers

## DB0603N 3dB 90° Couplers

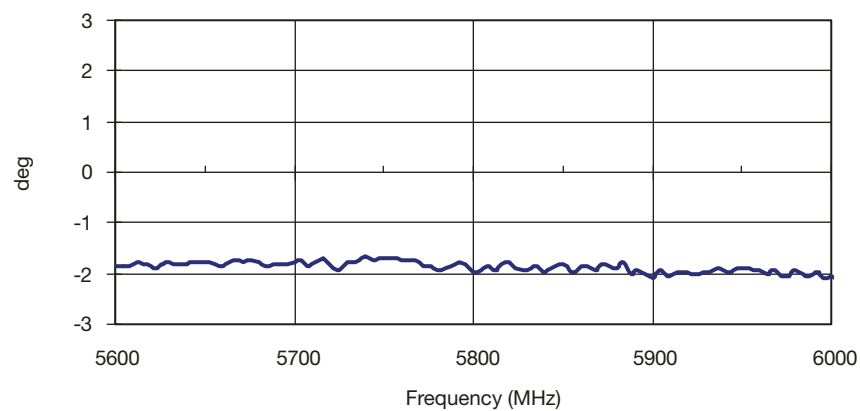


### 5600MHz TO 6000MHz DB0603N5800ANTR

Amplitude Balance



Phase Balance



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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