

1:1 Flux Coupled Transformer 5 - 100 MHz

Rev. V2

Features

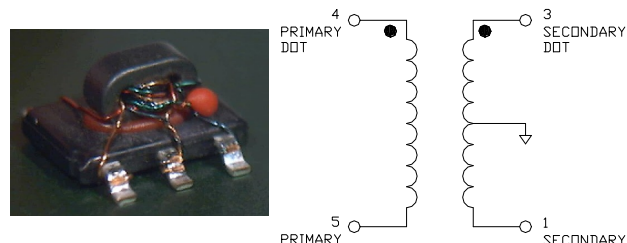
- 1:1 Impedance
- Surface Mount Package
- CT on Secondary
- 75 Ω
- RoHS Compliant

Description

The MABA-008124-CF1FA0 is a 1:1 RF flux coupled transformer in a surface mount package.

Ideally suited for high volume CATV application.

Schematic



Pin Configuration

| Pin # | Function |
|-------|---------------|
| 1 | Secondary |
| 2 | Secondary CT |
| 3 | Secondary Dot |
| 4 | Primary Dot |
| 5 | Primary |

Electrical Specifications: Freq. = 5 - 100 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

| Parameter | Test Conditions | Units | Min. | Typ. | Max. |
|-----------------------------------|----------------------------|-------|----------|-----------|------------|
| Insertion Loss | 5 - 100 MHz | dB | — | 0.7 | 1.0 |
| Amplitude Balance | 5 - 100 MHz | dB | — | ± 0.0 | ± 0.25 |
| Phase Balance (ref value 180°) | 5 - 100 MHz | ° | — | ± 0.3 | ± 4.0 |
| Input Return Loss | 5 - 75 MHz 75 - 100 MHz | dB | 17 15 | 25 21 | — |

Ordering Information

| Part # | Package |
|--------------------|---------------------|
| MABA-008124-CF1FA0 | 900 pieces per reel |
| MABA-008124-CF1FTB | Customer test board |

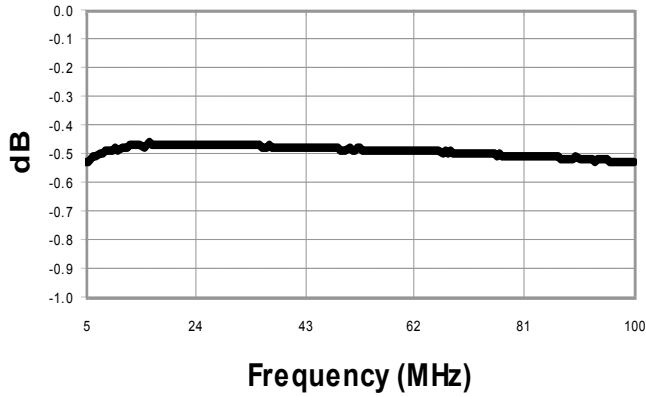
Absolute Maximum Ratings^{1,2}

| Parameter | Absolute Maximum |
|-----------------------|------------------|
| RF Power | 250 mW |
| DC Current | 30 mA |
| Operating Temperature | -40°C to +75°C |
| Storage Temperature | -40°C to +85°C |

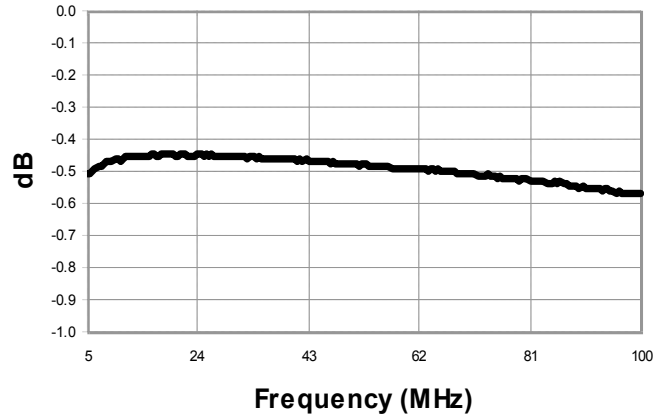
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

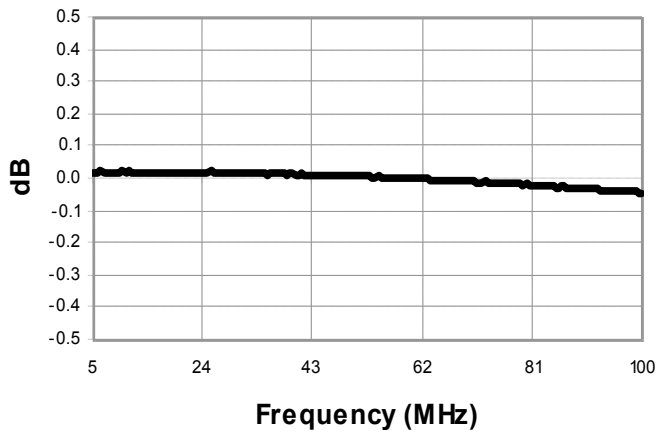
Insertion Loss 1



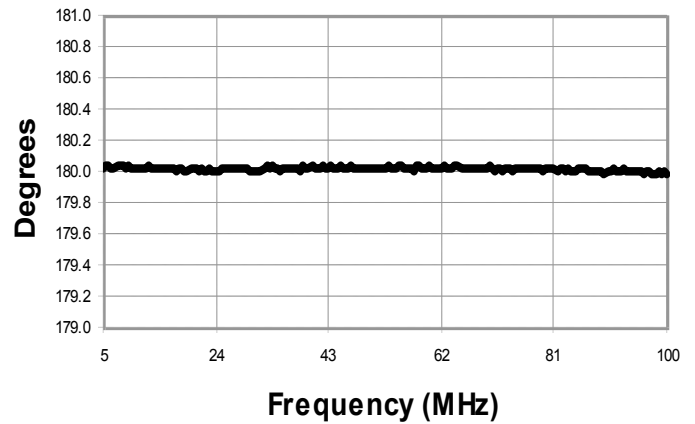
Insertion Loss 2



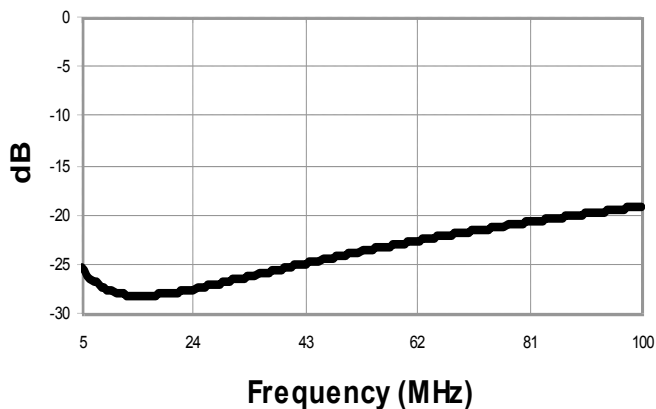
Amplitude Balance



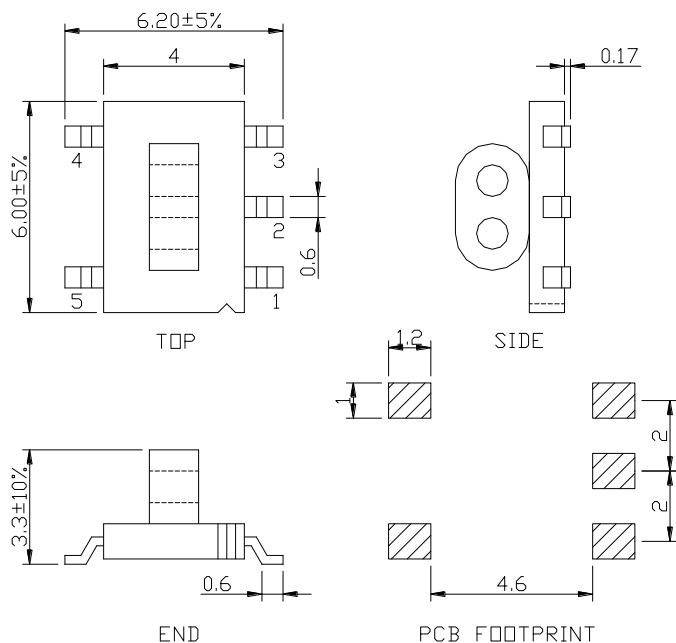
Phase Balance



Return Loss: Input



Outline Drawing (SM-250-5)



Dimensions in inches [mm] Tolerance: .xx \pm .02, .xxx \pm .010,
Except where otherwise stated.

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