

1:1 Flux Coupled Balun Transformer
5 - 120 MHz

M/A-COM Products
Part Status: Released Rev. V2

Features

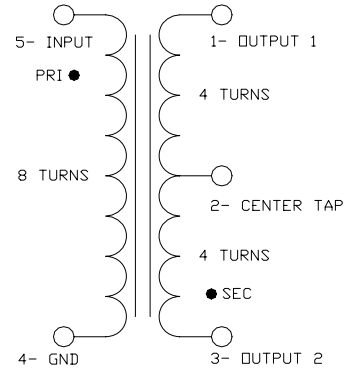
- Surface Mount
- 1:1 Impedance
- 75 Ohm
- RoHS Compliant

Description

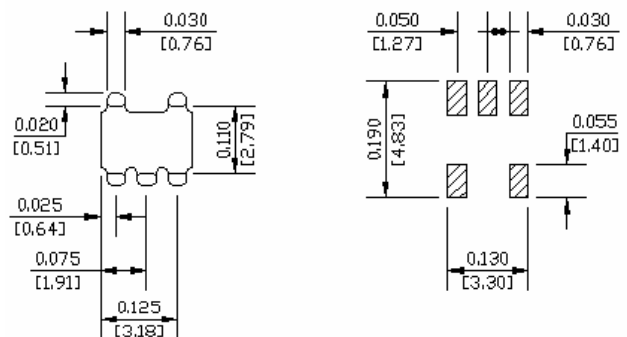
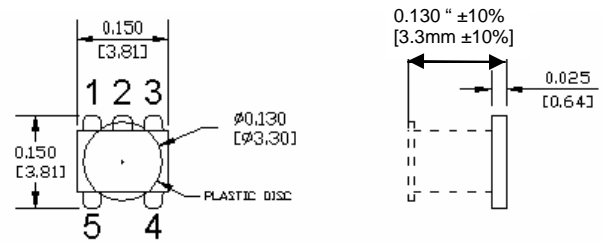
M/A-COM's MABA-008965-CF1160 is a 1:1 RF flux coupled Transformer in a low cost surface mount package. Ideally suited for high volume CATV application.



Schematic



Case Style SM-22A



Dimensions are inches [millimeters] ±0.015 [0.38] unless otherwise specified.

Pin Configuration

| Function | Pin Number |
|------------------------|------------|
| Secondary (output) | 1 |
| Secondary Centre Tap | 2 |
| Secondary Dot (output) | 3 |
| Primary (ground) | 4 |
| Primary Dot (Input) | 5 |

Ordering Information

| Parameter | Absolute Maximum |
|--------------------|---------------------|
| MABA-008965-CF1160 | 2000 |
| MABA-008965-CF11TB | Customer Test Board |

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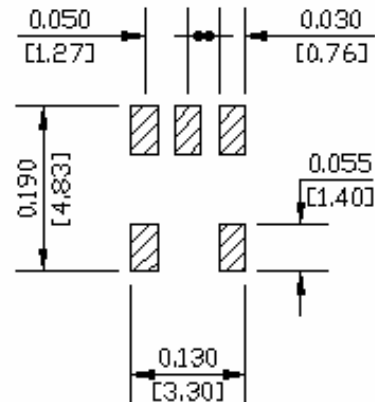
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$

| Parameter | Test Conditions | Units | Min. | Typ. | Max. |
|-----------------------------------|-----------------|----------|------|------------|-----------|
| Frequency Range | 5 – 120 MHz | | | | |
| Insertion Loss 1 (Pin 5 to Pin 1) | 5 – 80 MHz | dB | – | 0.1 | 0.4 |
| | 80 – 120 MHz | dB | – | 0.3 | 0.5 |
| Insertion Loss 2 (Pin 5 to Pin 3) | 5 – 80 MHz | dB | – | 0.2 | 0.4 |
| | 80 – 120 MHz | dB | – | 0.4 | 0.6 |
| Amplitude Un-Balance | 5 – 80 MHz | dB | – | ± 0.06 | ± 0.2 |
| | 80 – 120 MHz | dB | – | ± 0.18 | ± 0.3 |
| Phase Un-Balance | 5 – 80 MHz | $^\circ$ | – | ± 0.05 | ± 1.5 |
| | 80 – 120 MHz | $^\circ$ | – | ± 0.10 | ± 2.0 |
| Input Return Loss (Pin 5) | 5 – 80 MHz | dB | 19 | 25 | – |
| | 80 – 120 MHz | dB | 15 | 19 | – |

Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|--|
| RF Power | 250mW |
| DC Current | 30mA |
| Operating Temperature | -40°C to $+85^\circ\text{C}$ |
| Storage Temperature | -40°C to $+85^\circ\text{C}$ |

Recommended PCB Configuration

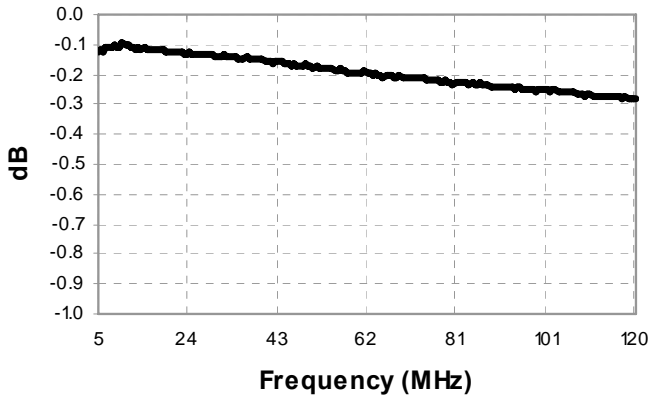


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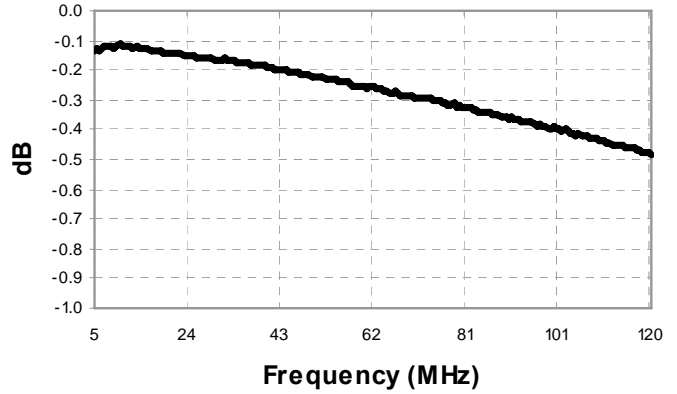
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Typical Performance: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$

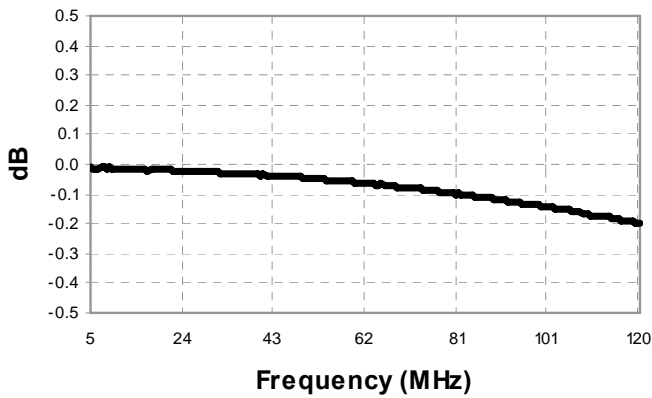
Insertion Loss 1 (Pin5 - Pin1)



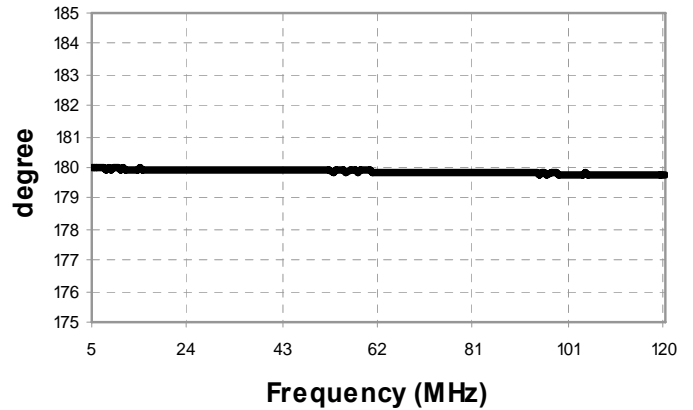
Insertion Loss 2 (Pin5 - Pin3)



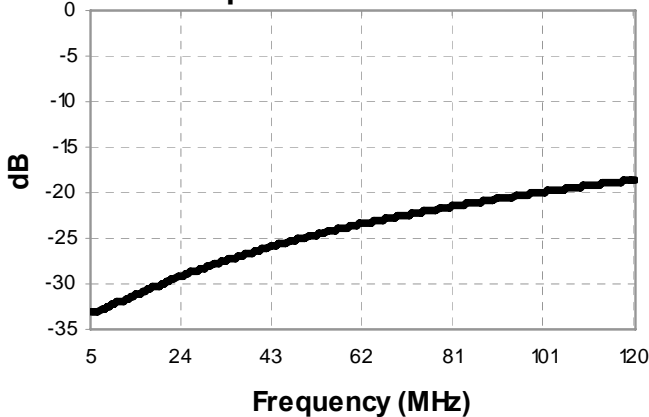
Amplitude Balance



Phase Balance



Return Loss: Input



ADVANCED: Data Sheets contain information regarding a product M/A-COM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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