

**1:1 Broadband CATV, Flux Coupled Transformer**  
5-120MHz

**MABACT0047**  
**V1**

**Features**

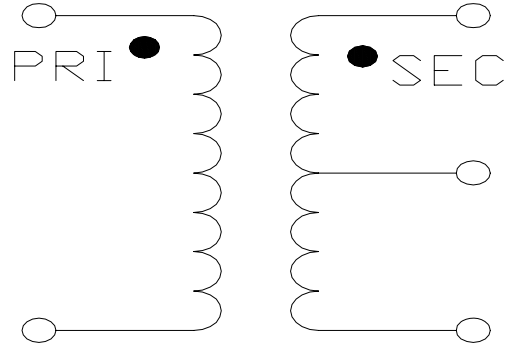
- Surface Mount
- 1:1 Flux Coupled
- 260°C Reflow Compatible
- Excellent temperature stability
- Available on Tape and Reel. Reel quantity 2000

**Description**

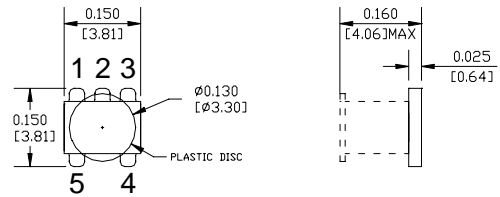
M/A-COM's MABACT0047 is a low cost 1:1 Flux Coupled Transformer designed for high volume CATV Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems



**Schematic**

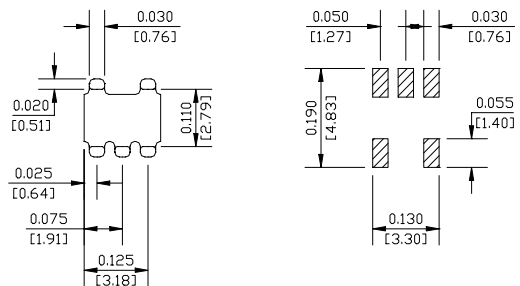


**Case Style: SM-22A**



**Pin Configuration**

| Pin No. | Function                 |
|---------|--------------------------|
| 1       | Secondary Dot (output 1) |
| 2       | Centre Tap               |
| 3       | Secondary (output 2)     |
| 4       | Primary (ground)         |
| 5       | Primary Dot (input)      |



PCB FOOTPRINT

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

**Ordering Information**

| Part Number | Package            |
|-------------|--------------------|
| MABACT0047  | Reel Quantity 2000 |

Note: Reference Application Note **M513** for reel size information.

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Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

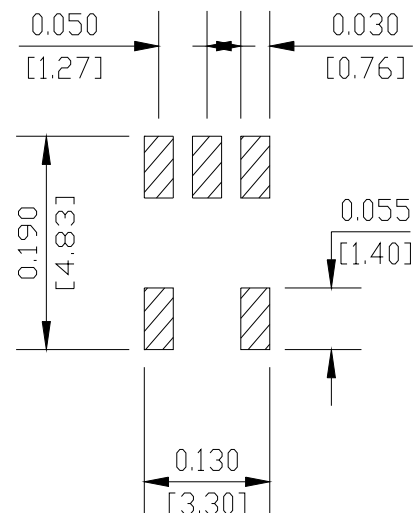
| Parameter         | Frequency    | Units    | Min | Typ       | Max       |
|-------------------|--------------|----------|-----|-----------|-----------|
| Frequency Range:  | 5 - 120 MHz  |          |     |           |           |
| Insertion Loss    | 5 - 120 MHz  | dB       | -   | 0.4       | 0.6       |
| Amplitude Balance | 5 - 120 MHz  | dB       | -   | $\pm 0.1$ | $\pm 0.3$ |
| Phase Balance     | 5 - 120 MHz  | $^\circ$ | -   | $\pm 0.5$ | $\pm 2.0$ |
| Input Return Loss | 5 - 65 MHz   | dB       | 22  | 28        | -         |
|                   | 65 - 120 MHz | dB       | 17  | 23        | -         |

Absolute Maximum Ratings <sup>1,2</sup>

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

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration

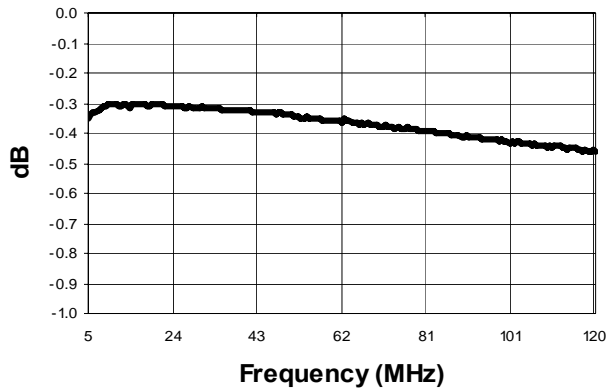


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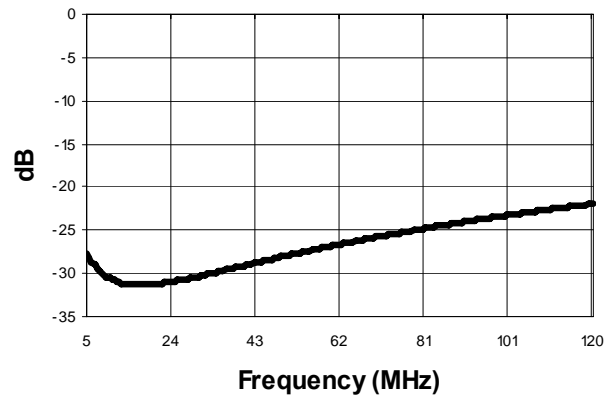
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

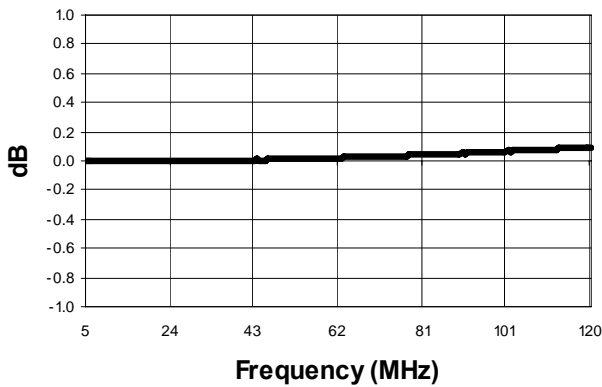
Insertion Loss



Return Loss: Input



Amplitude Balance



Phase Balance

