

E-Series Coupler
5 to 1000 MHz

M/A-COM Products
Rev. V1

Features

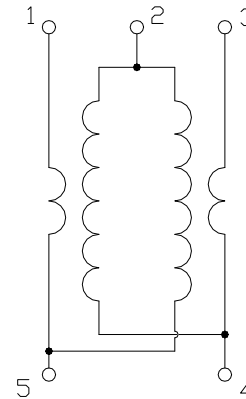
- Surface mount
- 10dB Coupler
- 260°C reflow compatible
- RoHS* compliant, lead-free
- Available on tape and reel.

Description

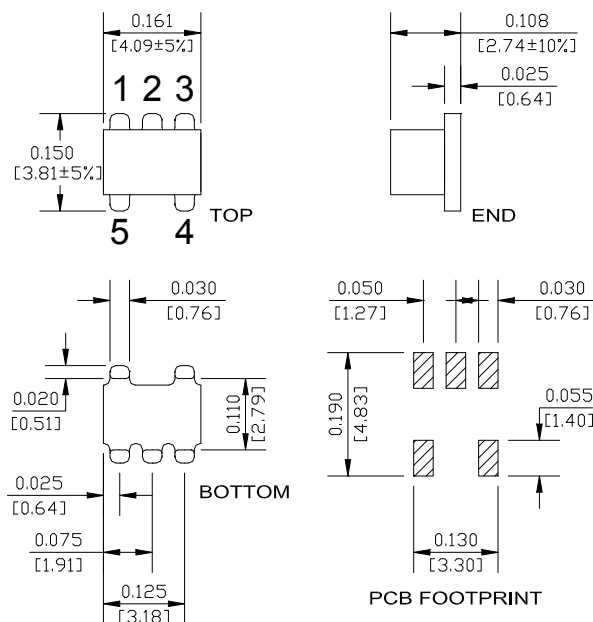
M/A Com's MACP-009596-CA0160 is a 10dB coupler in a low cost, surface mount package. Excellent coupling flatness. Ideally suited for broadband CATV applications.



Schematic



Case style: SM-22



Pin configuration

Pin no.	Function
1	Coupled
2	Ground
3	Input
4	Output
5	External 75 Ω

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

Ordering information

Part number	Description
MACP-009596-CA0160	2000 piece reel
MACP-009596-CA01TB	Customer Test Board

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

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 1000 MHz	dB	-	10	± 0.5
Main Line Loss	5 - 50 MHz	dB	-	1.1	1.4
	50 - 500 MHz	dB	-	1.3	1.5
	500 - 1000 MHz	dB	-	1.4	1.7
Directivity	5 - 50 MHz	dB	20	22	-
	50 - 600 MHz	dB	16	20	-
	600 - 1000 MHz	dB	14	18	-
Input Return Loss	5 - 1000 MHz	dB	12	18	-
Output Return Loss	5 - 1000 MHz	dB	12	23	-
Coupling Return Loss	5 - 1000 MHz	dB	12	16	-

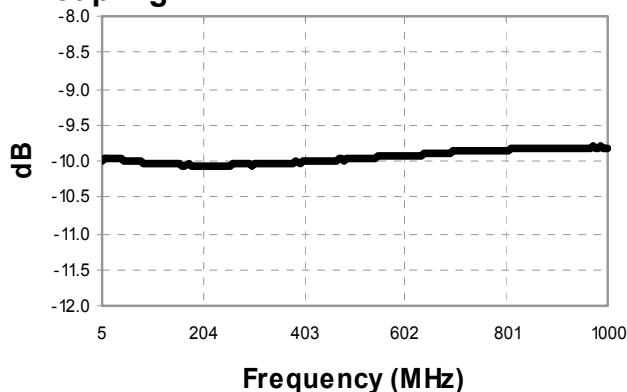
Absolute Maximum Ratings^{1,2}

Parameter	Absolute maximum
RF power	250mW
DC current	30mA
Operating Temperature	-20°C to +80°C
Storage Temperature	-20°C to +80°C

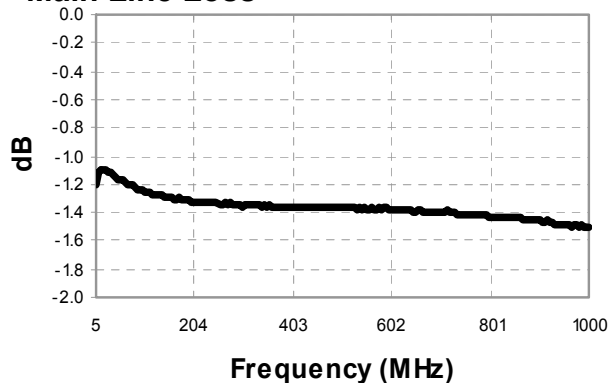
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

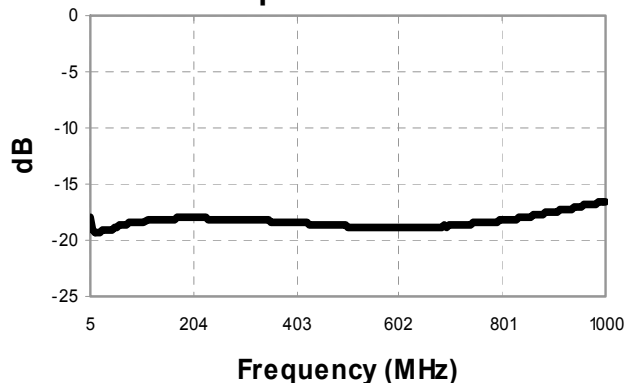
Coupling



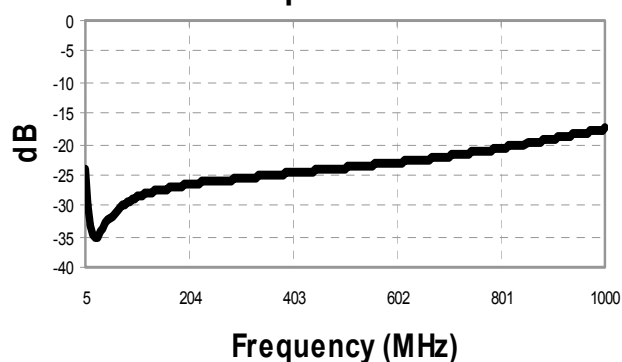
Main Line Loss



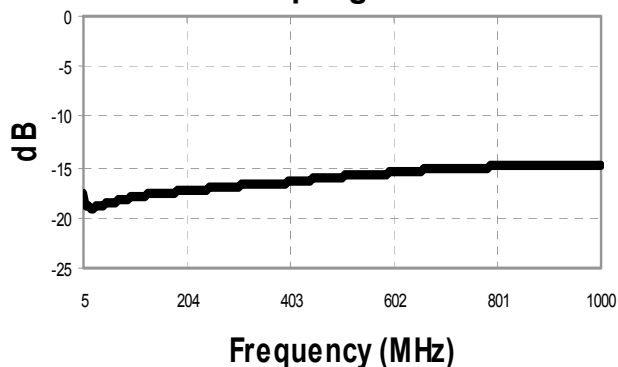
Return Loss: Input



Return Loss: Output



Return Loss: Coupling



Directivity

