

**Broadband CATV, Coupler**  
5-1000MHz

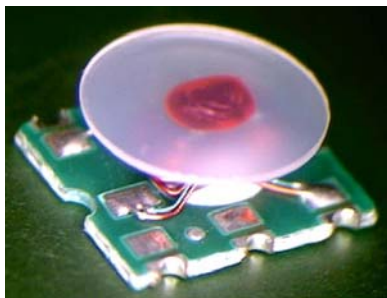
**EMDC-17-8-75**  
**V7**

**Features**

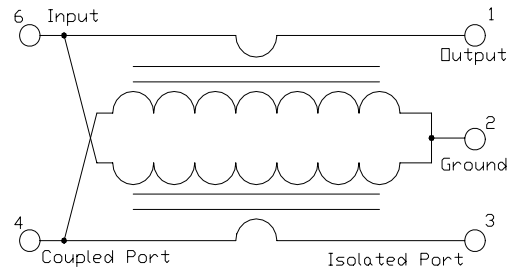
- Surface Mount
- Typical Coupling +17dB
- 260°C Reflow Compatible
- Available on Tape and Reel, reel qty. 900
- All wires are soldered to the substrate using HMP solder

**Description**

M/A-COM's EMDC-17-8-75 is a 17dB broadband Coupler in a low cost, surface mount package. It offers low loss, good isolation, good input/output matching and exceptional coupling repeatability. Ideally suited for high volume CATV/Broadband applications.



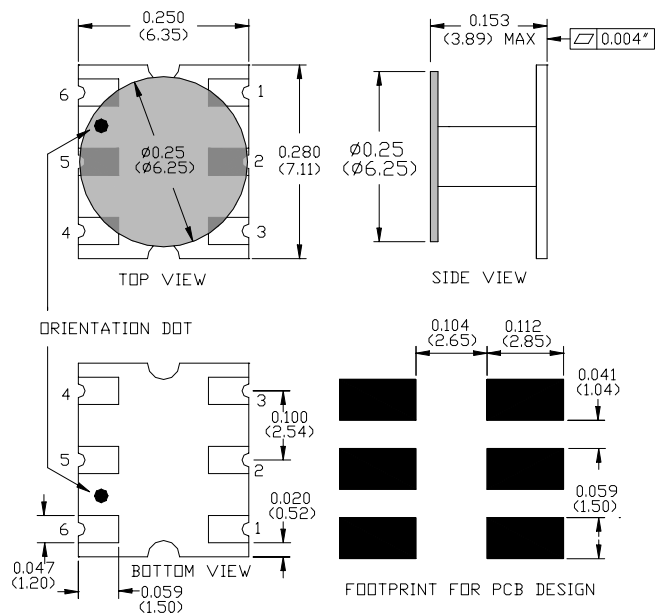
**Schematic**



**Pin Configuration**

Pin No.	Function
1	Output
2	Ground
3	Isolated (external 75 Ohms termination)
4	Coupled
5	Ground, not connected
6	Input

**Case Style: SM-127**



**Ordering Information**

Part Number	Package
EMDC-17-8-75TR	900 piece reel

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

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

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

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Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

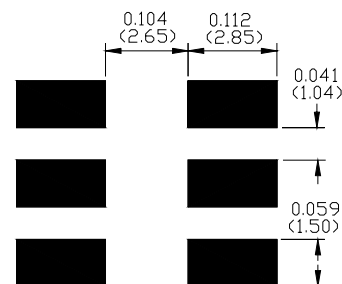
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>**

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 860 MHz	dB	16.5	17.2	17.9
	860 - 1000 MHz	dB	16.2	17	17.8
Main Line Loss	5 - 860 MHz	dB	-	0.6	1.0
	860 - 1000 MHz	dB	-	0.8	1.2
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.0
Directivity	5 - 50 MHz	dB	30	40	-
	50 - 500 MHz	dB	12	20	-
	500 - 1000 MHz	dB	5	12	-
Input Return Loss	5 - 50 MHz	dB	24	28	-
	50 - 500 MHz	dB	24	28	-
	500 - 1000 MHz	dB	20	25	-
Output Return Loss	5 - 50 MHz	dB	20	25	-
	50 - 500 MHz	dB	20	25	-
	500 - 1000 MHz	dB	20	23	-
Coupling Return Loss	5 - 50 MHz	dB	20	25	-
	50 - 500 MHz	dB	20	25	-
	500 - 1000 MHz	dB	18	23	-

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

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

**Recommended PCB Configuration**



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.

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

