

**16dB 75 Ohm Coupler**  
**5-862MHz**

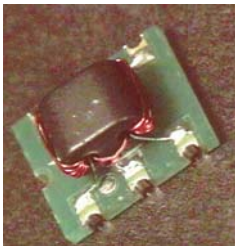
**EMDC-16-11-75**  
**V4**

**Features**

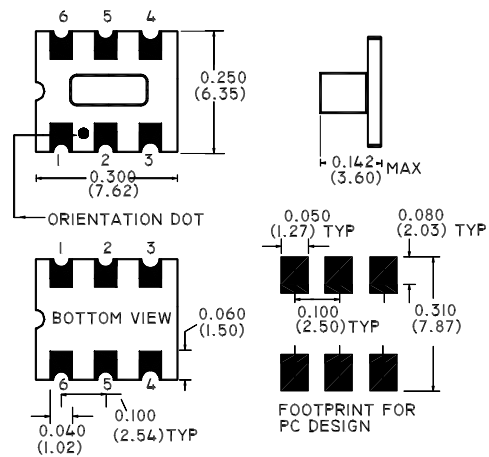
- Surface Mount
- Coupling 16dB typical
- 260°C Reflow Compatible
- Available on Tape and Reel. Reel quantity 900

**Description**

M/A-COM's EMDC-16-11-75 is a high performance 75 Ohm Coupler, in a SM-101 low cost, surface mount package. The EMDC-16-11-75 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Broadband Amplifiers and Headend equipment.



**Case Style: SM-101**



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

**Pin Configuration**

Pin No.	Function
1	Input
2	Ground
3	Coupled
4	Isolated, external 75 Ohms
5	Not Connected
6	Output

**Ordering Information**

Part Number	Package
EMDC-16-11-75TR	900

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

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

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

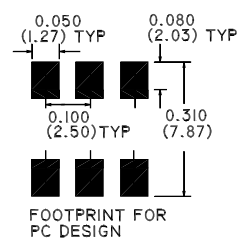
Parameter	Frequency	Units	Min	Typ	Max
Mainline Loss	5 - 862 MHz	dB	-	1.05	1.25
Coupling	5 - 44 MHz	dB	-	16	$\pm 0.5$
	45 MHz	dB	-	16	$\pm 0.2$
	862 MHz	dB	-	15.6	$\pm 0.3$
Coupling Flatness	5 - 862 MHz	dB	-	-	$\pm 0.3$
Isolation	5 - 862 MHz	dB	29	33	-
Input Return Loss	5 - 862 MHz	dB	18	25	-
Output Return Loss	5 - 862 MHz	dB	18	25	-
Coupled Return Loss	5 - 862 MHz	dB	18	25	-

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

Parameter	Absolute Maximum
RF Power	250 mW
DC current	30mA
Pin Temperature (10 sec)	260°C
Operating Temperature	-40°C to +85°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. M/A-COM does not recommend sustained operation near these survivability limits.

**Recommended PCB Configuration**

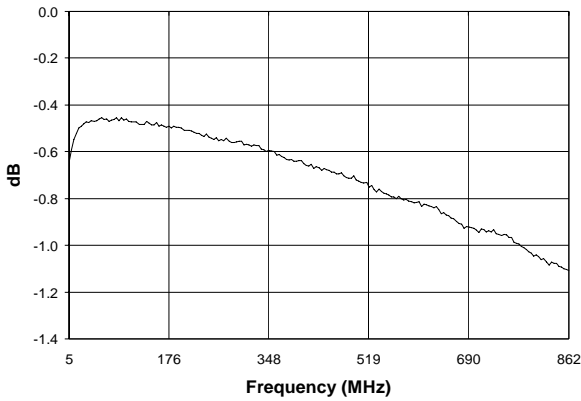


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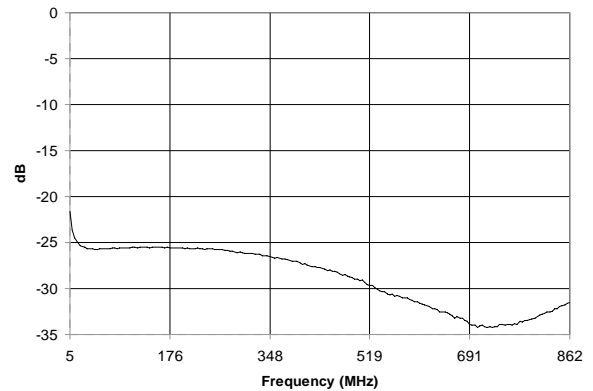
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**Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>**

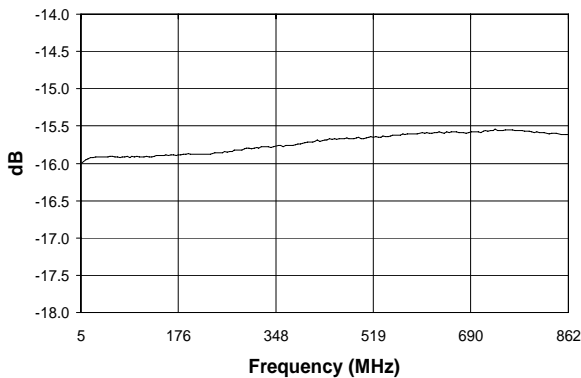
**Mainline Loss**



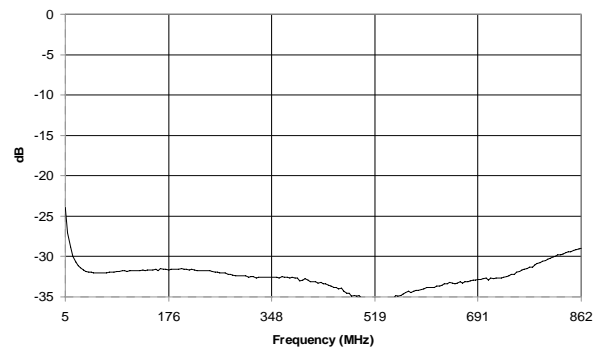
**Input Return Loss**



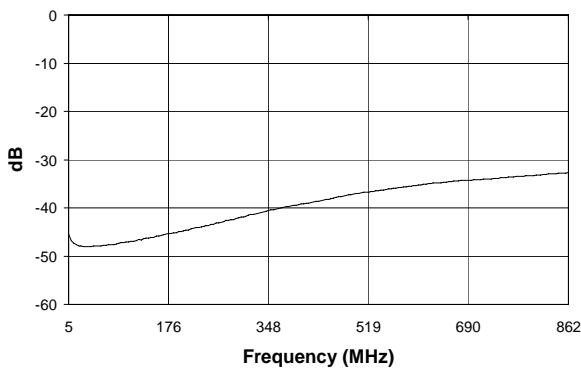
**Coupling**



**Output Return Loss**



**Isolation**



**Coupled Port Return Loss**

