

Coupler, 16 dB
5 - 862 MHz

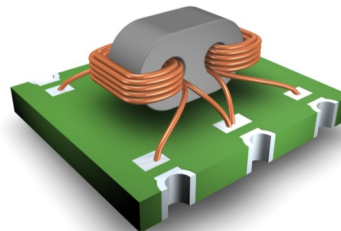
Rev. V1

Features

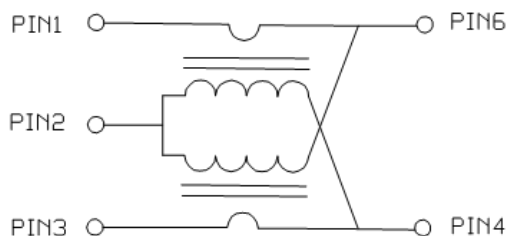
- 16 dB Coupling
- Surface Mount
- Low Profile
- Tape & Reel Packaging Available

Description

The EMDC-16-8-75 is a high performance 75 Ω coupler, in a SM-101 low cost, surface mount package. This coupler is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, and Broadband Amplifiers.



Schematic



Pin Configuration

Pin No.	Function
1	Input
2	Ground
3	Coupled
4	External 75 Ω
5	No Connection
6	Output

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

Parameter	Test Conditions	Units	Nominal	Typical	Minimum	Maximum
Mainline Loss	5 - 862 MHz	dB	—	1.05	—	1.25
Coupling	5 - 44 MHz	dB	16	—	—	± 0.5
	45 MHz		16			± 0.2
	45 - 870 MHz		15.6			± 0.3
Coupling Flatness	5 - 862 MHz	dB	—	—	—	± 0.3
Isolation	5 - 862 MHz	dB	—	33	29	—
Input Return Loss	5 - 862 MHz	dB	—	25	18	—
Output Return Loss	5 - 862 MHz	dB	—	25	18	—
Coupled Return Loss	5 - 862 MHz	dB	—	25	18	—

Ordering Information

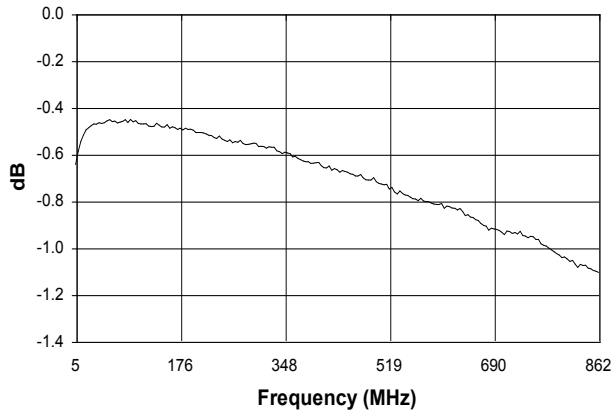
Part Number	Description
EMDC-16-8-75TR	900 piece reel
MACP-010676-C001TB	Customer Test Board

Recommended Maximum Ratings

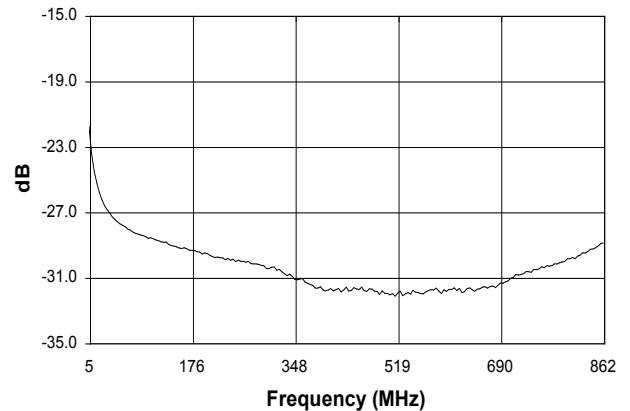
Parameter	Ratings
Input Power	250 mW
DC Current	30 mA
Operating/Storage Temperature	-40°C to +85°C

Typical Performance @ 25°C

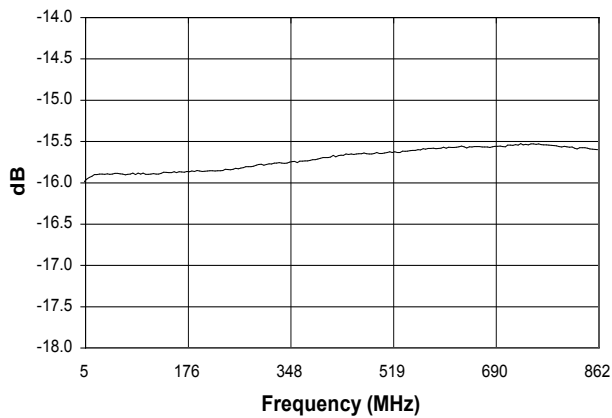
Mainline Loss



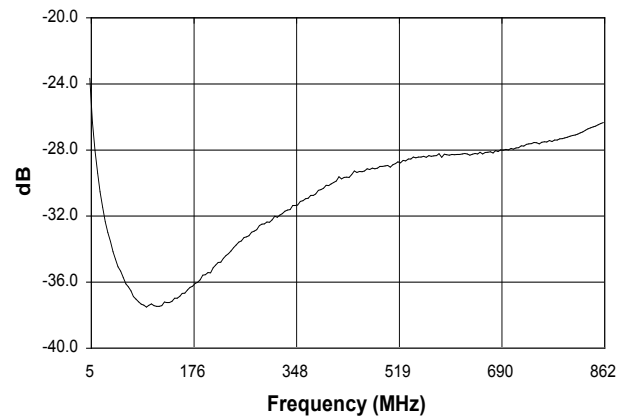
Input Return Loss



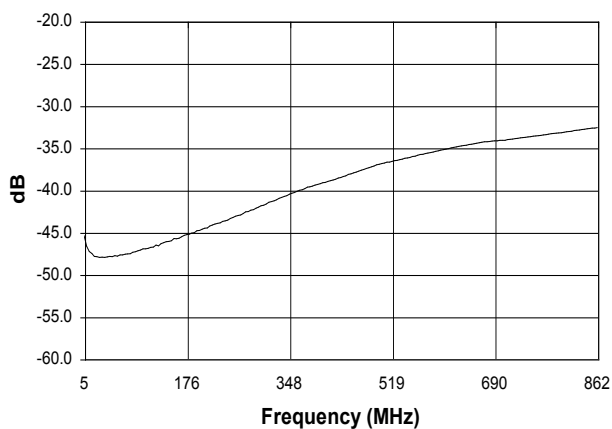
Coupling



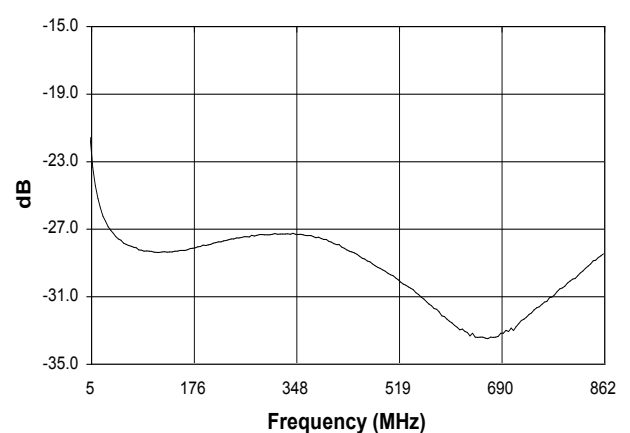
Output Return Loss



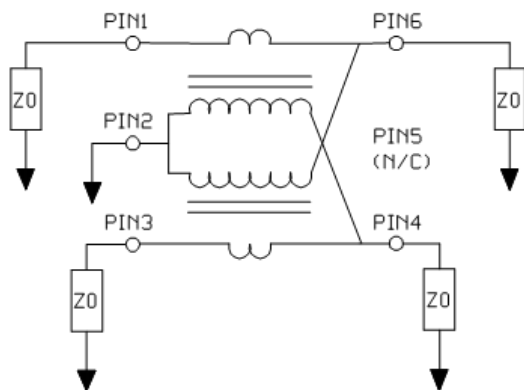
Isolation



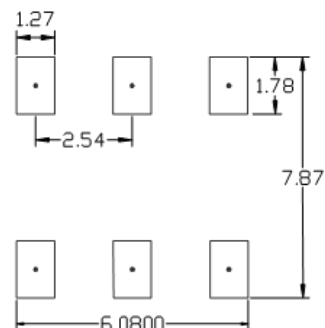
Coupled Port Return Loss



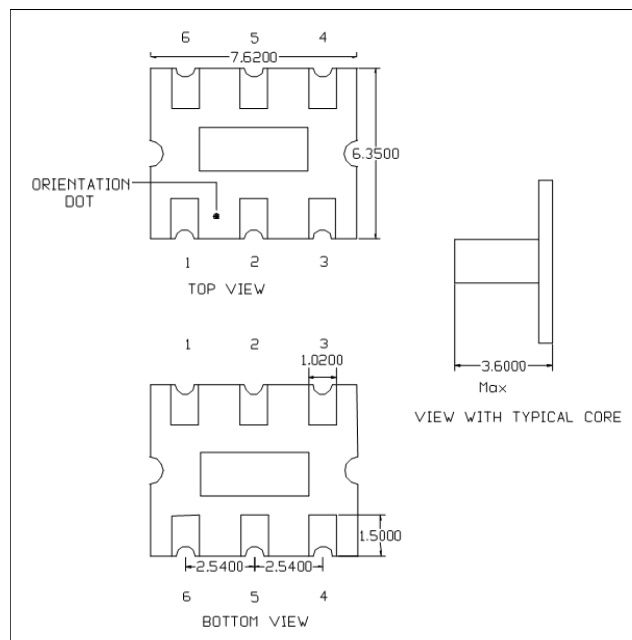
Application Circuit



Recommended Footprint



Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: ENIG on both sides, 0.05 to 0.1 μ m gold over 3 to 6 μ m nickel

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.60
Bo	mm	7.90
Ko	mm	3.20
Orientation	-	Check ANI-019
Reference Application Note ANI-019 for orientation		

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