

# Broadband CATV, 16 dB Coupler 5 - 1200 MHz

Rev. V4

#### **Features**

- Surface mount
- Typical coupling +16dB
- 260°C reflow compatible
- RoHS compliant and Pb free
- Available on tape and reel, reel quantity 1000

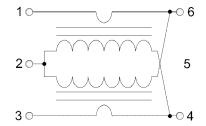
### **Description**

The MACPCT0030 is a 16 dB broadband coupler in a surface mount package. It offers low loss, good isolation, good input/output matching and exceptional matching in return loss.

Ideally suited for high volume CATV/Broadband applications.

### **Schematic**





## **Pin Configuration**

Pin#	Function	Pin#	Function
1	Input	4	Isolated (external 75 Ω termination)
2	Ground	5	N/C
3	Coupled	6	Output

### Electrical Specifications: $T_A = 25^{\circ}C$ , $Z_0 = 75 \Omega$

Parameter	Frequency Test Conditions (MHz)	Units	Min	Тур	Max
	5 - 40			15.8	16.0
Coupling	40 - 1000	dB	_	16.4	17.5
	1000 - 1200			16.8	18.5
Main Line Loss	5 - 1000	dB		1.0	1.25
Walli Line Loss	1000 - 1200	uБ		1.2	1.60
	5 - 40		20.0	23.0	
Input Return Loss	40 - 1000	dB	24.0	27.0	_
	1000 - 1200		22.0	28.0	
	5 - 40		20.0	23.7	
Output Return Loss	40 - 1000	dB	25.0	29.8	_
	1000 - 1200		20.0	24.1	
Isolation	5 - 1000	dB	25	29.0	
ISOIAUOTI	1000 - 1200	uБ	23	27.0	_
Coupling	5 - 1000	dB	20.0	22.3	
Return Loss	1000 - 1200		16.0	22.0	_

## Ordering Information<sup>1</sup>

Part Number	Package		
MACPCT0030	1000 piece reel		
MACP-007977-CT30TB	Test Board		

<sup>1.</sup> Reference Application Note M513 for reel size information.

## Absolute Maximum Ratings<sup>2,3</sup>

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

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

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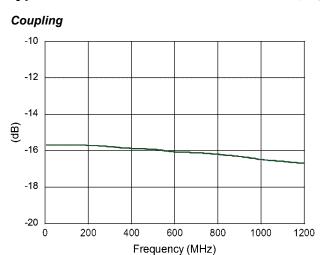
Visit <a href="https://www.macom.com">www.macom.com</a> for additional data sheets and product information.



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



# 0.0 -0.4 -0.8 -1.2 -1.6

600

Frequency (MHz)

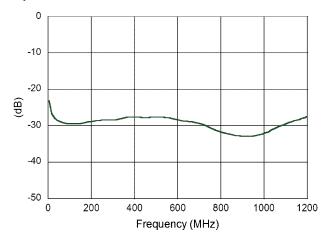
800

1000

1200

400

#### Input Return Loss

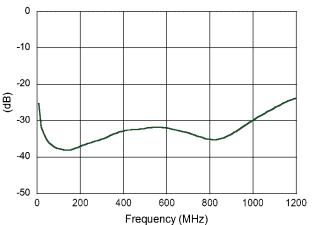


### Output Return Loss

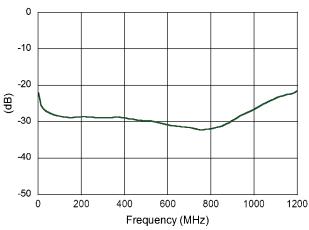
200

-2.0

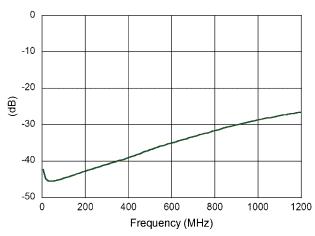
Main Line Loss



### **Coupling Return Loss**



### Isolation



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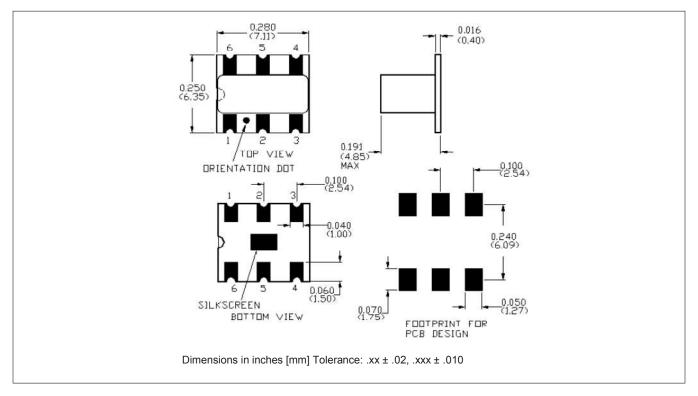
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Case Style: SM-123





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