E-Series RF 20dB Coupler 136 - 174 MHz

Features

- Typical 19dB Coupling
- Surface Mount
- Tape and reel packaging available
- 260°C Reflow Compatible
- Pb Free Solder to attach wires
- RoHS* compliant

Description

M/A-COM Technology Solutions MACP-010121-B8180X is a RoHS Compliant 20dB RF 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 cellular and wireless applications.

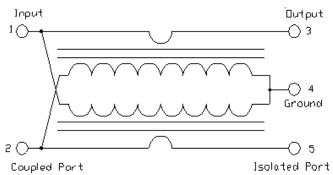
The MACP-010121-B8180X is available in a surface mount package and is designed to be utilized in a RoHS reflow profile.

Pin Configuration

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Pin No.	Function	
1	Input	
2	Coupled	
3	Output	
4	Ground	
5	External 50 Ohms	

Schematic



BOTTOM VIEW

SUGGESTED FOOTPRINT

Dimensions in mm, Tolerance: ±0.2mm, unless otherwise stated Coplanarity spec of 0.25mm to customer PCB. Drawing Not to Scale.

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

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Rev. V3



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Electrical Specifications: $T_A = 25^{\circ}C$, $Z_0 = 50\Omega$

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
RF Frequency	_	136 - 174	MHz		_	—
Coupling	F _L —f _U	136 - 174	dB	_	19±1	—
Main Line Loss	F∟—f∪	136 - 174	dB	_	0.2	—
Directivity	F _L —f _U	136 - 174	dB	13	15	—

Recommended Maximum Ratings^{1,2}

Parameter	Value	
RF Power	7W	
DC Current	240 mA ²	
Operating Temperature	-40°C to +85°C	
Storage Temperature	-55°C to +125°C	

1. Exceeding any one or combination of these limits may cause permanent damage to this device.

2. M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.

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North America Tel: 800.366.2266
Europe Tel: +353.21.244.6400
India Tel: +91.80.4155721
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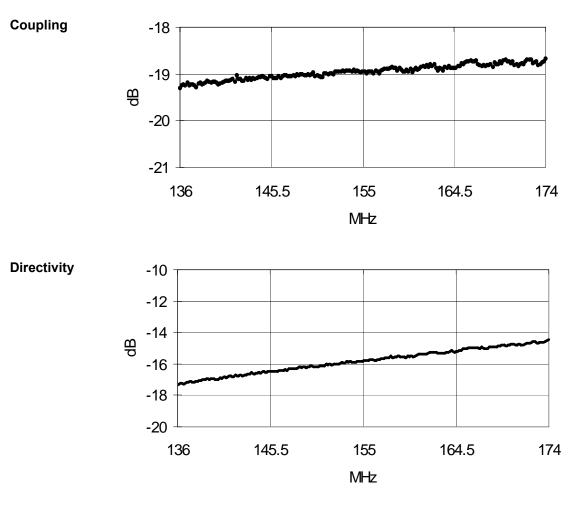
2

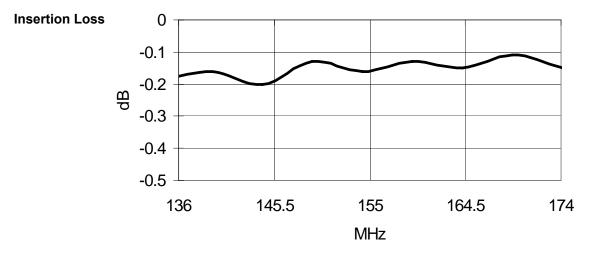


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Typical Performance Curves: $T_A = 25^{\circ}C$, $Z_0 = 50\Omega$





3

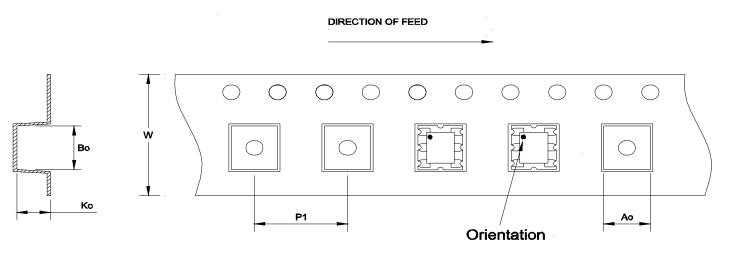
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Tape Specification:



Item	Dimension	Tolerance	Units
Ao	7.30	± 0.10	mm
Bo	7.40	± 0.10	mm
Ko	4.00	± 0.10	mm
W	16.00	± 0.30	mm
P1	12.00	± 0.10	mm

Ordering Information

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Part Number	Package	Quantity
MACP-010121-B8180X	T&R	900

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