

## Features

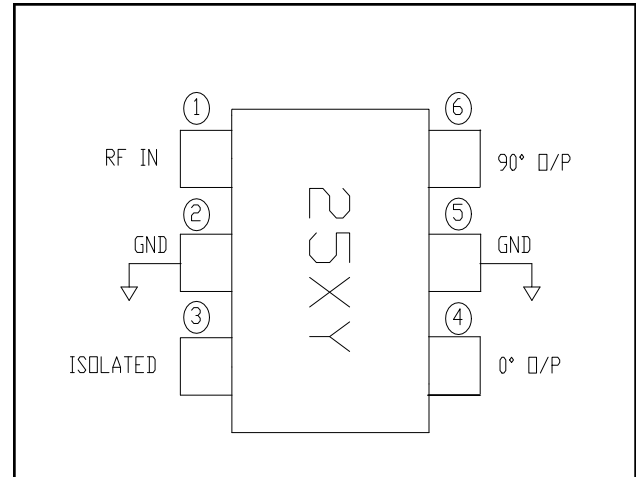
- Small Size and Low Profile
- Typical Insertion Loss 0.7 dB
- Typical Amplitude Balance 0.3 dB
- 1 Watt Power Handling
- SOT-26 Package

## Description

M/A-COM's QH01-0016-G is an IC-based monolithic power divider using M/A-COM's GMIC technology in a low cost SOT-26 plastic package. This Quad Hybrid is ideally suited for applications where small size, low insertion loss, superior phase/amplitude tracking and low cost are required. Typical applications include base station switching networks and other cellular applications where size and PCB real estate are at a premium. Available in Tape and Reel.

The QH01-0016-G is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

## Functional Block Diagram



## Ordering Information

Part Number	Package
QH01-0016-G	Bulk Packaging
QH01-0016-G-TR	1000 piece reel

Note: Reference Application Note M513 for reel size information.

## Pin Configuration

Pin No.	Function	Pin No.	Function
1	RF IN	4	0° OUTPUT
2	GND	5	GND
3	ISOLATED	6	90° OUTPUT

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

Parameter	Units	Min	Typ	Max
Insertion Loss above 3.0 dB	dB	—	0.7	1.2
Isolation	dB	14	17	—
VSWR	—	—	1.3:1	1.5:1
Input	—	—	1.35:1	1.5:1
RF1, RF2 Outputs	—	—	1.35:1	1.5:1
Amplitude Balance	dB	—	0.3	0.7
Phase Balance	Deg	—	1.5	6

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

Parameter	Absolute Maximum
Input Power <sup>3</sup>	1 W CW
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°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.
3. With internal load dissipation of 0.125 W Maximum.

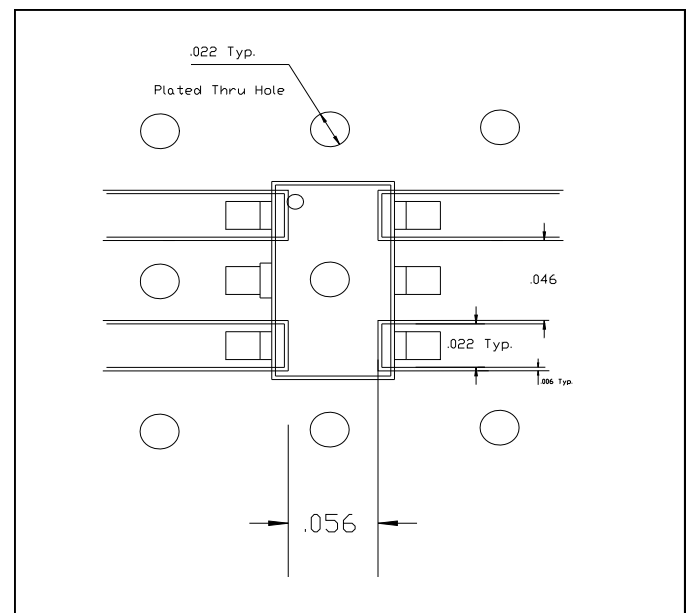
## Handling Procedures

Please observe the following precautions to avoid damage:

## Static Sensitivity

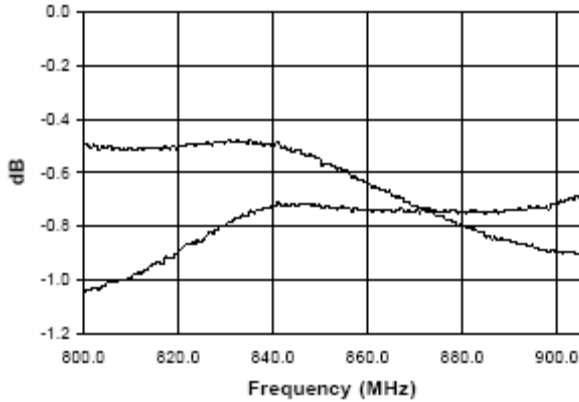
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

## Recommended PCB Configuration

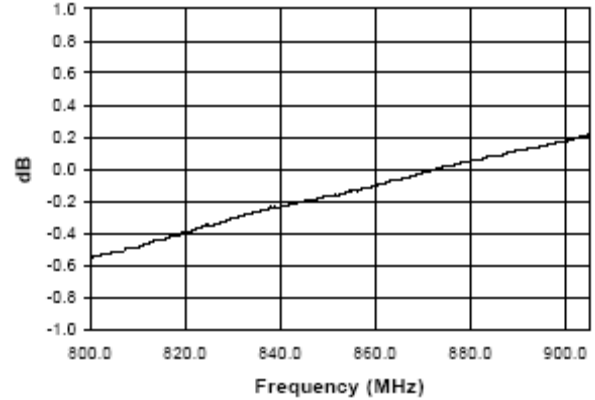


## Typical Performance Curves @ 25°C

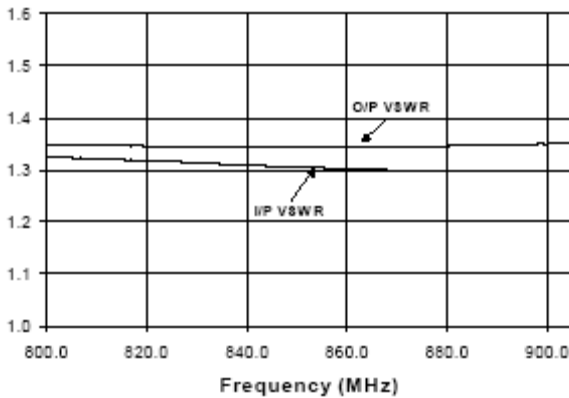
**Insertion Loss vs. Frequency**



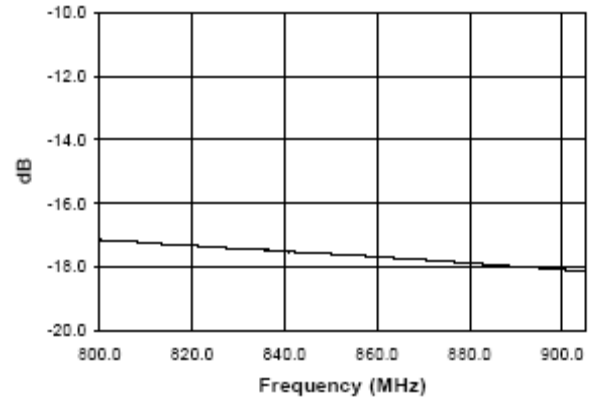
**Amplitude Balance vs. Frequency**



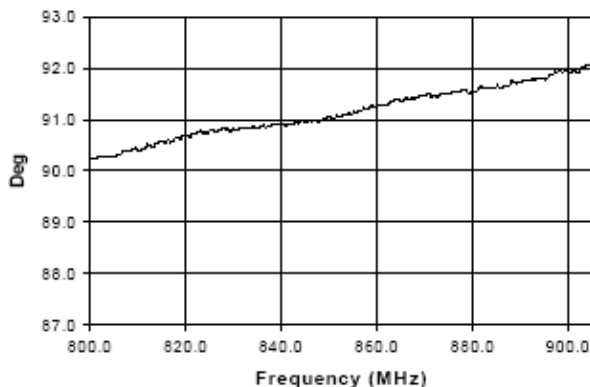
**VSWR vs. Frequency**



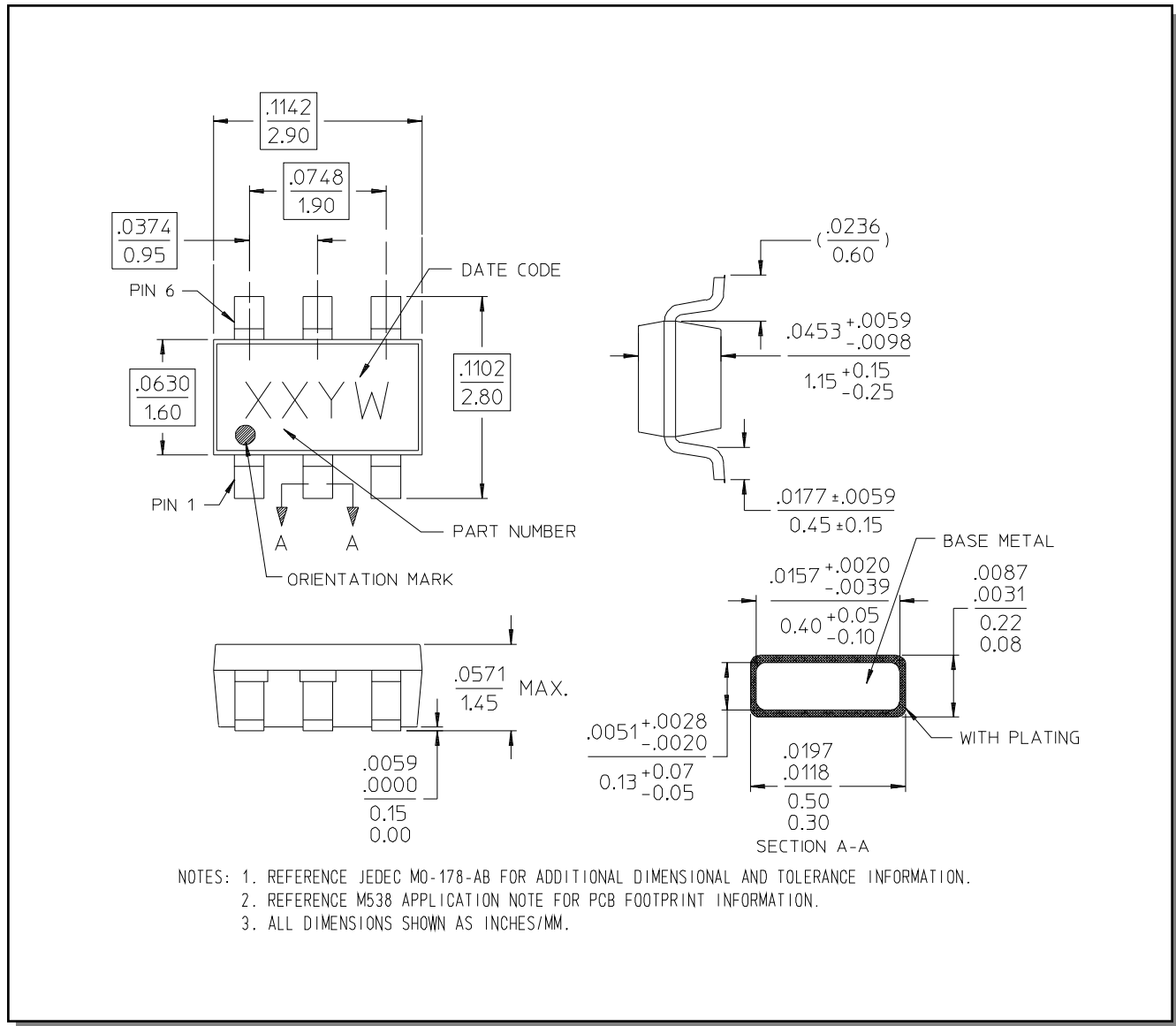
**Isolation vs. Frequency**



**Phase Balance vs. Frequency**



## SOT-26<sup>†</sup>



<sup>†</sup> Reference Application Note M538 for lead-free solder reflow recommendations.