Low Cost Five-Way GMIC SMT Power Divider 1700 - 2000 MHz

DS55-0001

V1.00

Features

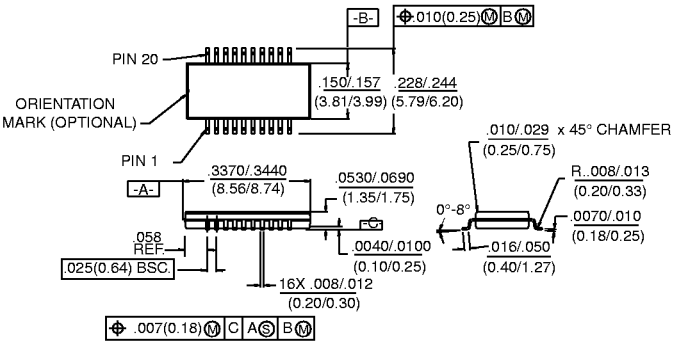
- Small Size, Low Profile
- Superior Repeatability (Lot-to-Lot Variation)
- Industry Standard QSOP-20 SMT Plastic Package
- Typical Isolation: 30 dB
- Typical Insertion Loss: 0.7 dB
- Low Cost
- 1 Watt Power Handling

Description

M/A-COM's DS55-0001 is an IC- based monolithic power divider using M/A-COM's GMIC technology in low cost QSOP-20 plastic packages. This 5-way power divider is ideally suited for applications where PCB real estate is at a premium and part count reduction and cost are critical. Typical applications include base station switching networks and other cellular equipment, including subscriber units. Available in tape and reel.

The DS55-0001 is fabricated using a passive-integrated circuit process. The process features full chip passivation for increased performance and reliability.

QSOP-20



20-Lead QSOP outline dimensions
(All dimensions per JEDEC No. MS-137-AD, Issue C)
Dimensions in () are in mm.
Unless Otherwise Noted: .XXX=±.010 (.XX=±0.25)
.XX=.02 (.X=±0.5)

Ordering Information

Part Number	Package
DS55-0001	QSOP 20-Lead Plastic Package
DS55-0001-TR	Forward Tape and Reel*
DS55-0001-RTR	Reverse Tape and Reel*

* If specific reel size is required, consult factory for part number assignment.

Typical Electrical Specifications[1], T_A= +25°C

Parameters	Units	Min.	Typical	Max.
Insertion Loss Above 7.0 dB	dB		0.7	1.2
Isolation	dB	20	30	
VSWR Input			1.5:1	1.8:1
Output			1.2:1	1.4:1
Amplitude Balance	dB		0.2	0.6
Phase Balance	°		6	12

1. All specifications apply with a 50-ohm source and load impedance.

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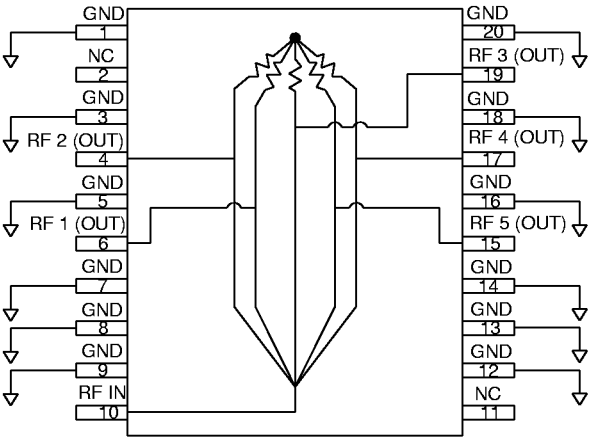
Absolute Maximum Ratings[1]

Parameter	Absolute Maximum
Input Power[2]	1W CW
Operating Temperature	- 40° to + 85°C
Storage Temperature	- 65°C to + 150°C

1. Exceeding these limits may cause permanent damage.
2. With internal load dissipation of 0.125 W Maximum.

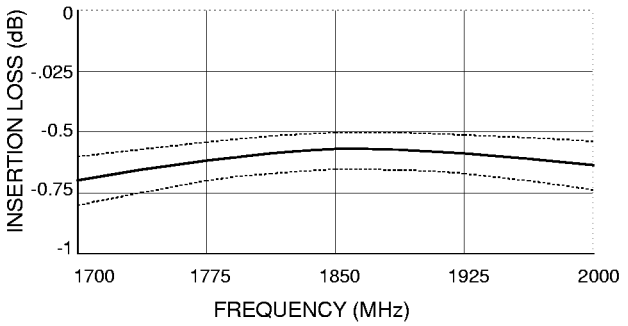
Functional Diagram



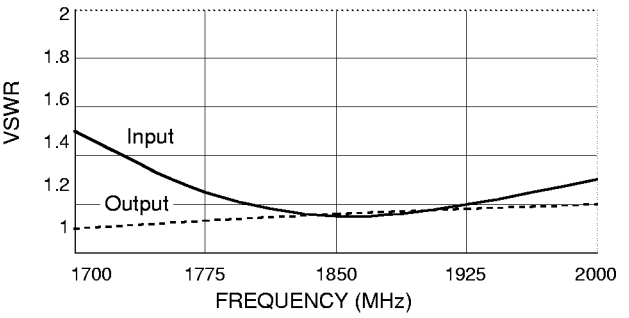
Pins labeled as ground should be DC and RF grounded.

Typical Performance @ +25°C

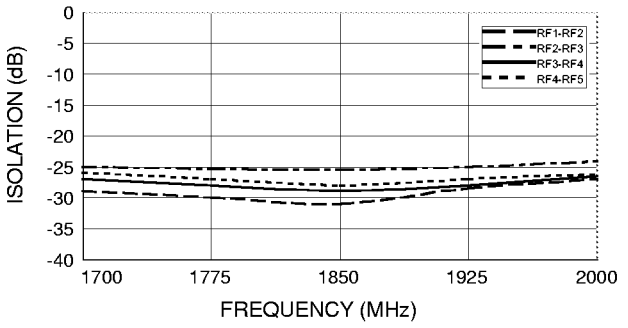
INSERTION LOSS vs FREQUENCY
(Dashed lines show amplitude balance window)



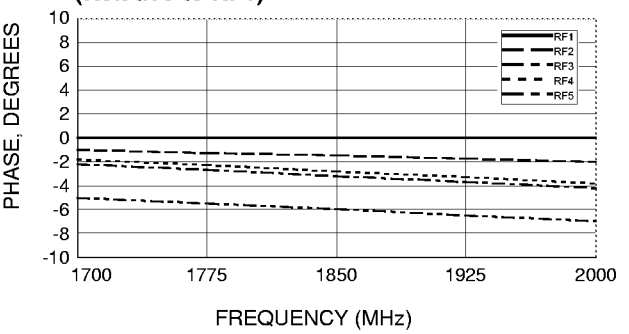
VSWR vs FREQUENCY



ISOLATION vs FREQUENCY



PHASE BALANCE vs FREQUENCY
(Relative to RF1)



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