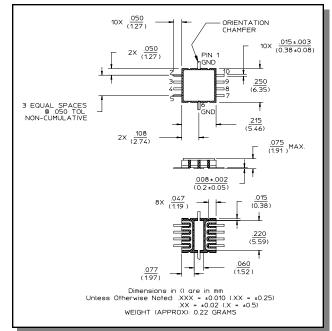
Ultra Low Noise pHEMT Dual Channel Amplifier, 1.710-1.910 GHz

Features

- 0.7 dB Typical Noise Figure
- 14 dB Typical Gain
- DC Decoupled RF Input and Output
- Single Bias Configuration
- SMT Construction
- Dual Channels for Balanced Designs
- Unconditionally Stable—No External Matching Circuit required

Description

M/A-COM's AM40-0023 is a dual-channel, ultra low noise amplifier in a surface mount package. Very low noise figure is achieved by using discrete pHEMT devices combined with M/A-COM's glass technology. The AM40-0023 is designed specifically for use in DCS-1800 and PCS telecommunication applications where less than 1 dB noise figure is required.



Electrical Specifications:

Bias Conditions: +7V @ 20 mA Typical (each channel,) $T_A = +25^{\circ}C$, $Z_0 = 50$ Ohms

CR-5

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Gain	$P_{IN} = -20 \text{ dBm}$	1.710-1.910 GHz	dB	11	14	—
Gain Flatness	P _{IN} = -20 dBm	1.710-1.910 GHz	dB	—	± 1.0	± 1.5
Noise Figure	_	1.710-1.910 GHz	dB	_	0.7	0.9
VSWR Input	P _{IN} = -20 dBm	1.710-1.910 GHz	Ratio	-	2.0:1	3.0:1
VSWR Output	P _{IN} = -20 dBm	1.710-1.910 GHz	Ratio	_	2.0:1	3.0:1
1 dB Compression	Input Power	1.710-1.910 GHz	dBm	-13	-9	—
Reverse Isolation	_	1.710-1.910 GHz	dB	20	25	_
Input Third Order Intercept	_	1.710-1.910 GHz	dBm	0	3	-

1

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Commitment to produce in volume is not guaranteed.

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China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

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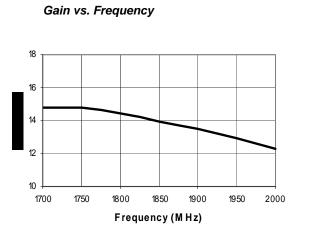
Rev. V3

AM40-0023

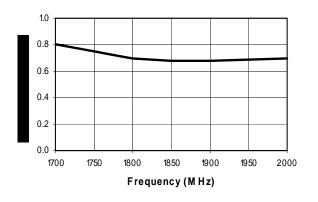
Ultra Low Noise pHEMT Dual Channel Amplifier, 1.710-1.910 GHz

Typical Performance Curves





Noise Figure vs. Frequency



Absolute Maximum Ratings¹

Parameter	Absolute Maximum		
Max. Input Power ²	+15 dBm		
Operating Voltage ²	+10.0 V		
Operating Temperature	-55°C to +125°C		
Storage Temperature	-65°C to +150°C		

1. Operation of this device above any one of these parameters may cause permanent damage. 2. Ambient Temperature $(T_A) = +25^{\circ}C$

RF OUT RF IN

1850

Frequency (MHz)

1900

1950

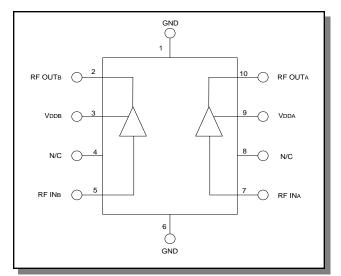
2000

Functional Schematic (Top View)

1800

1700

1750



Ordering Information

Part Number	Package		
AM40-0023 PIN	CR-5		

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• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

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