Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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HMC-C039

v02.1007

DIVIDE-BY-5 PRESCALER MODULE, 0.5 - 8.0 GHz

Features

Ultra Low SSB Phase Noise: -150 dBc/Hz

Wide Bandwidth

Output Power: -1 dBm

Single DC Supply: +5V @ 80mA

RoHS Compliant Hermetically Sealed Module

Field Replaceable SMA Connectors

-55 to +85 °C Operating Temperature

Typical Applications

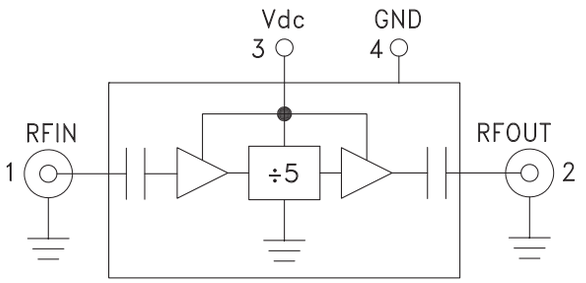
Prescaler for 0.5 to 18 GHz PLL Applications:

- Point-to-Point / Multi-Point Radios
- VSAT Radios
- Fiber Optic
- Test Equipment
- Military & Space

General Description

The HMC-C039 is a low noise Divide-by-5 Static Divider utilizing InGaP GaAs HBT technology packaged in a miniature, hermetic module with replacable SMA connectors. This device operates from 0.5 to 8GHz input frequency from a single +5V DC supply. The low additive SSB phase noise of -155 dBc/Hz at 100 kHz offset helps the user maintain excellent system noise performance.

Functional Diagram



Electrical Specifications, T_A = +25° C, 50 Ohm System, Vdc= +5V

Parameter	Conditions	Min.	Typ.	Max.	Units
Maximum Input Frequency		8	9		GHz
Minimum Input Frequency	Sine Wave Input			0.5	GHz
Input Power Range	Fin = 0.5 to 7 GHz	-20	-15	+15	dBm
	Fin = 7 to 8 GHz	-20	-15	+10	dBm
Output Power	Fin = 0.5 to 8 GHz	-4	-1		dBm
Reverse Leakage	Fin = 0.5 to 8 GHz		58		dB
SSB Phase Noise (100 kHz offset)	Pin = 0 dBm, Fin = 4.8 GHz		-155		dBc/Hz
Output Transition Time	Pin = 0 dBm, Fout = 882 MHz		100		ps
Supply Current (Idc)			80		mA

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HMC-C039* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

DOCUMENTATION

Data Sheet

- HMC-C039 Data Sheet

DESIGN RESOURCES

- HMC-C039 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all HMC-C039 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

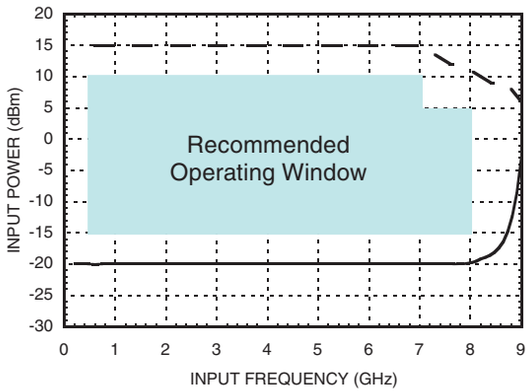
TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

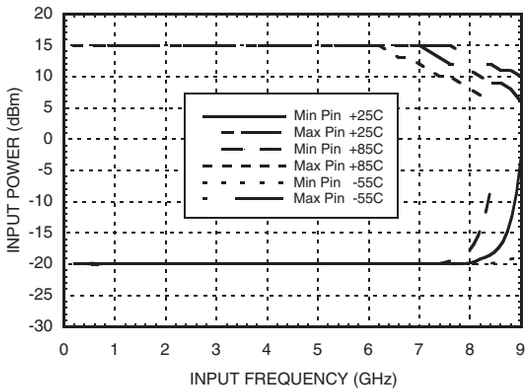
DOCUMENT FEEDBACK

Submit feedback for this data sheet.

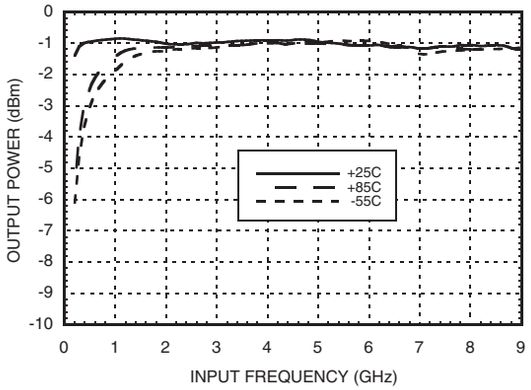
Input Sensitivity Window, T= 25 °C



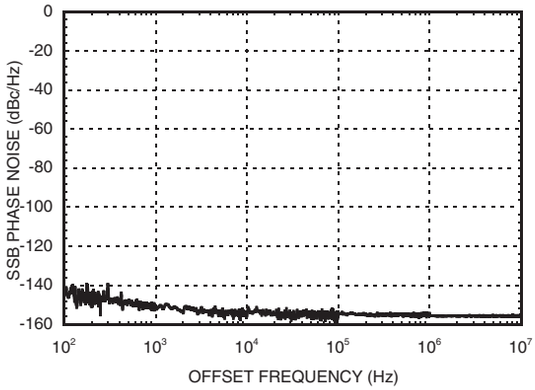
Input Sensitivity vs. Temperature



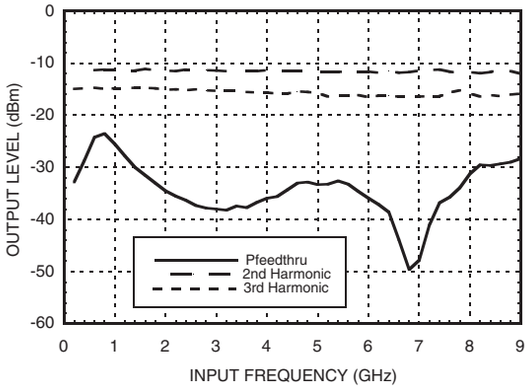
Output Power vs. Temperature



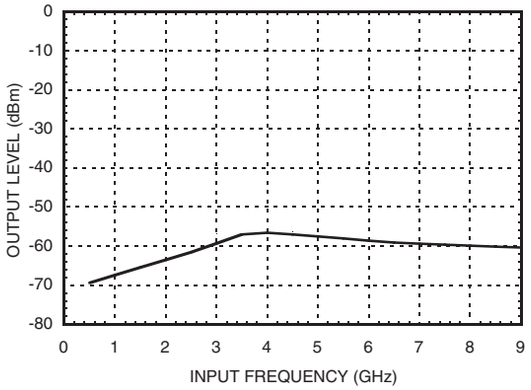
SSB Phase Noise Performance, Pin= 0 dBm, T= 25 °C



Output Harmonic Content, Pin= 0 dBm, T= 25 °C



Reverse Leakage, Pin= 0 dBm, T= 25 °C



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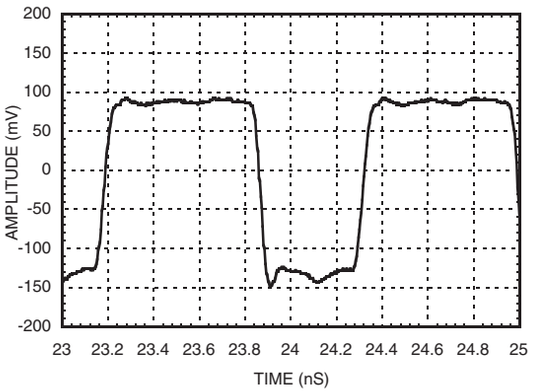
DIVIDE-BY-5 PRESCALER MODULE, 0.5 - 8.0 GHz

Output Voltage Waveform, Pin= 0 dBm, Fout= 882 MHz, T= 25 °C



Absolute Maximum Ratings

Supply Voltage (Vdc)	+5.5V
RF Input (Vdc = +5V)	+13 dBm
Storage Temperature	-65 to +150 °C
Operating Temperature	-55 to +85 °C

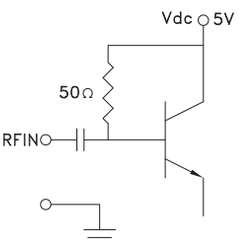
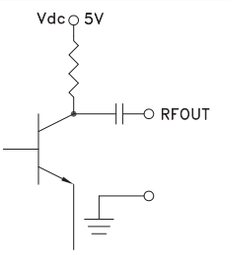
ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Typical Supply Current vs. Vdc

Vdc	Idc (mA)
4.75	74
5.0	80
5.25	86

Note: Divider will operate over full voltage range shown above

Pin Description

Pin Number	Function	Description	Interface Schematic
1	RFIN & RF Ground	RF input connector, SMA female, field replaceable. RF Input is AC coupled.	
2	RFOUT & RF Ground	RF output connector, SMA female, field replaceable. Divided output is AC coupled.	
3	Vdc	Supply voltage 5V ± 0.25V.	
4	GND	Power supply ground.	

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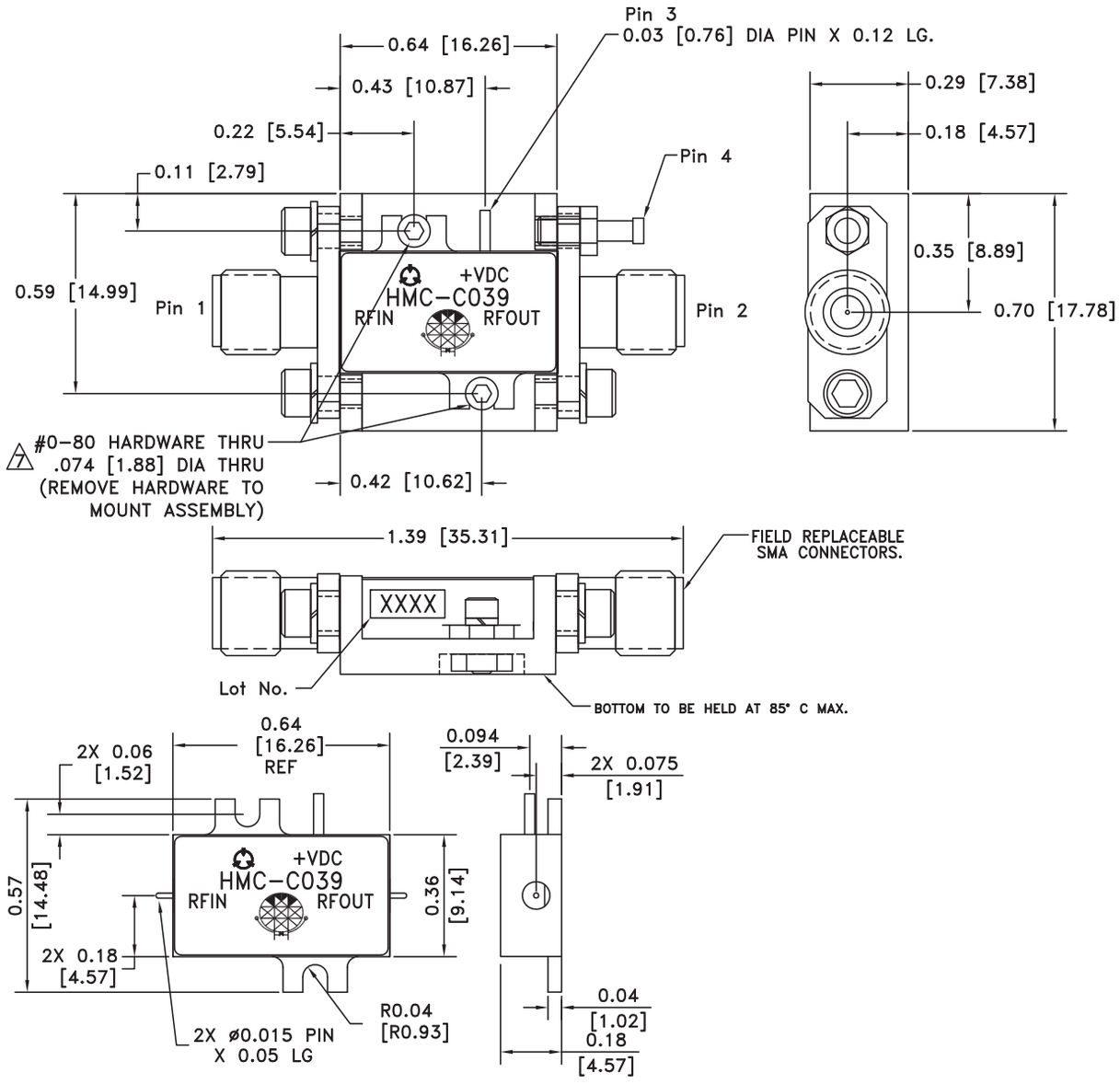
Outline Drawing



Package Information

Package Type	C-1
Package Weight [1]	10.2 gms [2]
Spacer Weight	N/A

[1] Includes the connectors

[2] ±1 gms Tolerance

NOTES:

1. PACKAGE, LEADS, COVER MATERIAL: KOVAR™
2. BRACKET MATERIAL: ALUMINUM
3. PLATING: ELECTROLYTIC GOLD 50 MICROINCHES MIN., OVER ELECTROLYTIC NICKEL 75 MICROINCHES MIN.
4. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
5. TOLERANCES ±.005 [0.13] UNLESS OTHERWISE SPECIFIED.
6. FIELD REPLACEABLE SMA CONNECTORS. TENSOLITE 5602 - 5CCSF OR EQUIVALENT.
7. TO MOUNT MODULE TO SYSTEM PLATFORM REPLACE 0 -80 HARDWARE WITH DESIRED MOUNTING SCREWS.

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