HMC344* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

EVALUATION KITS

- HMC344LC3 Evaluation Board.
- HMC344LH5 Evaluation Board
- HMC344LP3 Evaluation Board.

DOCUMENTATION

Data Sheet

- HMC344 Die Data Sheet
- HMC344LC3 Data Sheet
- HMC344LH5 Data Sheet
- HMC344LP3 Data Sheet

TOOLS AND SIMULATIONS

- HMC344 Die S-Parameters
- HMC344LC3 S-Parameters
- HMC344LH5 S-Parameters
- HMC344LP3 S-Parameters

REFERENCE MATERIALS

Quality Documentation

- Package/Assembly Qualification Test Report: 16L 3x3mm QFN Package (QTR: 11003 REV: 02)
- Package/Assembly Qualification Test Report: LC3, LC3B, LC3C (QTR: 2014-00376 REV: 01)
- Package/Assembly Qualification Test Report: LP2, LP2C, LP3, LP3B, LP3C, LP3D, LP3F, LP3G (QTR: 2014-0364)
- Package/Assembly Qualification Test Report: Plastic Encapsulated QFN (QTR: 05006 REV: 02)
- Semiconductor Qualification Test Report: MESFET-F (QTR: 2013-00247)

DESIGN RESOURCES

- HMC344 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all HMC344 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

TECHNICAL SUPPORT

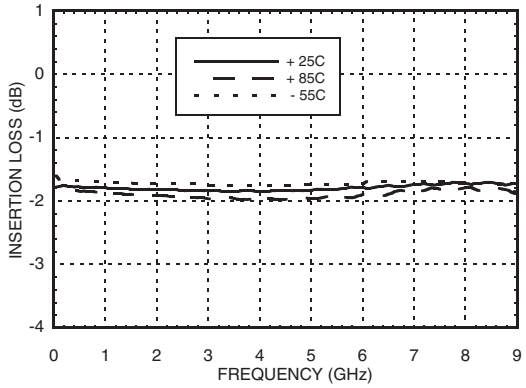
Submit a technical question or find your regional support number.

DOCUMENT FEEDBACK

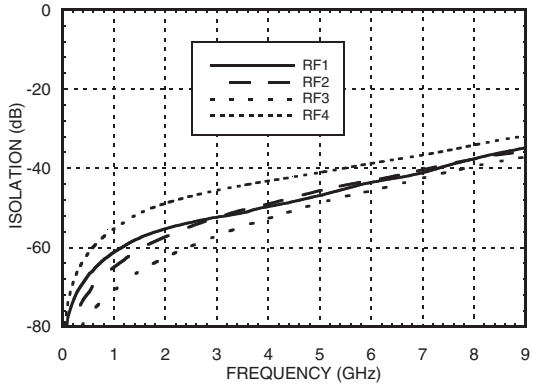
Submit feedback for this data sheet.

GaAs MMIC SP4T NON-REFLECTIVE SWITCH, DC - 8 GHz

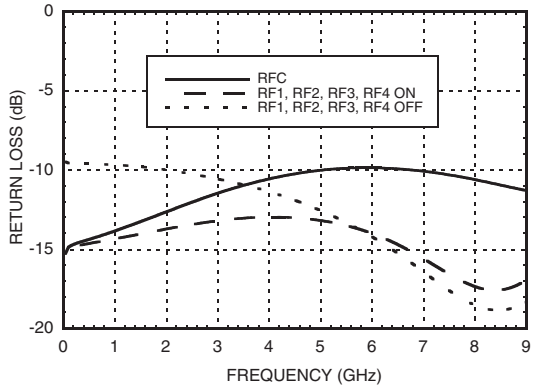
Insertion Loss vs. Temperature



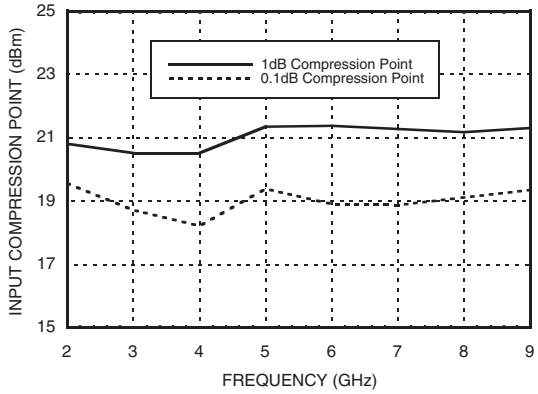
Isolation



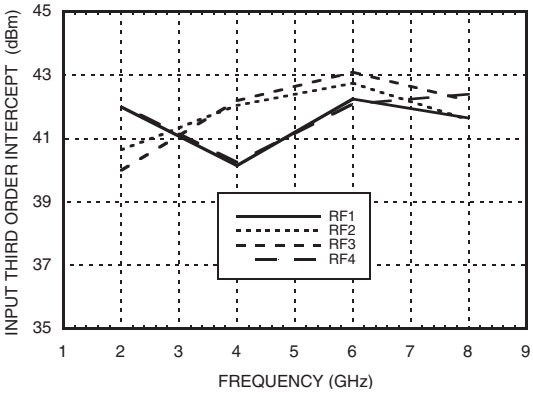
Return Loss



0.1 and 1 dB Input Compression Point



Input Third Order Intercept Point



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Application Support: Phone: 1-800-ANALOG-D

GaAs MMIC SP4T NON-REFLECTIVE SWITCH, DC - 8 GHz

Absolute Maximum Ratings

Bias Voltage Range (Vee)	-7V
Control Voltage Range (A & B)	Vee -0.5V to +1V
Channel Temperature	150 °C
Thermal Resistance (Insertion Loss Path)	143 °C/W
Thermal Resistance (Terminated Path)	1,030 °C/W
Storage Temperature	-65 to +150 °C
Operating Temperature	-55 to +85 °C
Maximum Input Power	+24 dBm
ESD Sensitivity (HBM)	Class 1A

ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Truth Table

Control Input		Signal Path State
A	B	RF COM to:
High	High	RF1
Low	High	RF2
High	Low	RF3
Low	Low	RF4

Bias Voltage & Current

Vee Range = -5 Vdc ±10%		
Vee (V)	Idd (Typ) (mA)	Idd (Max) (mA)
-5	3	6

TTL/CMOS Control Voltages

State	Bias Condition
Low	-3V to 0 Vdc @ 60 uA Typ.
High	-5 to 4.2 Vdc @ 5 uA Typ.

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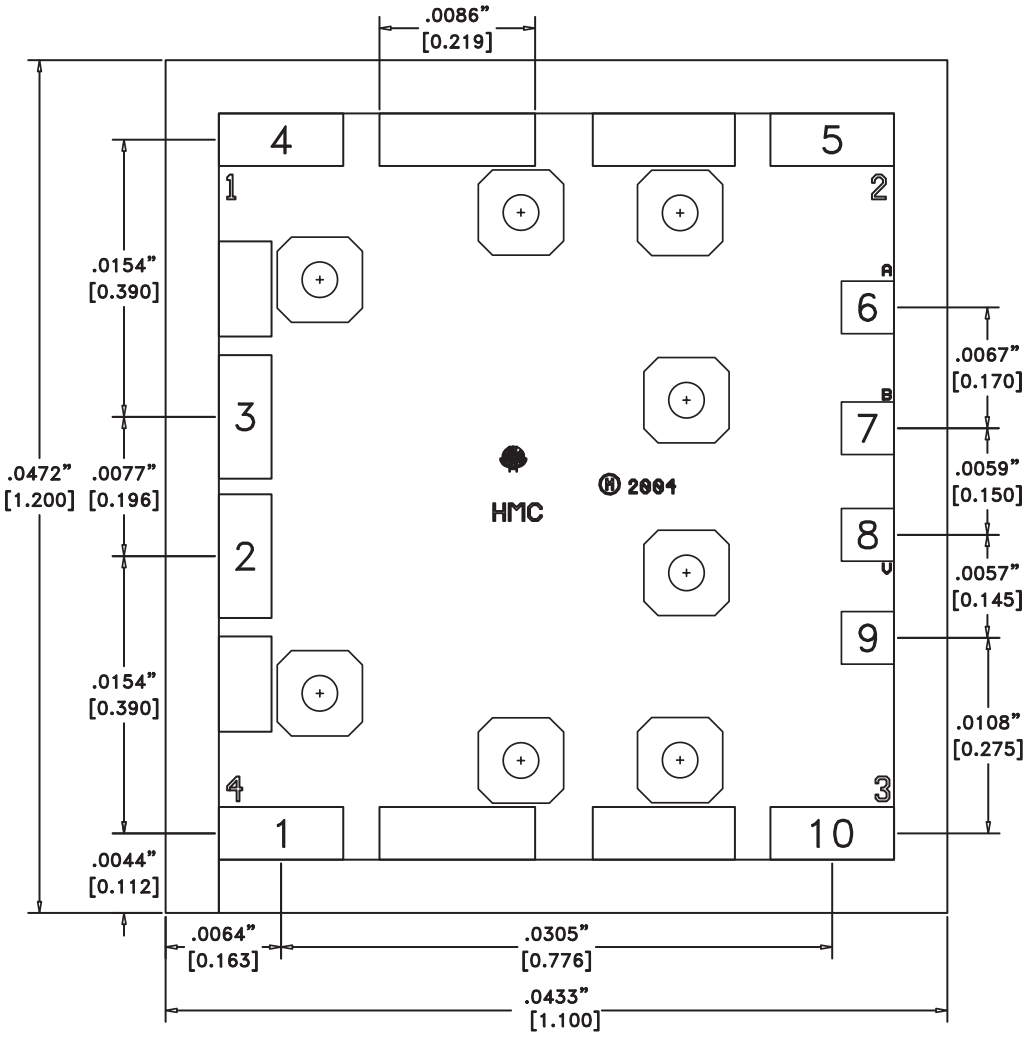
Outline Drawing



Die Packaging Information [1]

Standard	Alternate
WP-2 (Waffle Pack)	[2]

[1] Refer to the "Packaging Information" section for die packaging dimensions.
[2] For alternate packaging information contact Hittite Microwave Corporation.

NOTES:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. DIE THICKNESS IS 0.004".
3. TYPICAL BOND PAD IS 0.004" SQUARE.
4. TYPICAL BOND PAD SPACING IS 0.006" CENTER TO CENTER.
5. BOND PAD METALLIZATION: GOLD.
6. BACKSIDE METALLIZATION: GOLD.
7. BACKSIDE METAL IS GROUND.
8. NO CONNECTION REQUIRED FOR UNLABELED BOND PADS.

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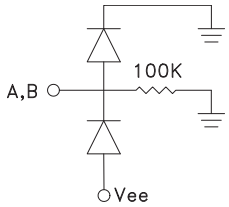
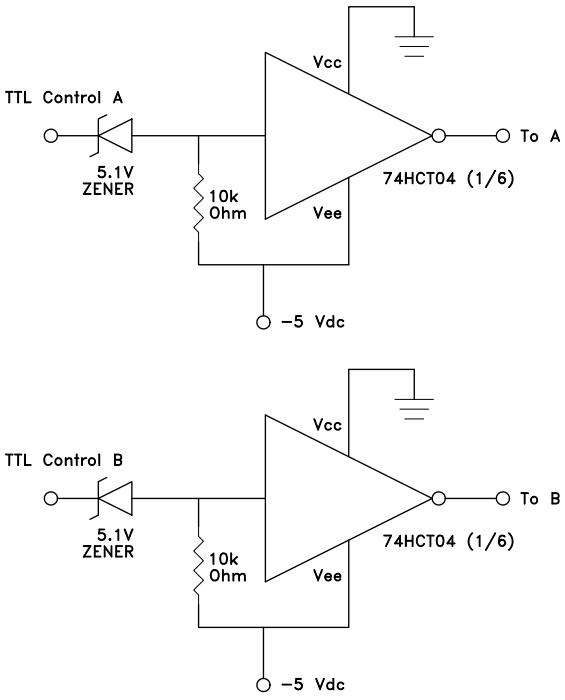
Pad Descriptions

Pad Number	Function	Description	Interface Schematic
1, 2, 3, 4, 5, 10	RF4, RFC, RF1, RF2, RF3	These pads are DC coupled and matched to 50 Ohms. Blocking capacitors are required.	
6	A	See truth table and control voltage table.	
7	B	See truth table and control voltage table.	
8	Vee	Supply Voltage -5.0 Vdc ±10%	
9, Die Bottom	GND	Die bottom and pad must be connected to RF/DC ground.	

TTL Interface Circuit



Note:
Control inputs A and B can be driven directly with TTL logic with -5 Volts applied to the HCT logic gates Vee pin and to Vee (pad) of the RF Switch.

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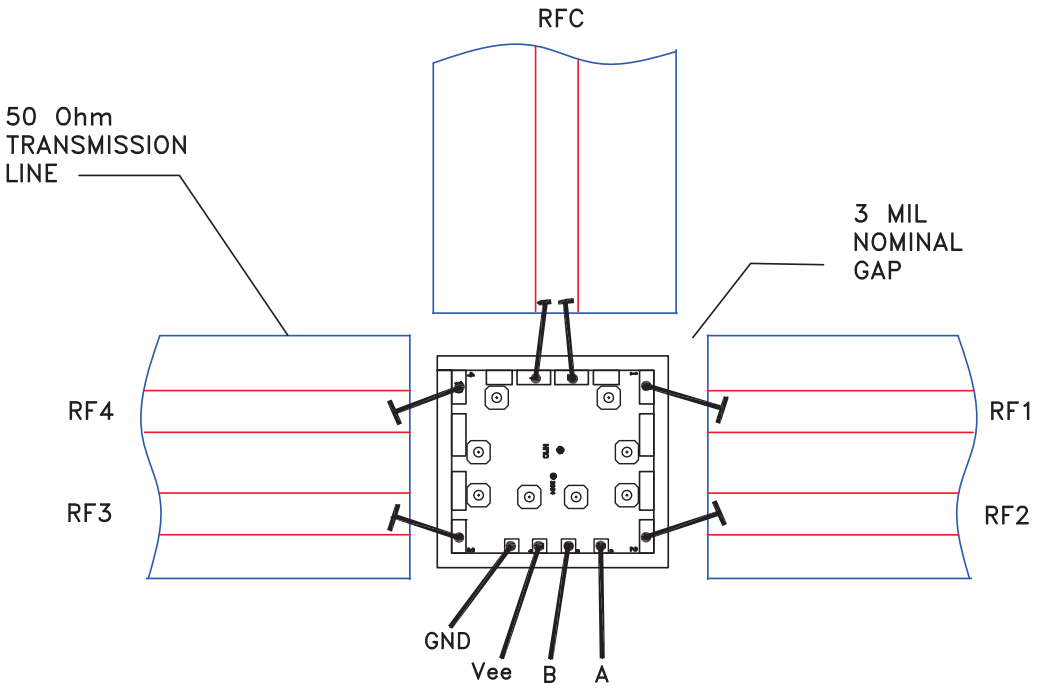
Assembly Diagram



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