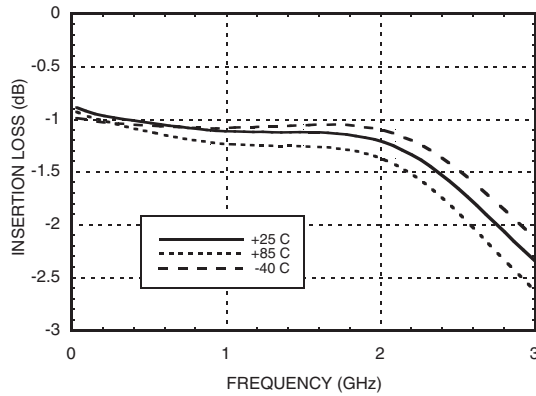


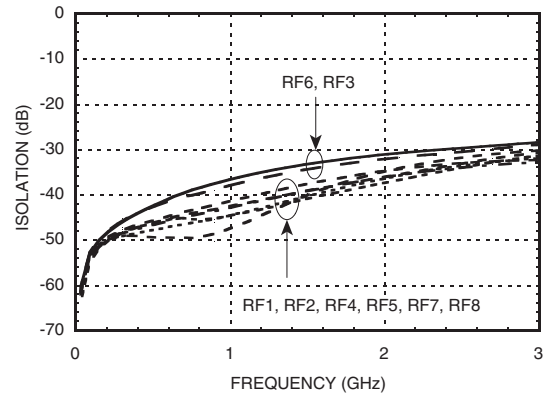
GaAs MMIC SP8T NON-REFLECTIVE SWITCH, DC - 2.5 GHz



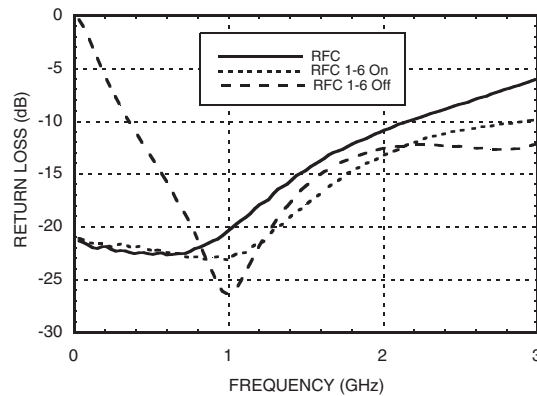
Insertion Loss



Isolation



Return Loss



Bias Voltage & Current

Vdd Range = +5.0 Vdc \pm 10%		
Vdd (Vdc)	Idd (Typ.) (mA)	Idd (Max.) (mA)
+5.0	6.0	9.0

TTL/CMOS Control Voltages

State	Bias Condition
Low	0 to +0.8 Vdc @ 5 uA Typ.
High	+2.0 to +5.0 Vdc @ 70 uA Typ.

Truth Table

Control Input			Signal Path State
A	B	C	RFCOM to:
Low	Low	Low	RF1
High	Low	Low	RF2
Low	High	Low	RF3
High	High	Low	RF4
Low	Low	High	RF5
High	Low	High	RF6
Low	High	High	RF7
High	High	High	RF8

NOTE:

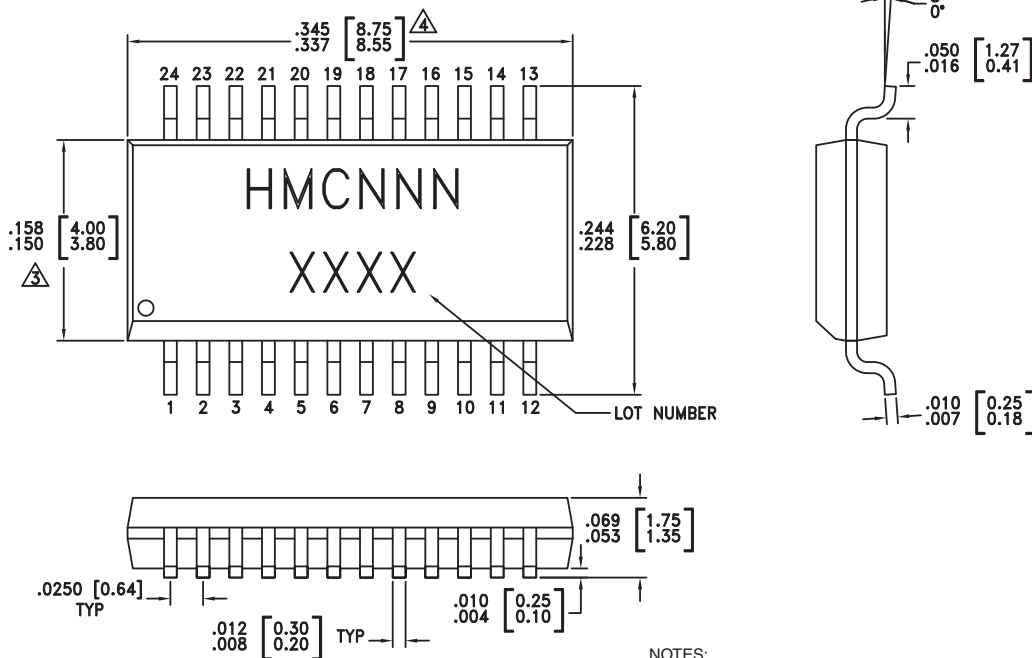
DC Blocking capacitors are required at ports RFC and RF1, 2, 3, 4, 5, 6, 7, 8.


**GaAs MMIC SP8T NON-REFLECTIVE
SWITCH, DC - 2.5 GHz**
Absolute Maximum Ratings

Bias Voltage Range (Port Vdd)	+7.0 Vdc
Control Voltage Range (A, B, C)	-0.5V to Vdd +1Vdc
Storage Temperature	-65 to +150 °C
Operating Temperature	-40 to +85 °C
Maximum Input Power Vdd = +5V	+20 dBm (0.05 - 0.5 GHz) +24 dBm (0.5 - 2.5 GHz)



**ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS**

Outline Drawing

NOTES:

1. LEADFRAME MATERIAL: COPPER ALLOY
2. DIMENSIONS ARE IN INCHES [MILLIMETERS].
3. DIMENSION DOES NOT INCLUDE MOLDFLASH OF 0.15mm PER SIDE.
4. DIMENSION DOES NOT INCLUDE MOLDFLASH OF 0.25mm PER SIDE.
5. ALL GROUND LEADS MUST BE SOLDERED TO PCB RF GROUND.

Package Information

Part Number	Package Body Material	Leadframe Plating	MSL Rating	Package Marking [3]
HMC253QS24	Low Stress Injection Molded Plastic Silica and Silicon Impregnated	Sn/Pb Solder	MSL1 [1]	HMC253 XXXX
HMC253QS24E	RoHS-compliant Low Stress Injection Molded Plastic Silica and Silicon Impregnated	100% Matte Tin	MSL1 [2]	<u>HMC253</u> XXXX

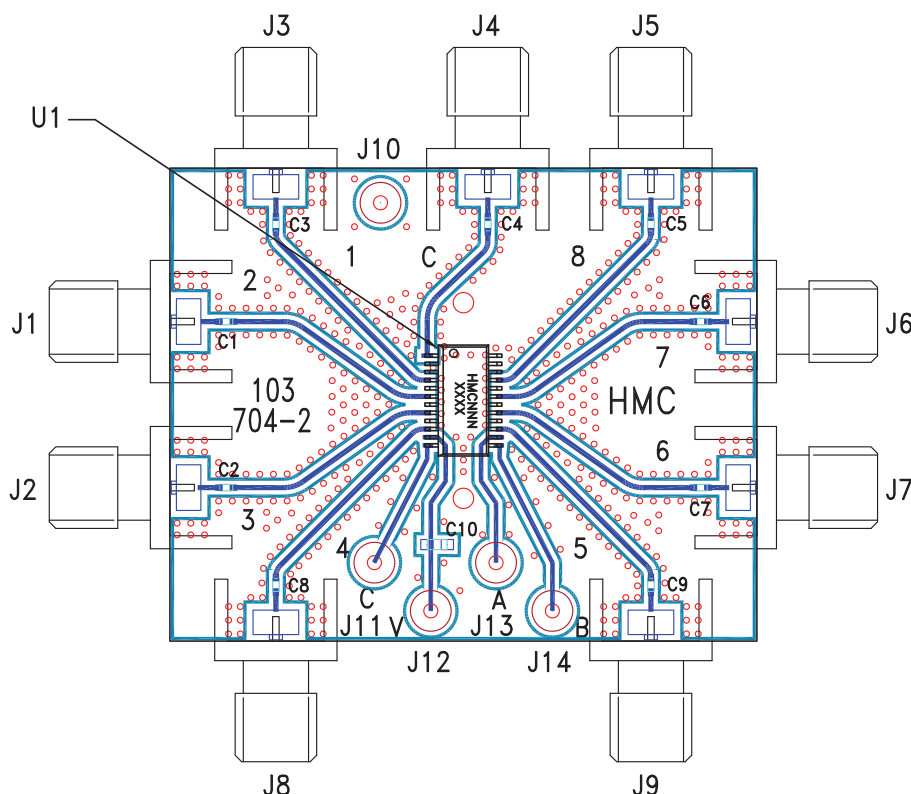
[1] Max peak reflow temperature of 235 °C

[2] Max peak reflow temperature of 260 °C

[3] 4-Digit lot number XXXX

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

For price, delivery, and to place orders: Analog Devices, Inc.,
One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106
Phone: 781-329-4700 • Order online at www.analog.com
Application Support: Phone: 1-800-ANALOG-D

Evaluation Circuit Board

List of Materials for Evaluation PCB 103706 [1]

Item	Description
J1 - J9	PCB Mount SMA Connector
J10 - J14	DC Pin
C1 - C9	100 pF Capacitor, 0402 Pkg.
C10	0.01 uF Capacitor, 0603 Pkg.
U1	HMC253QS24 / HMC253QS24E SP8T Switch
PCB [2]	103704 Eval Board

[1] Reference this number when ordering complete evaluation PCB

[2] Circuit Board Material: Rogers 4350

The circuit board used in the final application should be generated with proper RF circuit design techniques. Signal lines at the RF ports should have 50 ohm impedance while the package ground leads should be connected directly to the ground plane similar to that shown above. A sufficient number of via holes should be used to connect the top and bottom ground planes. The evaluation circuit board shown above is available from Hittite Microwave Corporation upon request.