

Features

- Frequency Range: DC~12GHz
- Isolation: >37dB@12GHz
- Insertion Loss: 1.2dB@12GHz
- Non-reflective Switch
- Nanosecond switch
- Package Size: 3mm×3mm×1.2mm

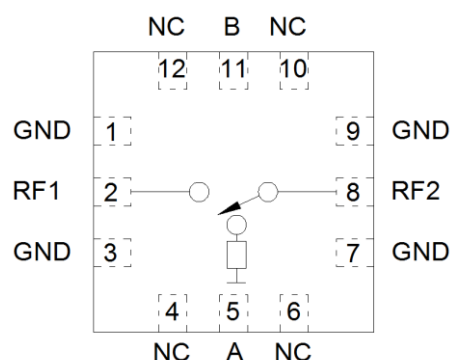
Typical Applications

- Radar and ECM
- RF/ Microwave radio
- Military and Space
- Test and Measurement
- Fiber Optics

General Description

XT3207 is a general purpose broadband high isolation non-reflective GaAs pHEMT SPST switch in QFN surface mount package. The switch offers over 37 dB isolation and less than 0.9dB insertion loss over operation frequency. Its fast switching and compact size make this absorptive SPST ideal for many critical applications. The switch operates using complementary negative control voltage logic lines of 0/-5V.

Functional Diagram



Electrical Performance

($T_A=+25^{\circ}\text{C}$, Control Voltage =0/-5V, $Z_0=50\Omega$)

Parameter	Fre.	Min.	Typ.	Max.	Units
Insertion Loss	DC-12GHz	—	-0.9	—	dB
Isolation	DC-12GHz	—	-40	—	dB
Return Loss RF1,RF2 (ON)	DC-12GHz	—	-20	—	dB
Return Loss RF2 (OFF)	DC-12GHz	—	-15	—	dB
Input P ₁ dB	DC-12GHz	—	27	—	dBm
Switching Speed	DC-12GHz	—	5	—	ns

Absolute Maximum Ratings

Input power	27dBm	Control Voltage Range	0~7V
Channel Temperature	150℃	Storage Temperature	-65℃~+150℃
Operating Temperature	-55℃~+85℃	ESD Sensitivity (HBM)	Class 1A

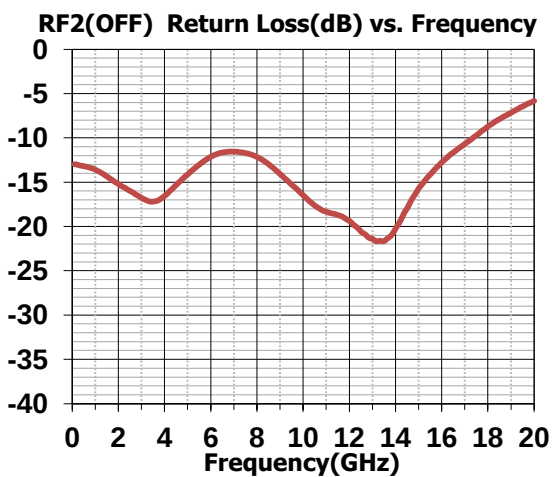
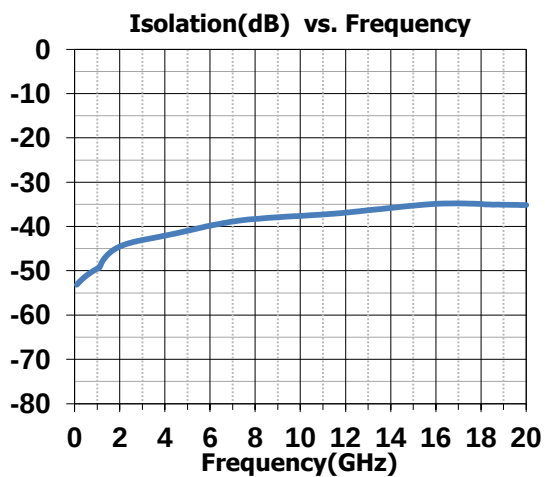
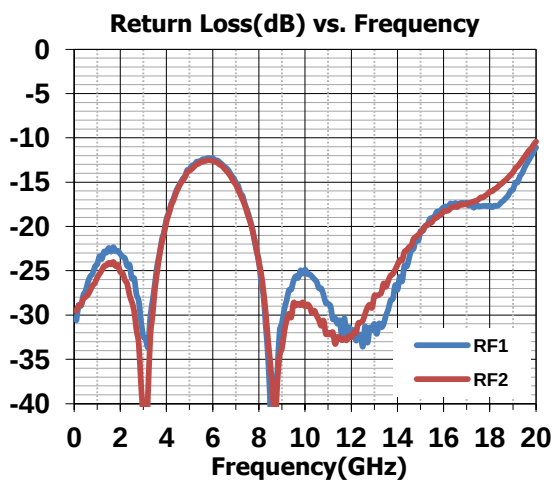
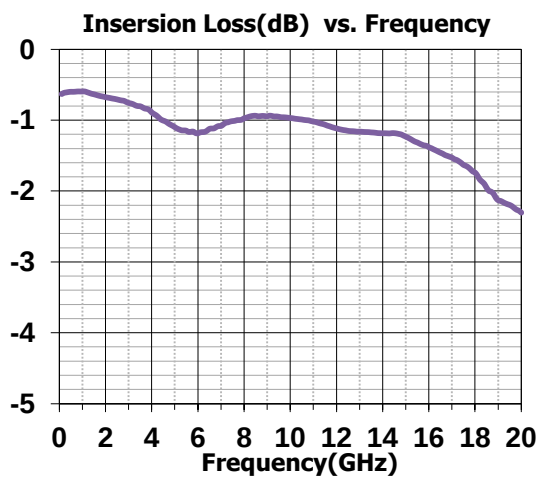
XT3207Q3



GaAs MMIC SPST Switch(Package)
DC~12GHz

Rev 1.1

Typical Performance Curve



XT3207Q3



GaAs MMIC SPST Switch(Package)
DC~12GHz

Rev 1.1

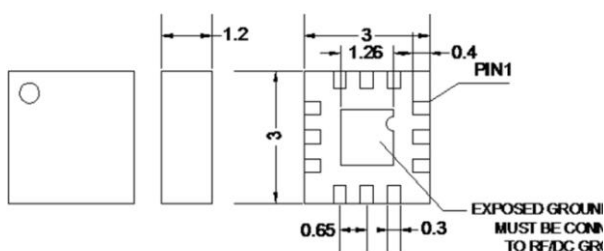
Control Voltages

State	Bias Condition
Low	0~0.2V
High	-7~-3V

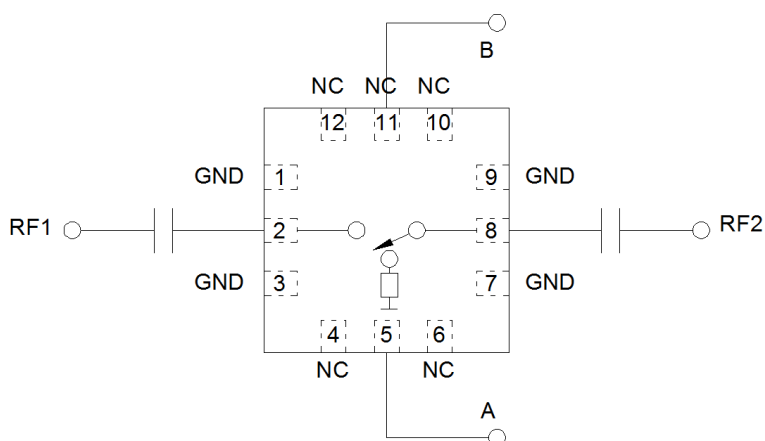
Truth Table

Control Input		Switch State
A	B	RF1-RF2
Low	High	ON
High	Low	OFF

Outline Drawing (all dimensions in mm)



Assembly Diagram



Attention:

1. The moisture resistant grade of products is 2A, the storage environment $\leq 30^{\circ}\text{C}/60\%\text{RH}$, The surrounding workshop Life is 4 weeks.
2. After un-packing, It is necessary to bake the parts for 6 hours in 125 ± 5 degree environment before soldering.