

High-Frequency SPDT Switch

Description

The CXG1008N is a high-isolation switch MMIC. This IC is designed using the Sony's GaAs J-FET process and operates at a single positive power supply.

Features

- Single positive power supply operation
- High isolation 43 dB (Typ.) at 2.0 GHz
VCTL (H)=3.0 V

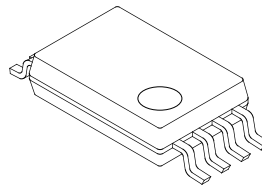
Application

Local signal select switch for digital cellular and digital cordless telephones, etc.

Structure

GaAs J-FET MMIC

SSOP-8P-L01 (Plastic)



Absolute Maximum Ratings (Ta=25 °C)

- | | | | |
|-------------------------|------|-------------|----|
| • Control voltage | Vctl | 6 | V |
| • Operating temperature | Topr | -35 to +85 | °C |
| • Storage temperature | Tstg | -65 to +150 | °C |

Operating Condition

- | | | | |
|-----------------|--|-----|---|
| Control voltage | | 0/3 | V |
|-----------------|--|-----|---|

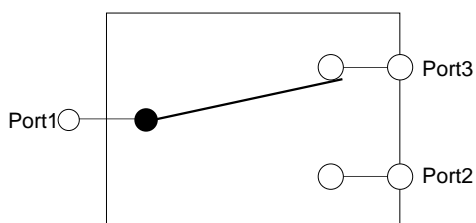
Electrical Characteristics

VCTL (L) =0V, VCTL (H) =3V, Pin=10dBm

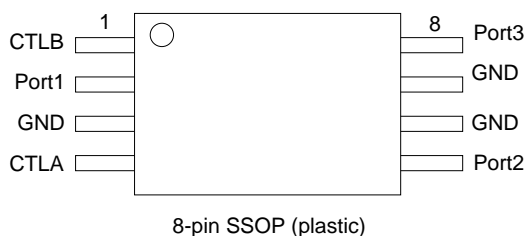
(Ta=25 °C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Insertion loss	IL1	f=1.0 GHz		0.7	1.1	dB
Isolation	ISO1		52	57		dB
Insertion loss	IL2	f=2.0 GHz		0.8	1.2	dB
Isolation	ISO2		38	43		dB
Input VSWR	VSWRIN			1.3	1.5	
Output VSWR	VSWROUT			1.3	1.5	
Switching time	TSW			50		ns
Control pin current	ICTL			50	100	μA

Block Diagram

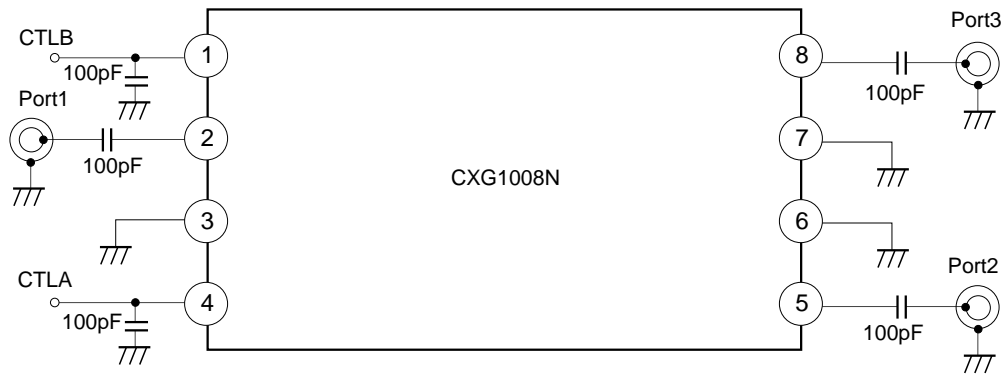


Package Outline/Pin Configuration

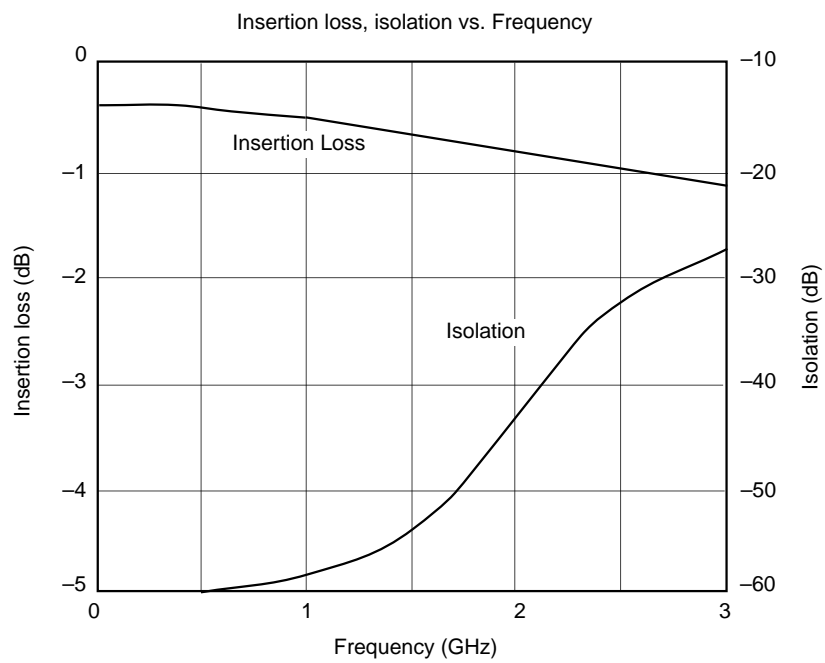


VCTLA	VCTLB	
High	Low	Port1-Port2 ON Port1-Port3 OFF
Low	High	Port1-Port2 OFF Port1-Port3 ON

Recommended Circuit

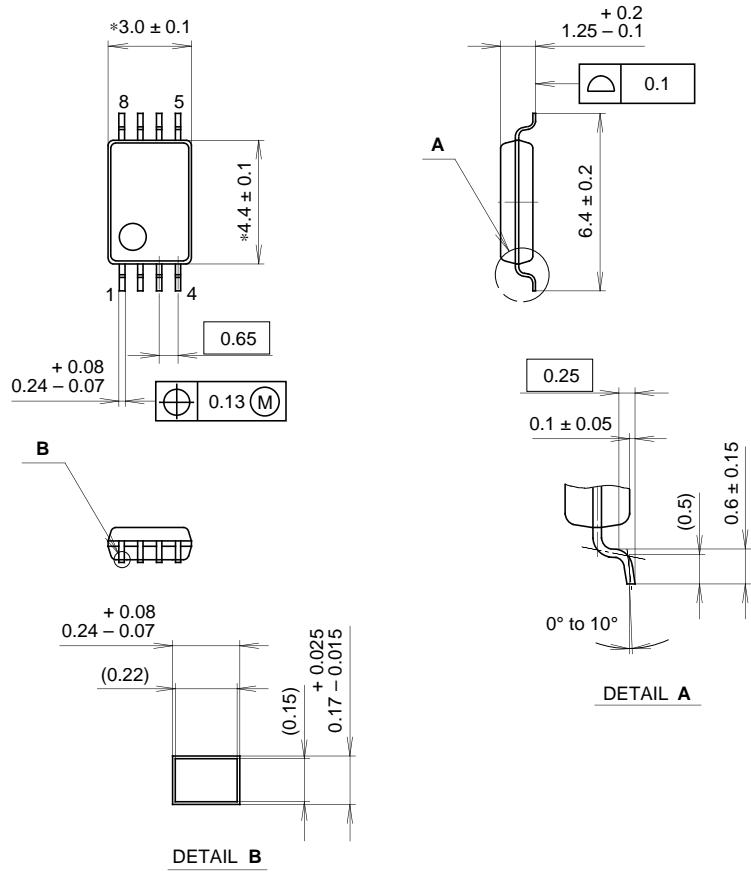


Example of Representative Characteristics (Ta=25 °C)



Package Outline Unit: mm

8PIN SSOP (PLASTIC)



NOTE: Dimension "*" does not include mold protrusion.

PACKAGE STRUCTURE

SONY CODE	SSOP-8P-L01
EIAJ CODE	SSOP008-P-0044
JEDEC CODE	_____

PACKAGE MATERIAL	EPOXY RESIN
LEAD TREATMENT	SOLDER / PALLADIUM PLATING
LEAD MATERIAL	COPPER ALLOY
PACKAGE WEIGHT	0.04g