SONY

CXG1008N

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
  V_{CTL} (H)=3.0 V

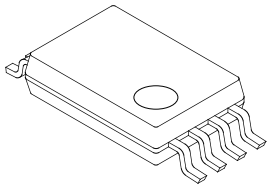
Application

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

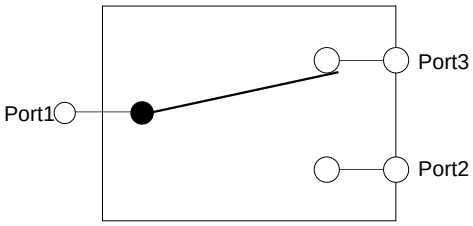
E95443A57-TE

Electrical Characteristics

V_{CTL} (L) =0V, V_{CTL} (H) =3V, Pin=10dBm (Ta=25 ˚C)

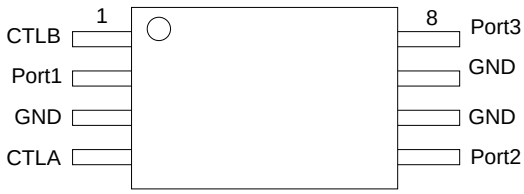
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Insertion loss	IL1	f=1.0 GHz		0.7	1.1	dB
Isolation	ISO1		52	57		dB
Insertion loss	IL2	f=2.0 GHz		0.8	1.2	dB
Isolation	ISO2		38	43		dB
Input VSWR	VSWRIN			1.3	1.5	
Output VSWR	VSWROUT			1.3	1.5	
Switching time	TSW			50		ns
Control pin current	I_{CTL}			50	100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

Block Diagram



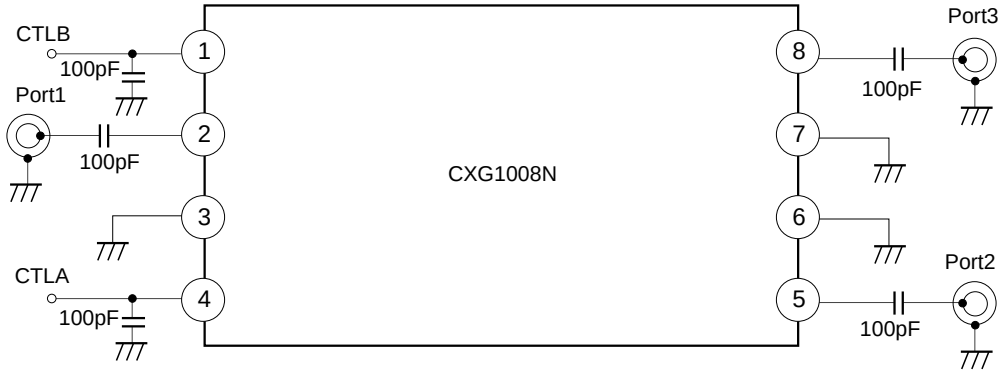
VCTLA	VCTLB	
High	Low	Port1-Port2 ON Port1-Port3 OFF
Low	High	Port1-Port2 OFF Port1-Port3 ON

Package Outline/Pin Configuration

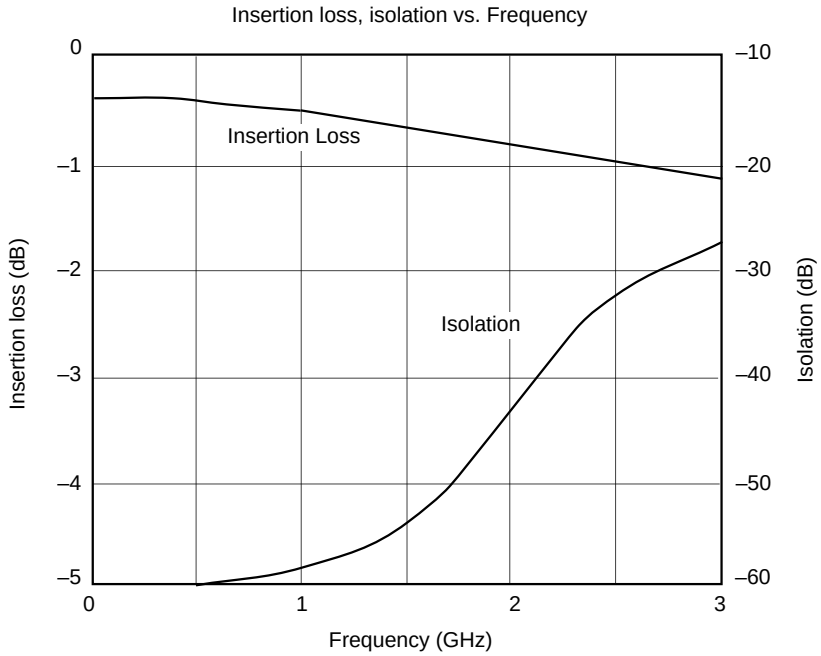


8-pin SSOP (plastic)

Recommended Circuit

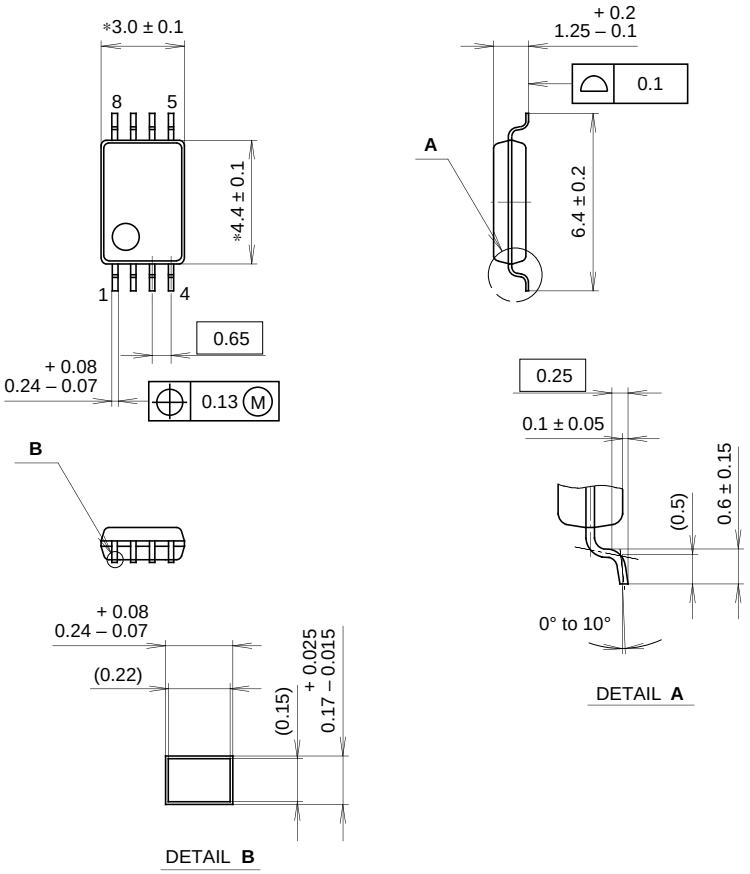


Example of Representative Characteristics (Ta=25 ˚C)



Package Outline Unit: mm

8PIN SSOP (PLASTIC)



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

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

PACKAGE STRUCTURE

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