SONY

CXG1012N

High-Frequency SPDT Antenna Switch

VCTL (H)=4.0 V

Description

The CXG1012N is an antenna 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

Insertion loss
0.5 dB (Typ.) at 2.0 GHz

Medium power switching

P1dB (Typ.) 29 dBm at 2.0 GHz VCTL (H)=3.0V at 2.0 GHz

Application

Antenna switch for digital cordless telephones

Structure

GaAs J-FET MMIC



Absolute Maximum Ratings (Ta=25 °C)

Control voltage
Operating temperature
Storage temperature
Vctl
Topr
-35 to +85
C
Tstg
-65 to +150
C

Operating Condition

Control voltage 0/3 V



Electrical Characteristics

VCTL (L) =0V, VCTL (H) =3V, Pin=21.5dBm

(Ta=25 °C)

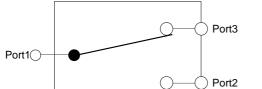
Item	Symbol	Condition	Min.	Тур.	Max.	Unit
Insertion loss	IL1	f=1.0 GHz		0.3	0.6	dB
Isolation	ISO1		30	35		dB
Insertion loss	IL2	f=2.0 GHz		0.5	0.8	dB
Isolation	ISO2		20	23		dB
Input VSWR	VSWRIN			1.3	1.5	
Output VSWR	VSWROUT			1.3	1.5	
Switching time	TSW			100		ns
Control pin current	ICTL			70	150	μA

VCTL (L) =0V, f = 2.0GHz

(Ta=25 °C)

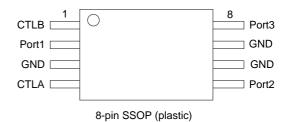
1 dB gain compression	D4 4D (3)	MOT: (II) 2.M	96	20	dD.cc
point output	P1dB (3)	VCTL (H) =3 V	26	29	dBm
1 dB gain compression	D4 4D (4)	\/o=- (LI)	20	22	dD.cc
point output	P1dB (4)	VCTL (H) =4 V	30	33	dBm

Block Diagram

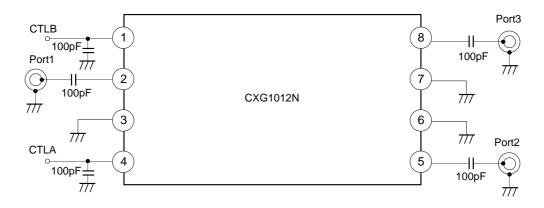


VCTLA	VCTLB	
High	Low	Port1-Port2 ON
		Port1-Port3 OFF
Low	High	Port1-Port2 OFF
		Port1-Port3 ON

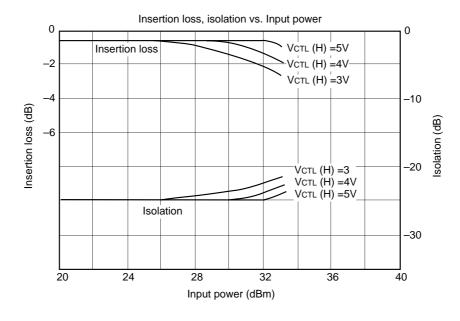
Package outline/Pin Configuration

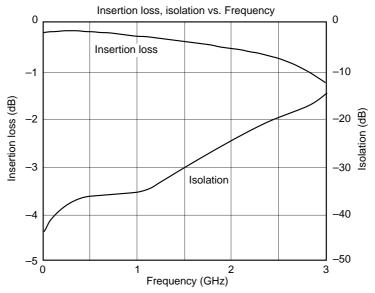


Recommended Circuit

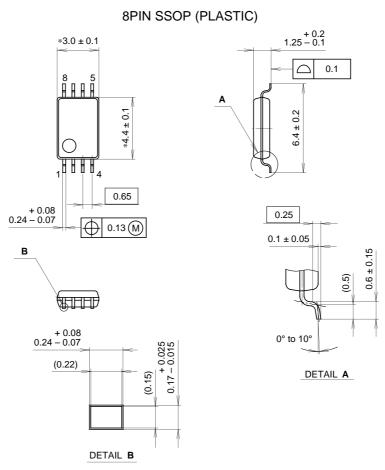


Example of Representative Characteristics (Ta=25 °C)





Package Outline Unit: mm



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