



SPM3227 — RF SPDT Switch MMIC

Features

- Low insertion loss.
- High surge breakdown voltage.
- Ultrasmall package (ECSP).
- High isolation.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Control Voltage	V _{CTL}		6.0	V
Power Dissipation	P _D		150	mW
Storage Temperature	T _{stg}		-55 to +150	°C
Operating Temperature	T _{opr}		-40 to +85	°C

Electrical Characteristics at Ta=25°C Control Voltage : 0 / +2.8V, DC Cut Capacitor : 100pF

Parameter	Conditions	Ratings			Unit	
		min	typ	max		
Insertion Loss	IN-OUT1, IN-OUT2	f=400MHz*, P _{IN} =0dBm		0.2	0.4	dB
		f=1GHz, P _{IN} =0dBm		0.25	0.45	dB
		f=2GHz, P _{IN} =0dBm		0.3	0.5	dB
		f=2.5GHz, P _{IN} =0dBm		0.35	0.55	dB
Isolation	IN-OUT1, IN-OUT2	f=400MHz*, P _{IN} =0dBm	30	33		dB
		f=1GHz, P _{IN} =0dBm	23	26		dB
		f=2GHz, P _{IN} =0dBm	18	21		dB
		f=2.5GHz, P _{IN} =0dBm	16	19		dB
VSWR	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz		1.1	1.5	
Switching Time	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz		20	100	ns
P _{IN} 0.1dB	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz	21	25		dBm

Marking : GH

* DC Cut Capacitor : 1000pF



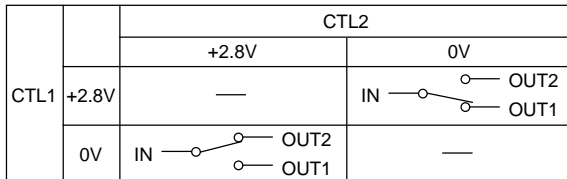
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SPM3227

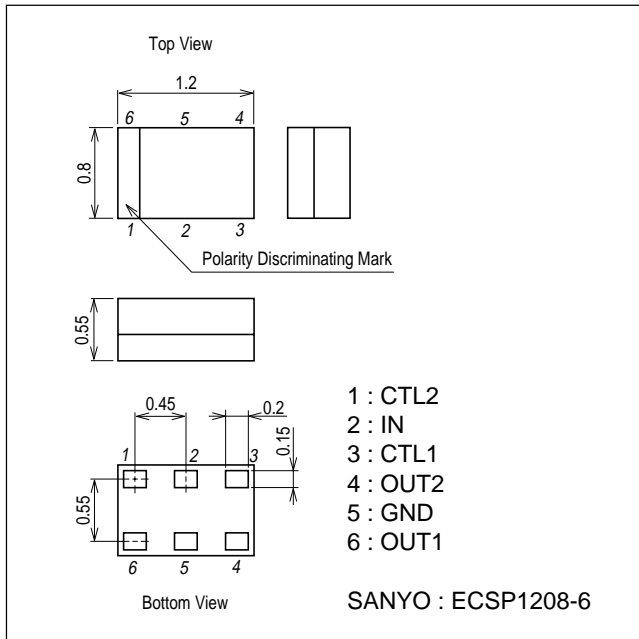
Electrical Characteristics at $T_a=25^\circ\text{C}$ Control Voltage : 0 / +1.8V, DC Cut Capacitor : 100pF

Parameter	Conditions	Ratings			Unit	
		min	typ	max		
Insertion Loss	IN-OUT1, IN-OUT2	f=400MHz*, $P_{IN}=0\text{dBm}$		0.22	0.45	dB
		f=1GHz, $P_{IN}=0\text{dBm}$		0.25	0.5	dB
		f=2GHz, $P_{IN}=0\text{dBm}$		0.3	0.55	dB
		f=2.5GHz, $P_{IN}=0\text{dBm}$		0.35	0.6	dB
Isolation	IN-OUT1, IN-OUT2	f=400MHz*, $P_{IN}=0\text{dBm}$	29	32		dB
		f=1GHz, $P_{IN}=0\text{dBm}$	23	26		dB
		f=2GHz, $P_{IN}=0\text{dBm}$	18	21		dB
		f=2.5GHz, $P_{IN}=0\text{dBm}$	16	19		dB
VSWR	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz		1.1	1.5	
Switching Time	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz		20	100	ns
$P_{IN}0.1\text{dB}$	IN-OUT1, IN-OUT2	f=0.1GHz to f=2.5GHz, $V_{CTL}=0 / +1.8\text{V}$	15	19		dBm

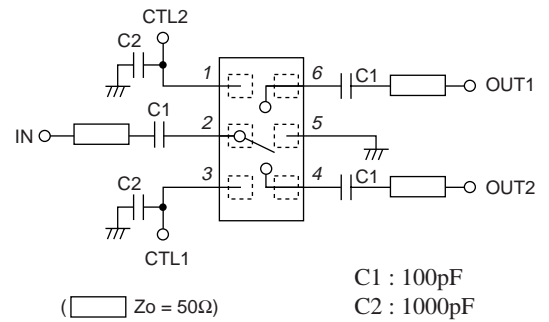


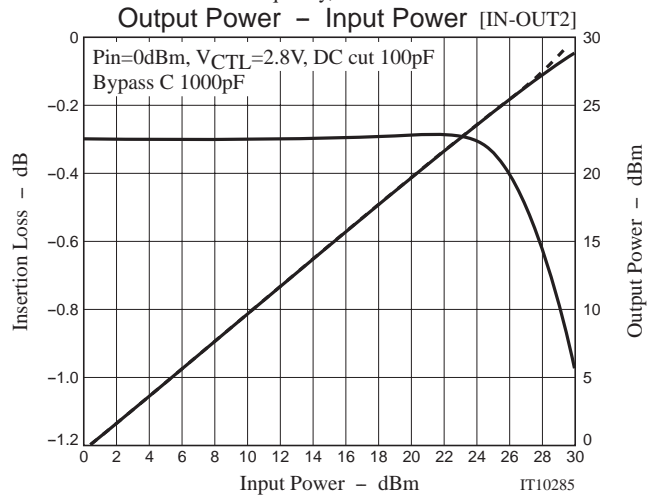
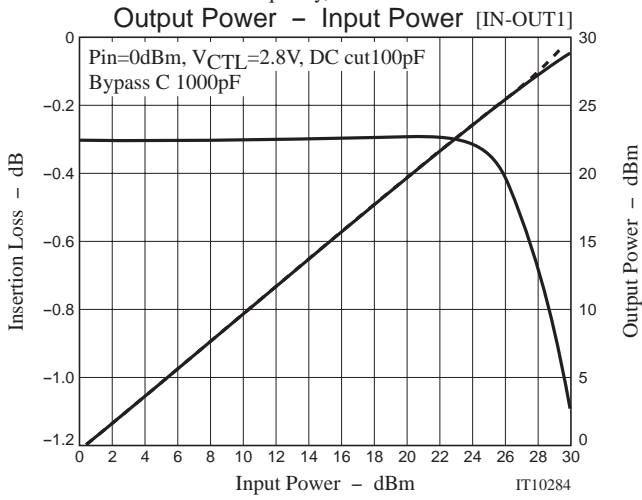
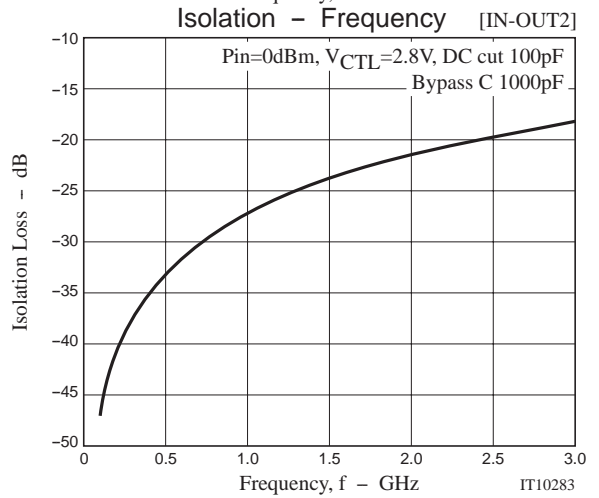
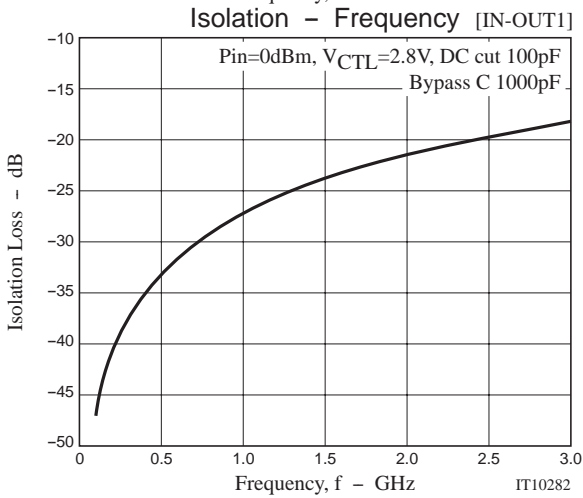
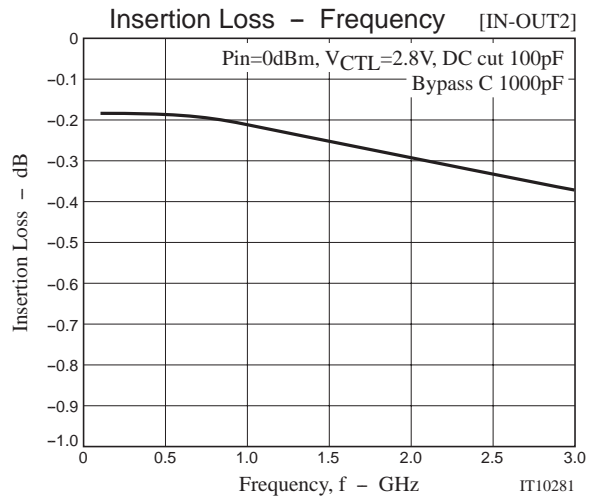
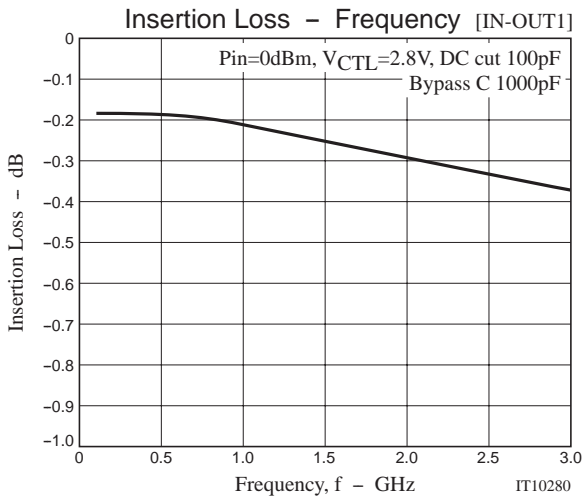
Package Dimensions

unit : mm
7034-001



Testing Circuit





Note on usage : This product is easily damaged by electrostatic discharge (ESD) and must be handled carefully with effective antistatic measures in place.

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