SW408

0.1 - 3GHz SPDT Switch

RFIC 2017.05 Update Rev3.2

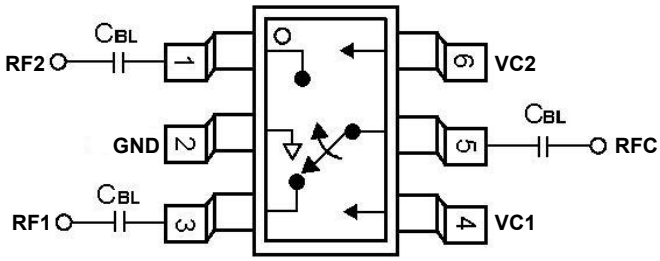
DESCRIPTION

SW408 is a GaAs switch designed for 0.1 to 3GHz frequency band application. This switch can be used for Tx/Rx selection or antenna diversity function of many wireless communication systems.
SW408 is housed in a low cost SOT-363 lead (Pb) free plastic package, and features low insertion loss, low current consumption and fast switching speed.

KEY FEATURES

- **Insertion loss:**
  0.4dB @ 2.5GHz
- **Isolation:**
  26dB @ 2.5GHz
- **Low current consumption**
- **Low switching time**
- **Low cost SOT-363 lead (Pb) free plastic package**

Pin Assignment



DC blocking capacitors are necessary for all RF ports.
The typical value of C_{BL} is 22pF for ISM band application.

Logic Control Table

VC1	VC2	RFC-RF1	RFC-RF2
High	Low	Off	On
Low	High	On	Off

High = +2V to +5V
Low = +0V to +0.2V

Absolute Maximum Ratings

Parameter	*Rating*	*Unit*
DC Power Supply For Collector	+6	V
RF Input Power 0.5 - 2.5GHz	+36	dBm
Operating Ambient Temperature	-40 to +85	˚C
Storage Temperature	-60 to +150	˚C
MSL	LEVEL 1	
ESD	HBM Class 1A	

Important Note:

The information provided in this datasheet is deemed to be accurate and reliable only at present time. RFIC Technology Corp. reserves the right to make any changes to the specifications in this datasheet without prior notice.

Caution: ESD Sensitive
Appropriate precaution in handling, packaging
And testing devices must be observed.

For more information,please contact us at:
Sales Dept.
Tel: +886-2-2698-1022
e-mail: sales@rfintc.com

Electrical Characteristics for +3V Control Voltages

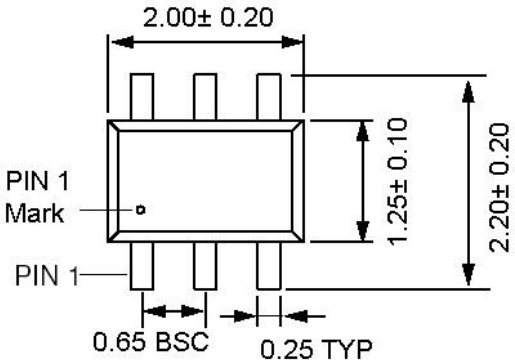
Logic High = 3V; Logic Low = 0V; TA = 25°C; unless otherwise noted.

Parameter	Specification			Units	Notes
	Min	Typ.	Max		
Insertion Loss		0.25 0.35 0.4	0.4 0.5 0.6	dB	DC – 1GHz 1 – 2GHz 2 – 3GHz
Isolation	23 23 23	27 25 26		dB	DC – 1GHz 1 – 2GHz 2 – 3GHz
VSWR		1:2:1 1:2:1 1:3:1	1:4:1 1:4:1 1:4:1		DC – 1GHz 1 – 2GHz 2 – 3GHz
IP0.1dB		29 32		dBm	H/L = 3/0V for 0.5 – 3GHz H/L = 5/0V for 0.5 – 3GHz
IP3		50		dBm	Two-tone input power+5dbm @0.5 – 3GHz
Switching Time		30 40		ns	10/90% or 90/10% RF 50% CLT to 90/10% RF
Control Current		1	3	uA	H/L = 5/0V

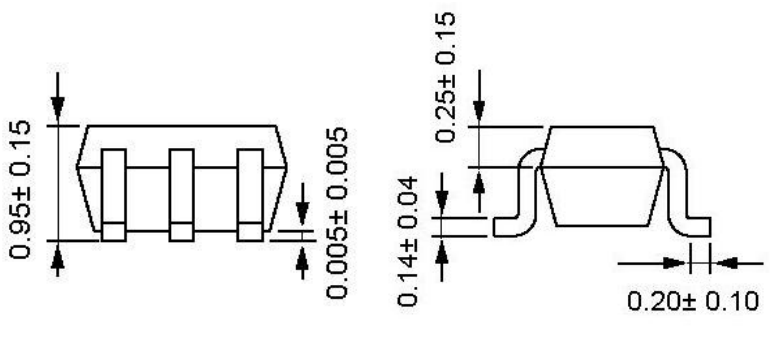
Note: 1. All measurements made in a 50 ohm system.
2. DC=300MHz

SOT-363 Package Outline

Top View



Side View



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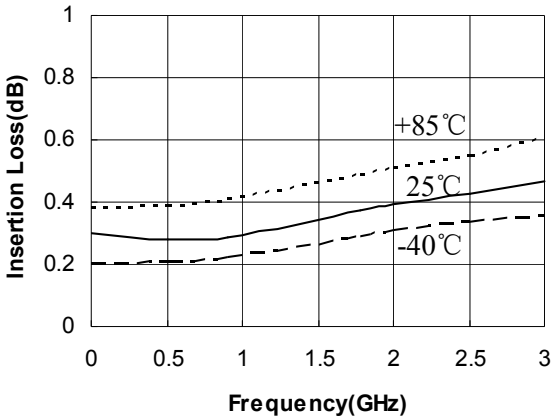
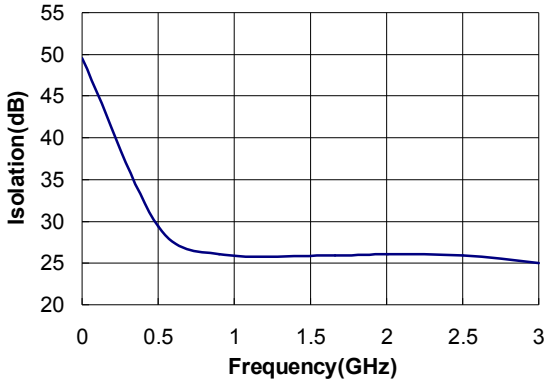
Typical Characteristic Chart (0, +3V)

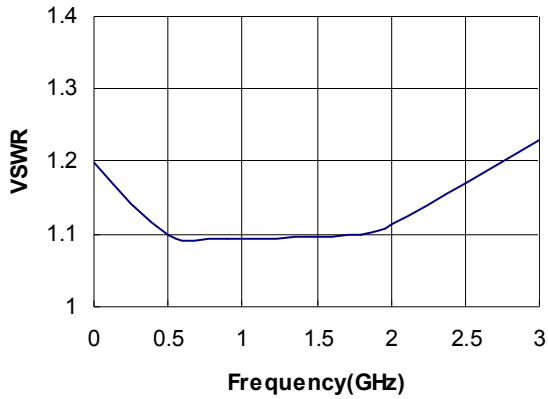
Insertion Loss vs. Frequency



Isolation vs. Frequency



VSWR vs. Frequency



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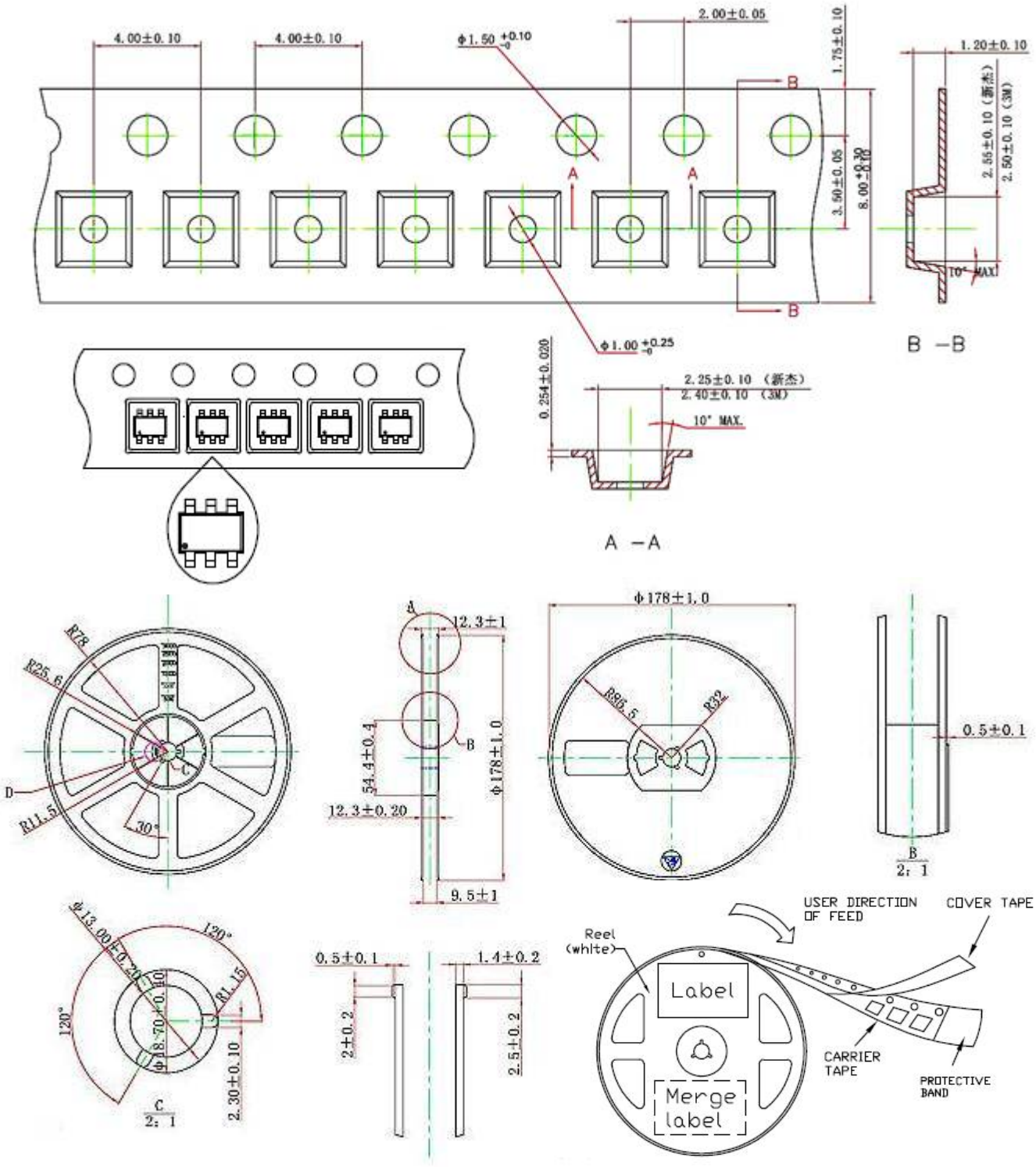
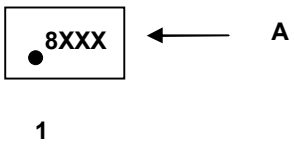
Packing



Ordering information

Part Number	Reel Size	Tape/Reel
SW408	7 inch	3000 PCS

Marking



"A" is manufacture code

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RFIC 2017.05 Update Rev3.2

The product is designed and manufactured for consumer application only and is not intended for any application listed below which requires especially high reliability for the prevention of such defect which could lead to personal injury, death, physical or environmental damage.

- Aircraft equipment.
- Aerospace equipment.
- Undersea equipment.
- Medical equipment.
- Life-saving or life-sustaining applications
- Transportation equipment (vehicles, trains, ships, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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