

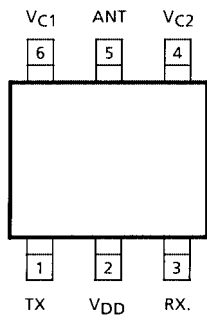
TG2205F

RF SPDT Switch
(Application: PHS)

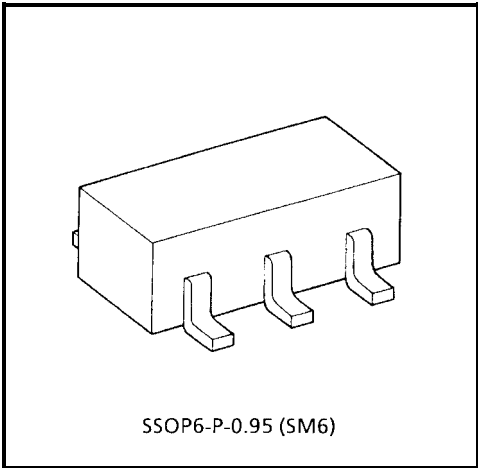
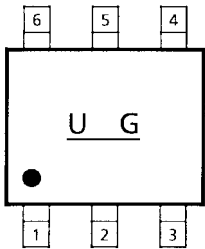
Features

- Low insertion loss: LOSS = 0.5dB (typ.)
- Hight isolation: ISL = 25dB (typ.)
- Control voltage: 0 V/3 V

Pin Assignment (top view)



Marking



Weight: 0.014 g (typ.)

Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V _{DD}	5	V
Control voltage	V _{C1}	5	V
	V _{C2}	5	V
Input power	P _i	1	W
Operating temperature range	T _{opr}	-40~85	°C
Storage temperature range	T _{stg}	-55~125	°C

Caution

This device is electrostatic sensitivity. Please handle with caution.

Electrical Characteristics ($V_{DD} = 3\text{ V}$, $f = 1.907\text{ GHz}$, $T_a = 25^\circ\text{C}$, $Z_g = Z_l = 50\ \Omega$)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Insertion loss	LOSS (1)	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$, $P_i = 22\text{ dBmW}$	—	0.5	1.0	dB
	LOSS (2)	1	$V_{C1} = 0\text{ V}$, $V_{C2} = 3\text{ V}$, $P_i = 0\text{ dBmW}$	—	0.5	1.0	
Isolation	ISL (1)	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$, $P_i = 22\text{ dBmW}$	20	25	—	dB
	ISL (2)	1	$V_{C1} = 0\text{ V}$, $V_{C2} = 3\text{ V}$, $P_i = 0\text{ dBmW}$	20	25	—	
Switching time	t_{SW}	—	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$ or $V_{C1} = 0\text{ V}$, $V_{C2} = 3\text{ V}$	—	0.01	—	μs
Supply current	I_{DD}	—		—	—	0.01	mA
Control Current	I_{C1}	—		—	—	0.01	mA
	I_{C2}	—		—	—	0.01	
Output power at 1dB gain compression	P_{O1dB}	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$	—	24	—	dBmW
Adjacent channel leakage power ratio	P_{adj}	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$, $P_i = 22\text{ dBmW}$ (Note 1) $\Delta f = 600\text{ kHz}$	—	—	-60	dB

Note 1: Input signal is modulated to $\pi/4$ QPSK ($\alpha = 0.5$). Bit rate is 384 kbps.

Truth Table

Control Voltage		Switch Condition	
V_{C1}	V_{C2}	ANT-RX	ANT-TX
3 V	0 V	OFF	ON
0 V	3 V	ON	OFF

[illegible]

Top View

ANT

C_1

V_{c1}

C_2

V_{c2}

C_2

C_1

T_x

C_1

R

C_2

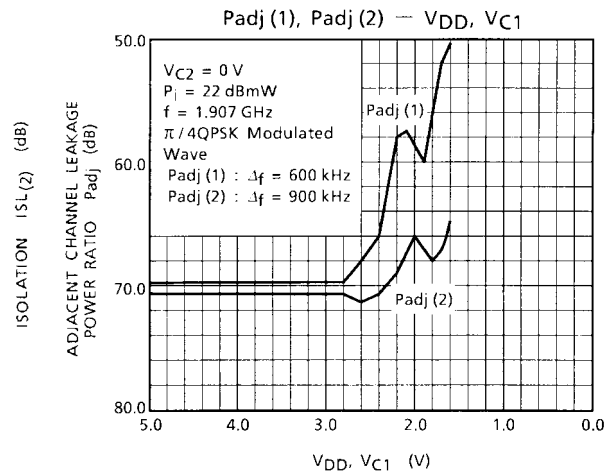
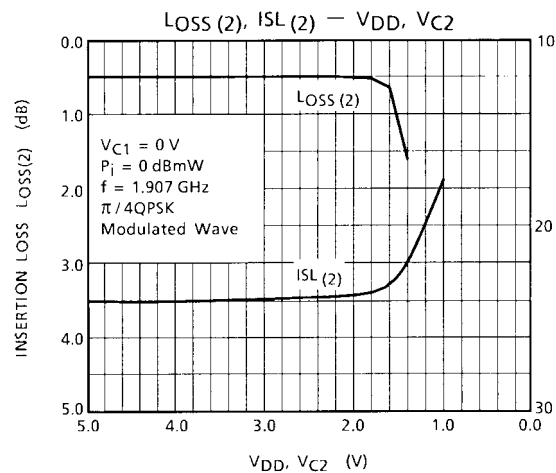
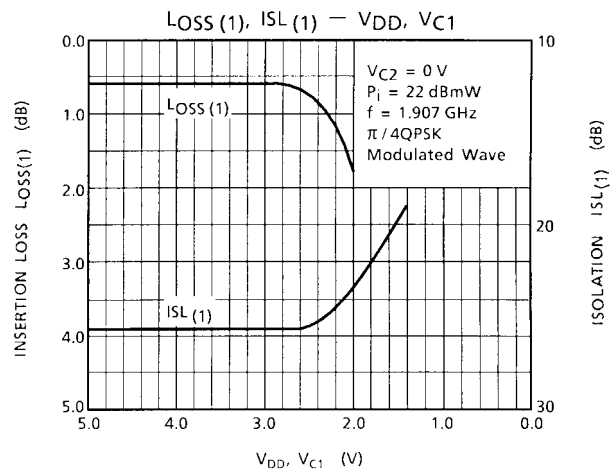
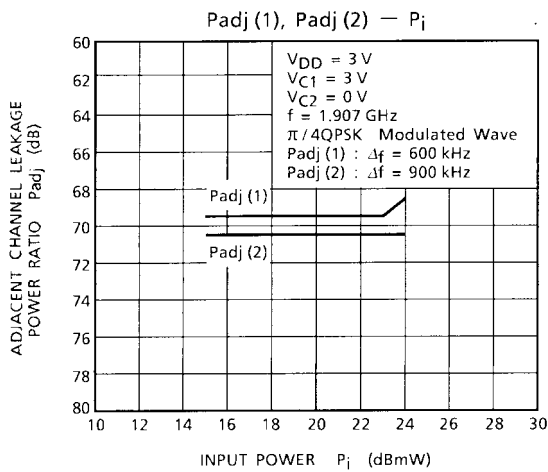
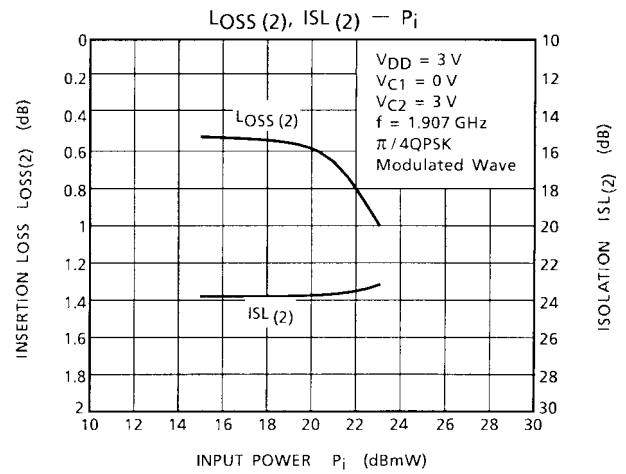
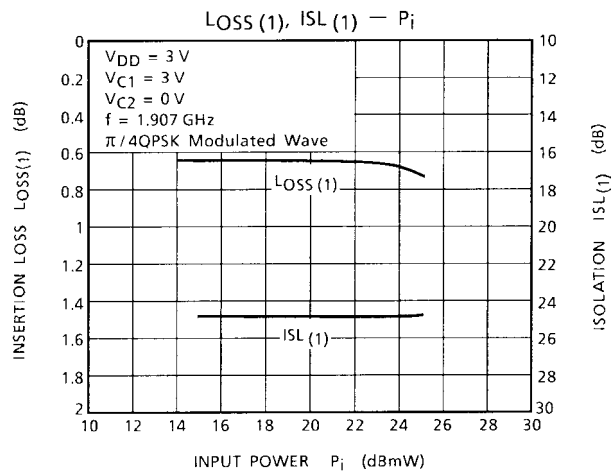
V_{DD}

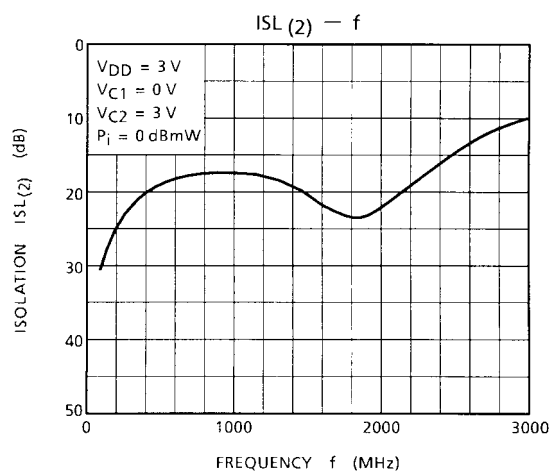
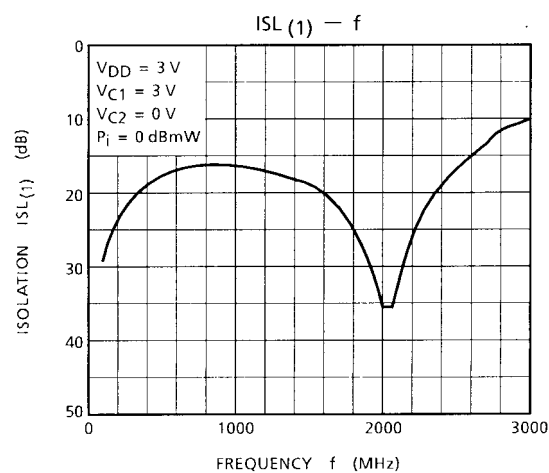
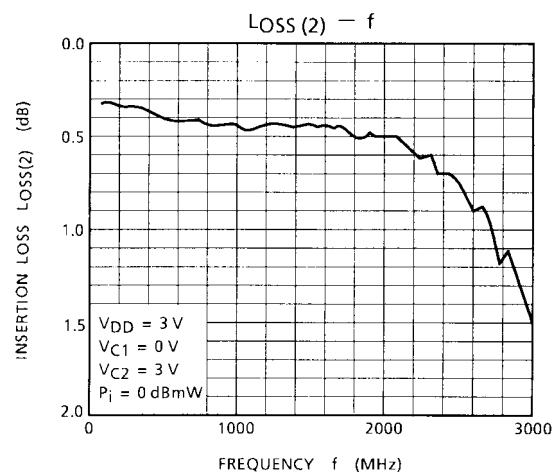
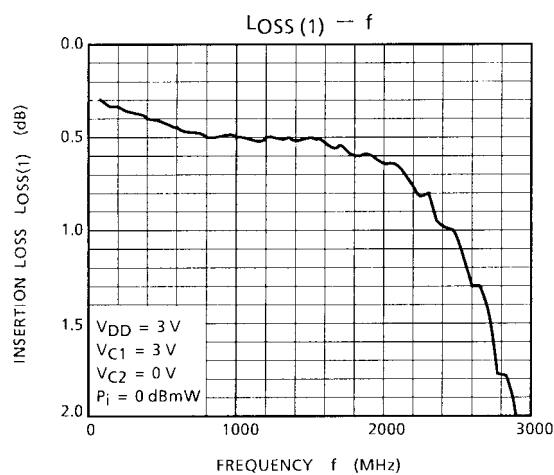
C_3

R_x

C_1 : DC BLOCK
 C_2 : 9 pF
 C_3 : 3 pF
 R : 12 k Ω

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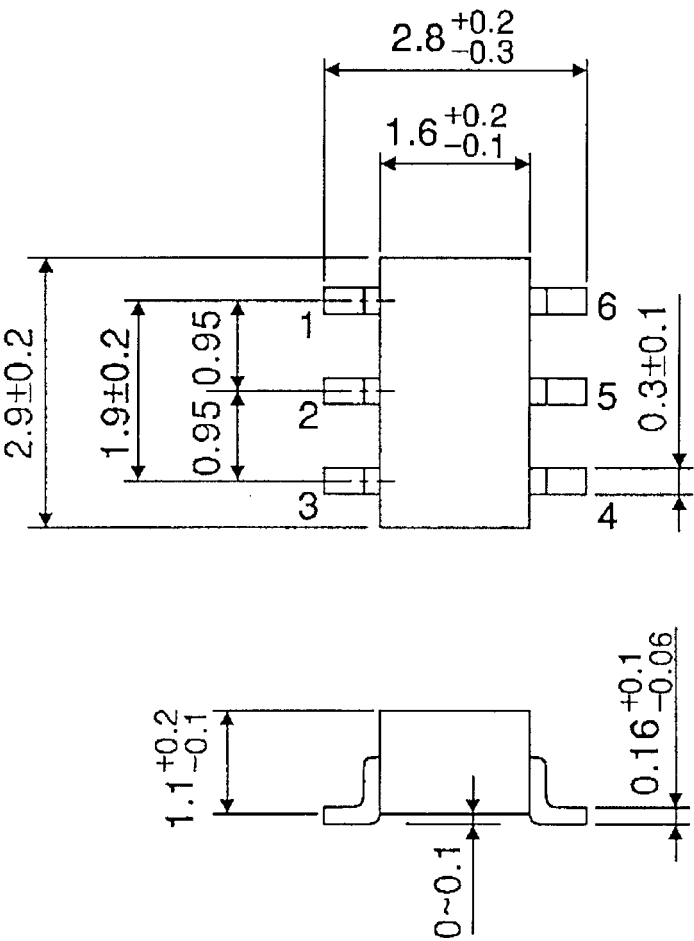




Package Dimensions

SSOP6-P-0.95

Unit : mm



Weight : 0.014 g (Typ.)

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020704EBC

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