

TG2205F

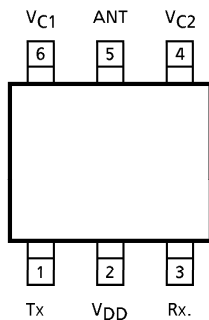
RF SPDT SWITCH

(APPLICATION : PHS)

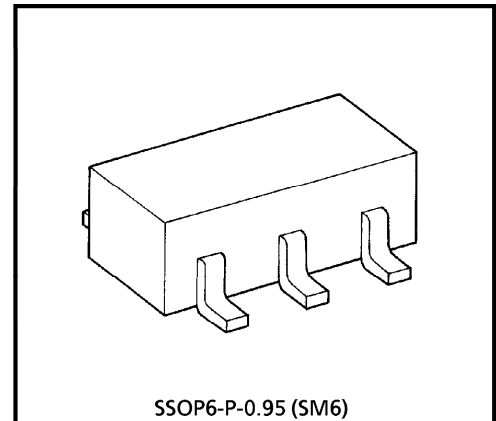
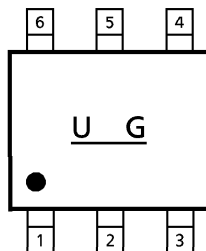
FEATURES

- LOW INSERTION LOSS : $L_{OSS} = 0.5 \text{ dB (Typ.)}$
- HIGH ISOLATION : $ISL = 25 \text{ dB (Typ.)}$
- CONTROL VOLTAGE : $0 \text{ V} / 3 \text{ V}$

PIN CONNECTION (TOP VIEW)



MARKING



SSOP6-P-0.95 (SM6)
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.

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

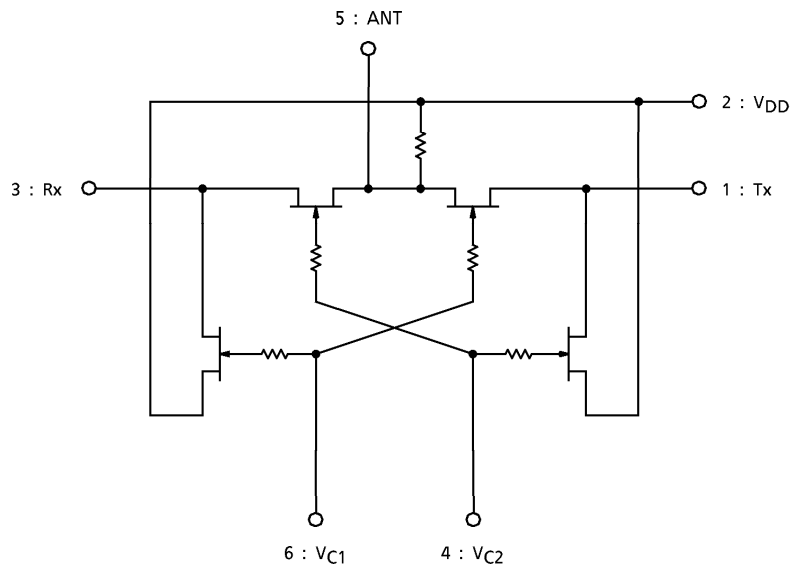
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Insertion Loss	LOSS (1)	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$, $P_i = 22\text{ dBmW}$	—	0.5	1.0	dB
	LOSS (2)	1	$V_{C1} = 0\text{ V}$, $V_{C2} = 3\text{ V}$, $P_i = 0\text{ dBmW}$	—	0.5	1.0	dB
Isolation	ISL (1)	1	$V_{C1} = 3\text{ V}$, $V_{C2} = 0\text{ V}$, $P_i = 22\text{ dBmW}$	20	25	—	dB
	ISL (2)	1	$V_{C1} = 0\text{ V}$, $V_{C2} = 3\text{ V}$, $P_i = 0\text{ dBmW}$	20	25	—	dB
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	mA
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), $\Delta f = 600\text{ kHz}$	—	—	-60	dB

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

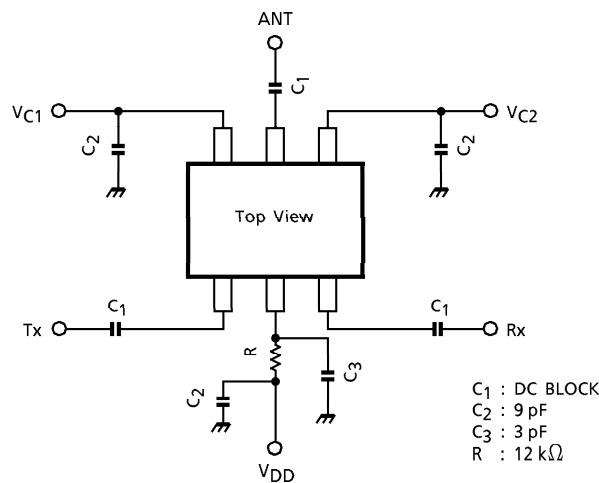
TRUTH TABLE

CONTROL VOLTAGE		SWITCH CONDITION	
V_{C1}	V_{C2}	ANT-Rx	ANT-Tx
3V	0V	OFF	ON
0V	3V	ON	OFF

EQUIVALENT CIRCUIT

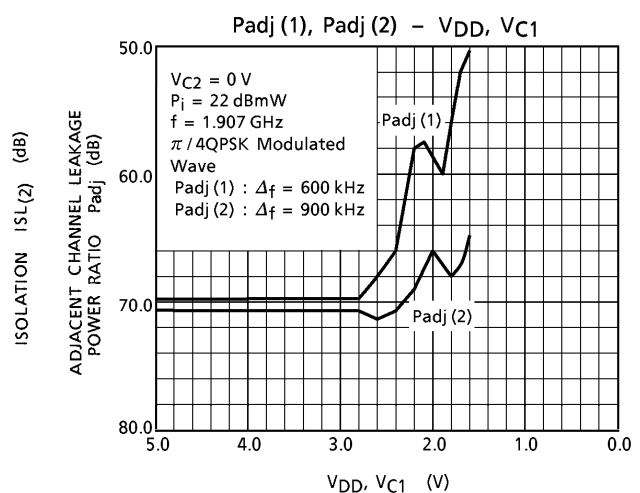
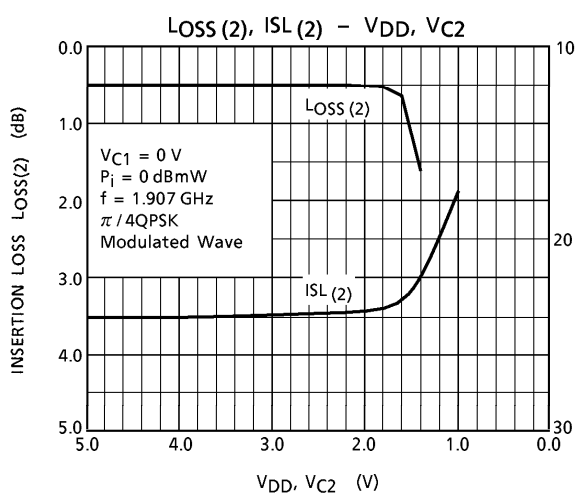
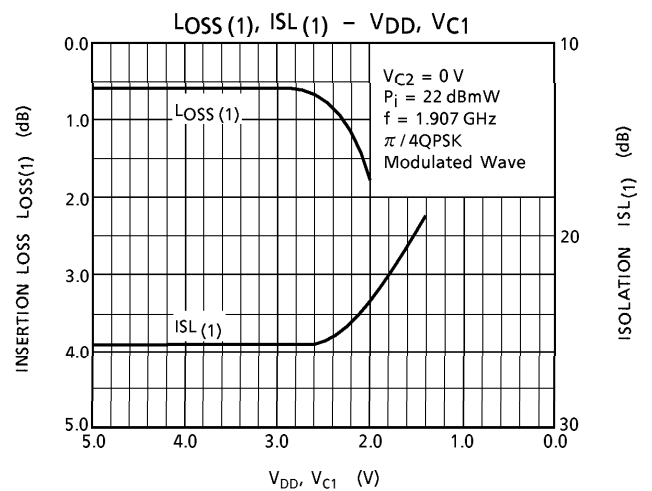
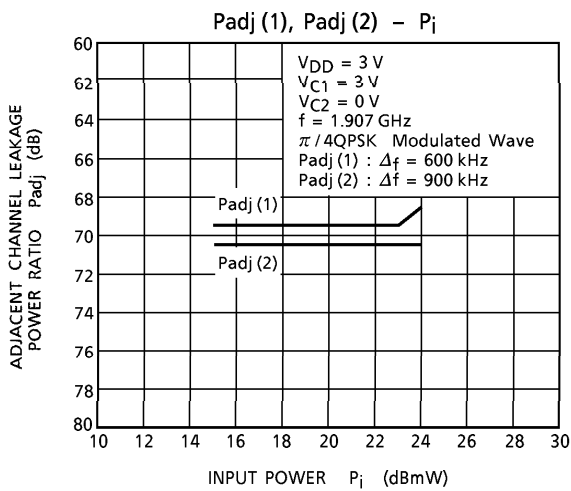
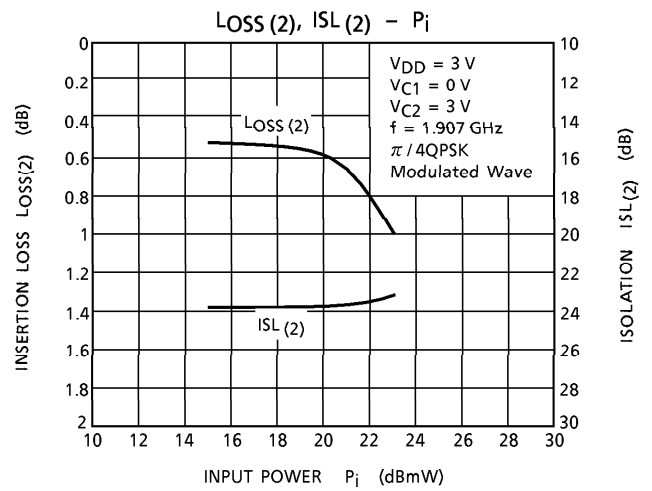
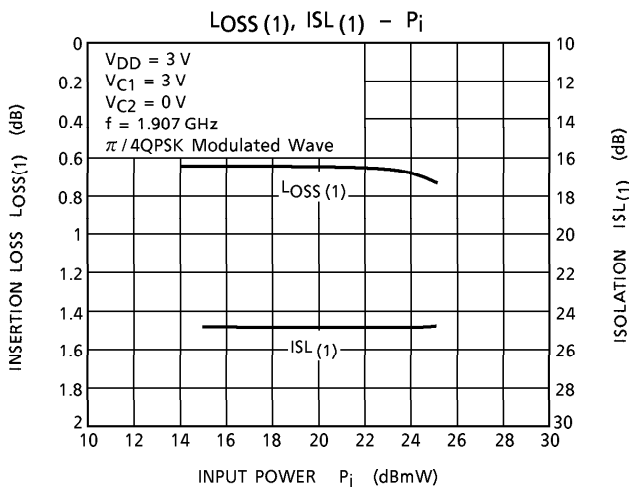


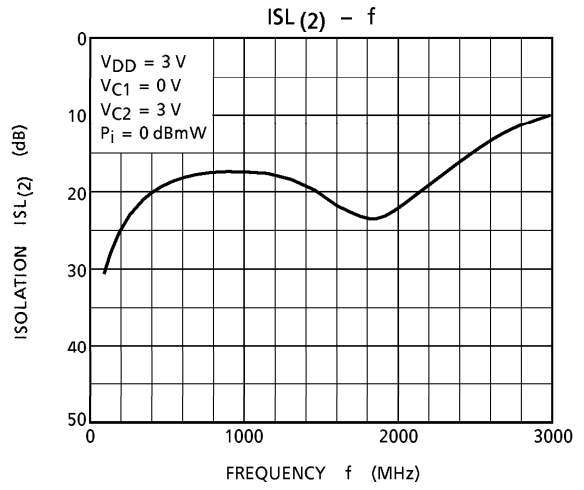
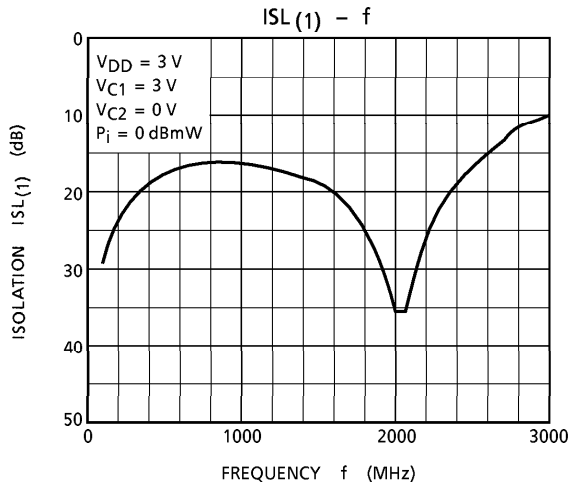
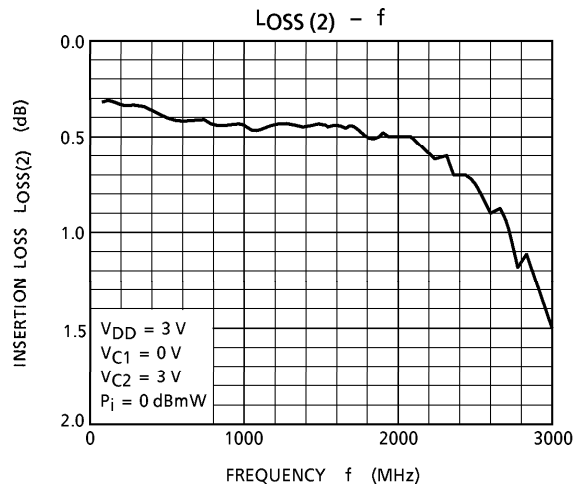
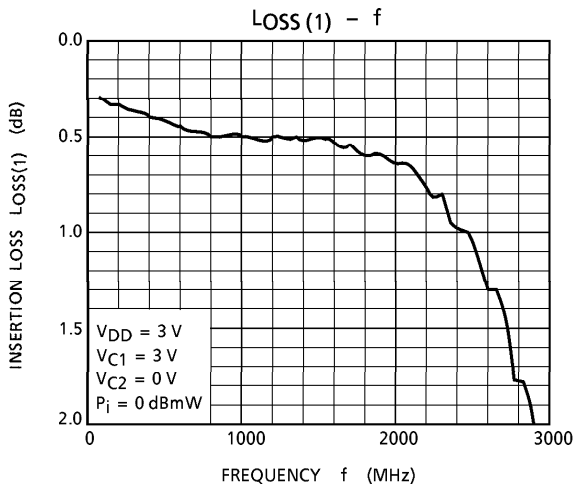
TEST CIRCUIT1 (RF TEST CIRCUIT)



NOTICE

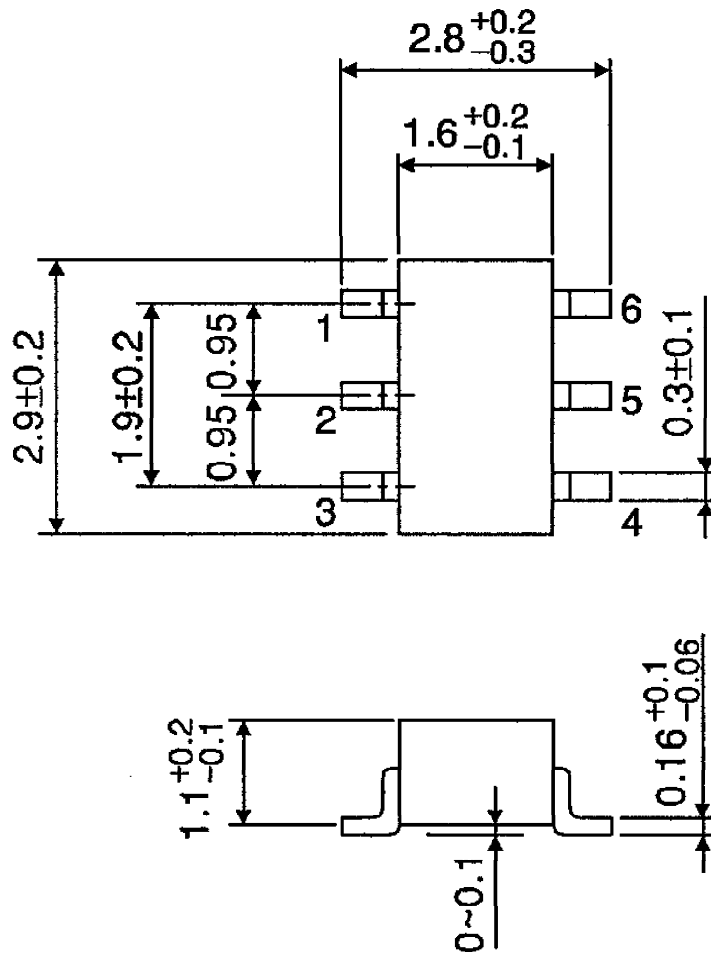
The circuits and measurements contained in this document are given only in the context of as examples of applications for these products.
 Moreover, these example application circuits are not intended for mass production, since the high-frequency characteristics (the AC characteristics) of these devices will be affected by the external components which the customer uses, by the design of the circuit and by various other conditions. It is the responsibility of the customer to design external circuits which correctly implement the intended application, and to check the characteristics of the design.
 TOSHIBA assume no responsibility for the integrity of customer circuit designs or applications.





PACKAGE DIMENSIONS
SSOP6-P-0.95

Unit : mm



Weight : 0.014 g (Typ.)