

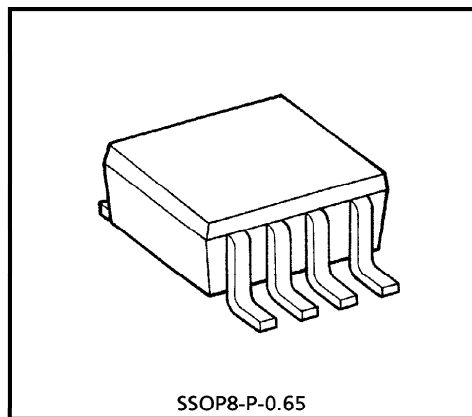
TG2006F

1.9GHz BAND POWER AMPLIFIER

PHS, DIGITAL CORDLESS TELECOMMUNICATION

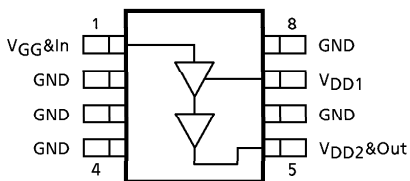
FEATURES

- Positive Voltage Operation : $V_D = 3V, V_G = 0$ to $3V$
- Low Current Consumption : $I_t = 130mA$ (Typ.)
- Small Package : SM8 Package
($2.9 \times 2.8 \times 1.1mm$)
- Low Cost : Can be achieved minimum function.

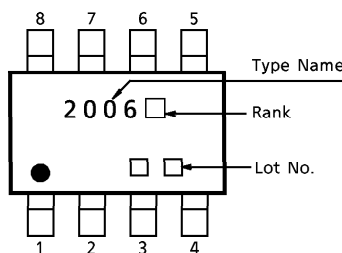


Weight : 0.02g (Typ.)

PIN ASSIGNMENT (TOP VIEW)



MARKING



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{DD1}	5	V
	V_{DD2}	5	V
Gate Voltage	V_{GG}	1	V
Input Power	P_i	10	mW
Power Dissipation	P_d (Note)	250	mW
Operating Temperature Range	T_{opr}	-40~85	°C
Storage Temperature Range	T_{stg}	-55~150	°C

(Note) When mounted on $2.5cm^2 \times 1.6t$ glass epoxy board.

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CLASSIFY RANK

This device is classified by Fig.1.

And satisfy ELECTRICAL CHARACTERISTICS by V_g Condition on each rank.

Can't order to choose any rank.

RANK	V_g CONDITION
A	$V_g = 0V$
B	$V_g = 1V$
C	$V_g = 3V$

Fig.1

CAUTION

This device is electrostatic sensitivity. Please handle with caution.

ELECTRICAL CHARACTERISTICS

($V_d = 3V$, $V_g =$ (Note 1), $f = 1.9GHz$, $T_a = 25^\circ C$, $Z_g = Z_l = 50\Omega$ 1 / 2 duty operation)

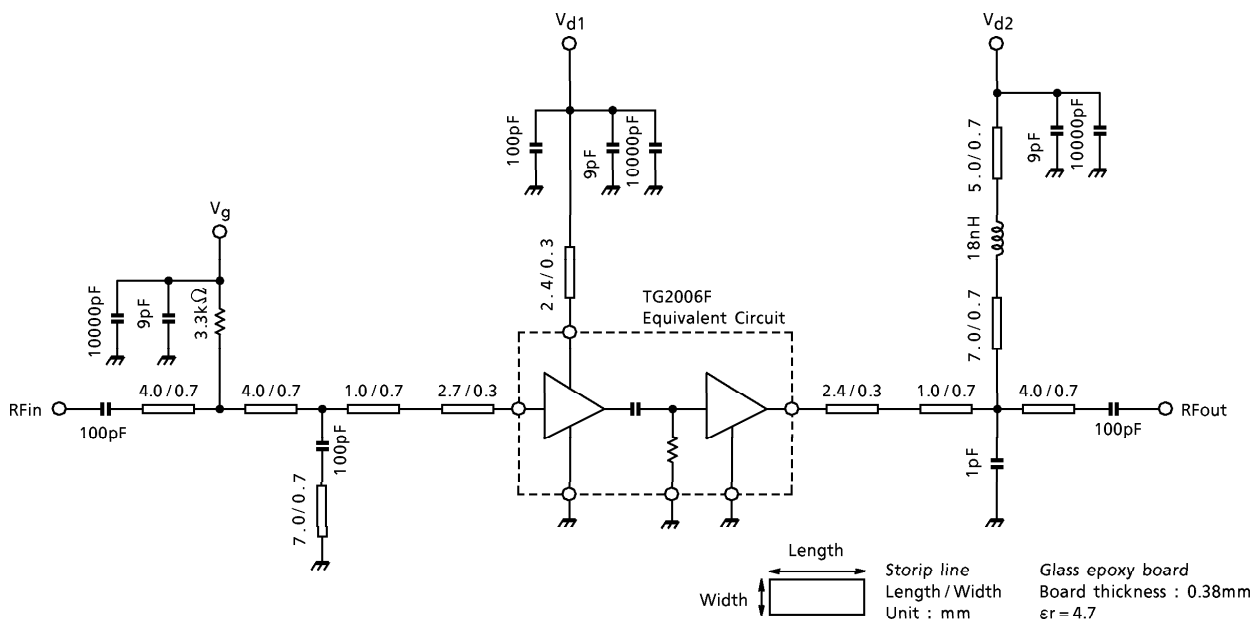
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Frequency	f_{range}	—	—	1895	—	1918	MHz	
Total Current	I_t	1	$P_o = 21dBmW$, $P_i =$ Regulation	—	130	150	mA	
Gate Current	I_G	1		—	—	1		
Output Power	P_o	1	$P_i = 1dBmW$	21	—	—	dBmW	
Small Signal Gain	G_p	1	$P_i = -20dBmW$	21	23	—	dB	
Adjacent Channel Leakage Power Ratio	ACP (1)	1	$P_o = 21dBmW$, $P_i =$ Regulation (Note 2)	$\Delta f = 600kHz$	—	-60	-55	dB
	ACP (2)	1			$\Delta f = 900kHz$	—	-65	
Harmonics	$2f_0$	1	$P_o = 21dBmW$, $P_i =$ Regulation	—	—	-30	dB	
	$3f_0$	1		—	—	-30		
Input VSWR	$VSWR_{in}$	1	$P_o = 21dBmW$, $P_i =$ Regulation	—	1.5	2.5	—	
Load Mismatch	—	—	$V_d = 4.0V$, $V_g =$ (Note 1), $P_o = 21dBmW$, $P_i =$ Regulation, $Z_g = 50\Omega$ VSWR Load = 20 : 1 all phase	No Degradation			—	
Stability	—	—	$V_d = 2.7\sim 4.0V$, $V_g =$ (Note 1), $P_i = -2mW\sim 4dBmW$, $Z_g = 50\Omega$ VSWR Load = 6 : 1 all phase	All spurious output than 60dB below desired signal			—	

(Note 1) V_g Voltage is decided on Fig.1.

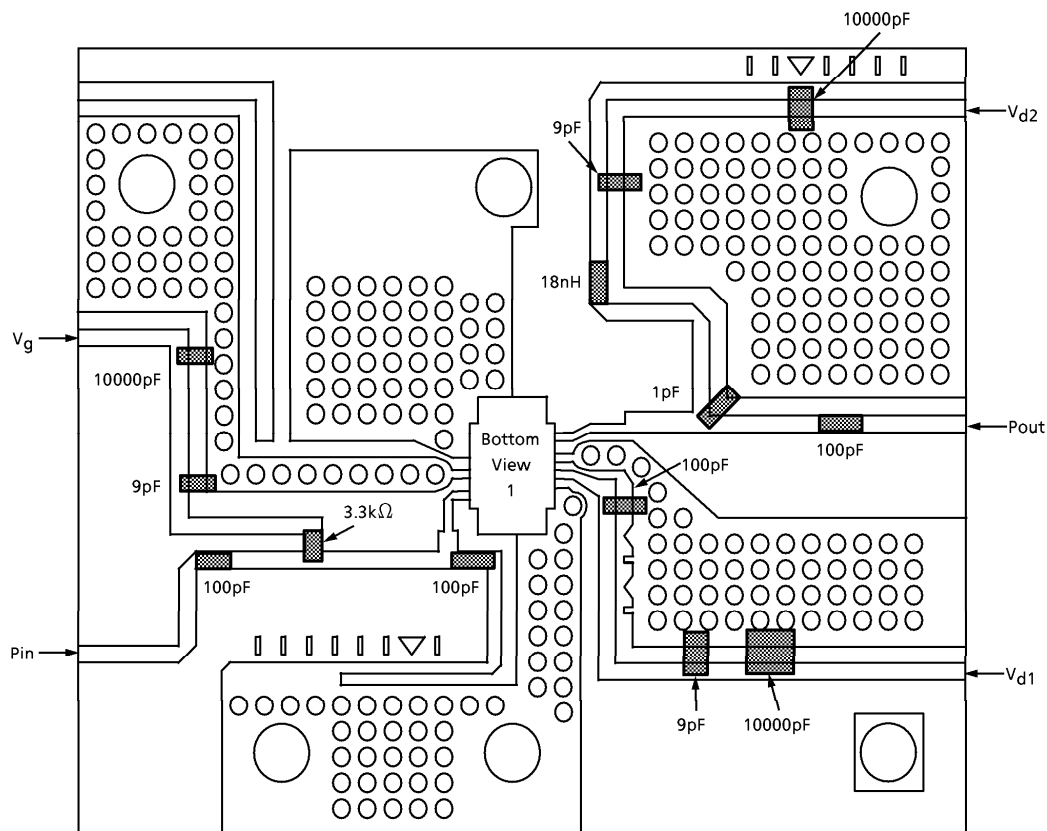
(Note 2) Input signal is modulated to $\pi/4QPSK$ ($\alpha = 0.5$). Bit rate is 384kbps.

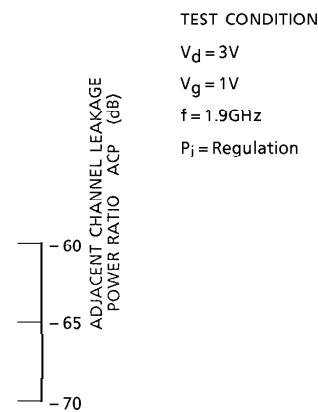
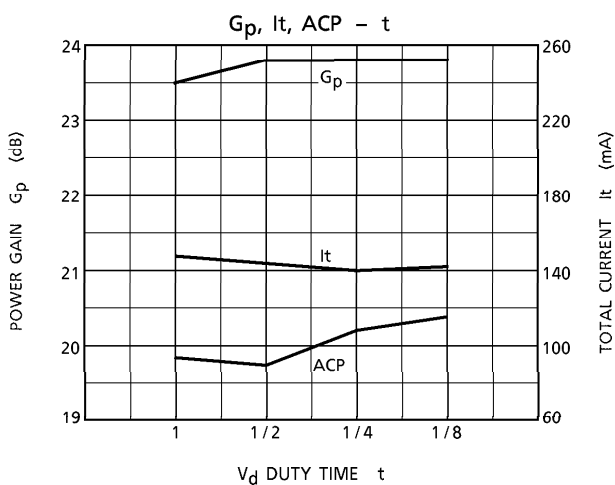
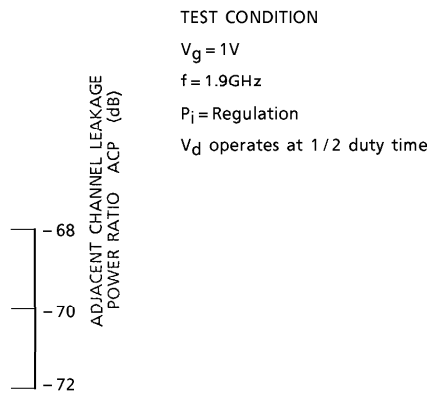
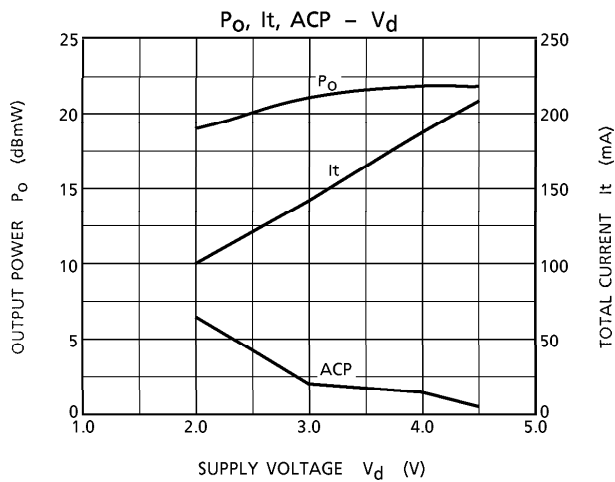
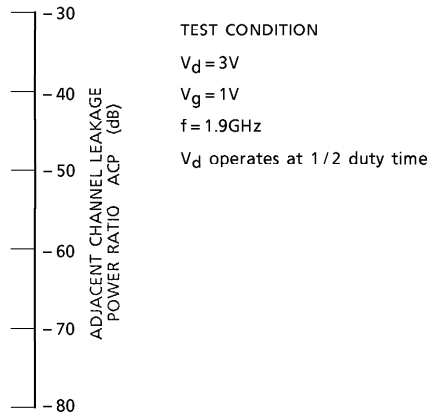
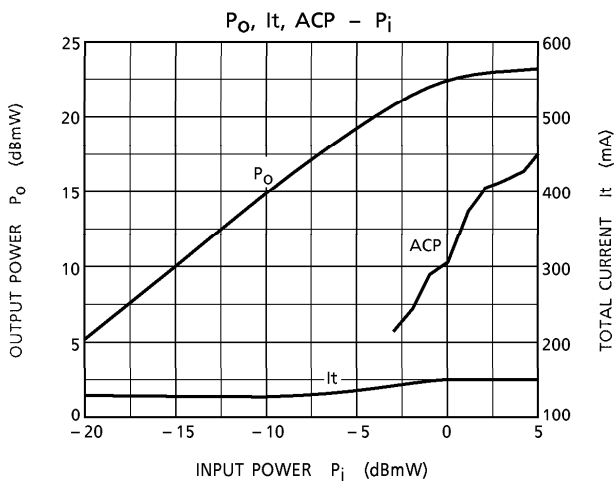
(Note 3) $V_d = V_{d1} = V_{d2}$, $I_t = I_{d1} + I_{d2}$

TEST CIRCUIT 1 (RF TEST CIRCUIT)



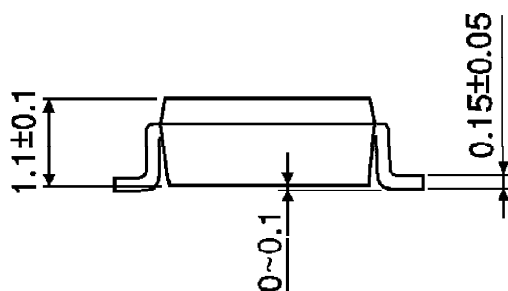
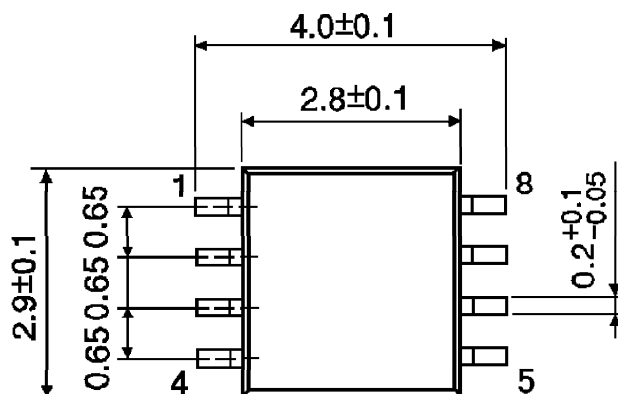
RF TEST BOARD





OUTLINE DRAWING
SSOP8-P-0.65

Unit : mm



Weight : 0.02g (Typ.)