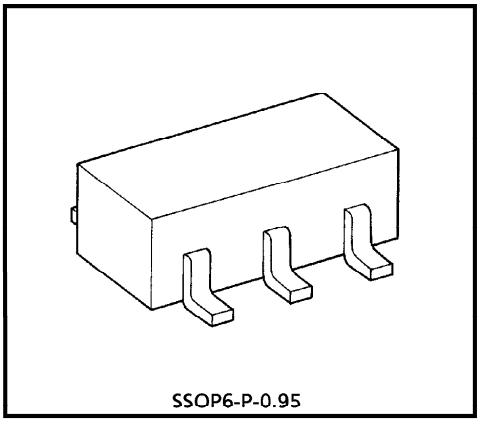
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA4009F

1.9GHz BAND PRE AMPLIFER APPLICATION

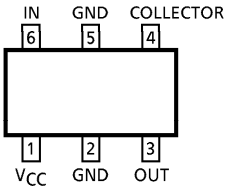
FEATURES

- Low current : I_{CC} = 12mA (Typ.)
- High gain : G_P = 12dB (Typ.)
- Recommended operating voltage : V_{CC} = 2.7~3.3V

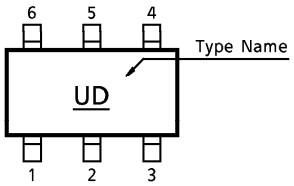


Weight : 0.014g (Typ.)

PIN ASSIGNMENT (TOP VIEW)



MARKING



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	5	V
Total Power Dissipation	P_D (*)	300	mW
Operating Temperature	T_{opr}	−40~85	°C
Storage Temperature Range	T_{stg}	−55~125	°C

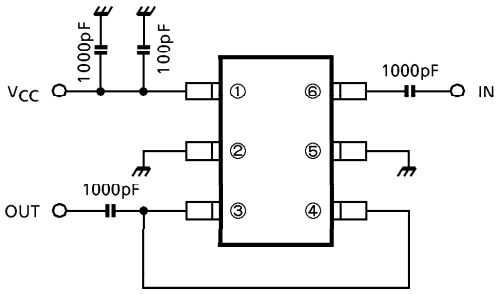
(*) When mounted on the glass epoxy board of 2.5cm² × 1.6t.

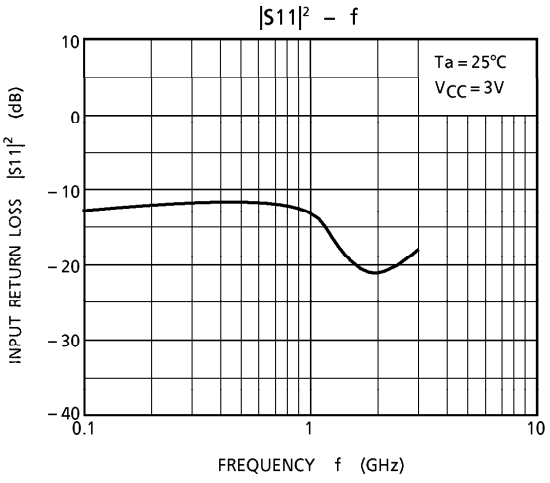
ELECTRICAL CHARACTERISTICS (V_{CC} = 3V, Ta = 25°C, Zg = Zl = 50Ω)

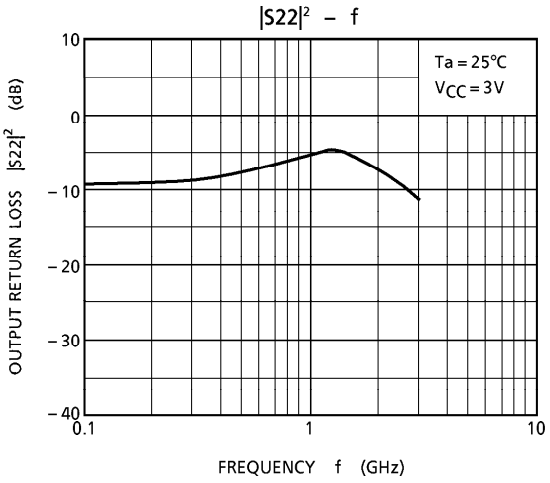
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Circuit Current	I_{CC}	—	Non Carrier	—	12	16	mA
Frequency Range	f_{range}	—	—	1895	—	1918	MHz
Power Gain	G_P	1	f = 1895~1918MHz	10	12	—	dB
Noise Figure	NF	1		—	6	—	dB
Isolation	ISL	1		15	20	—	dB
Input VSWR	$VSWR_{in}$	1		—	1.2	2.0	—
Output VSWR	$VSWR_{out}$	1		—	2.5	—	—
Output Power At 1dB Gain Comperssion	P_{O1dB}	1		—	−8	—	dBmW

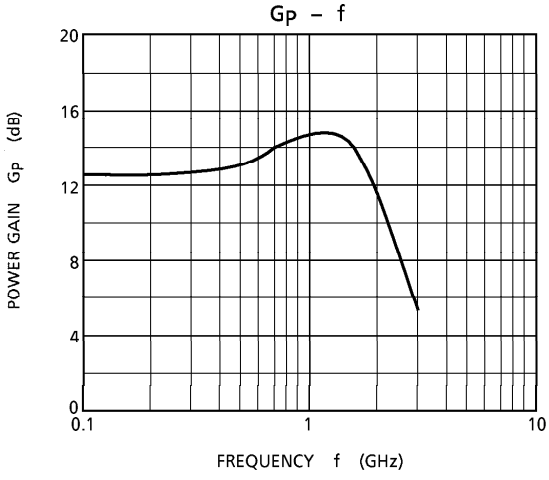
961001EBA2

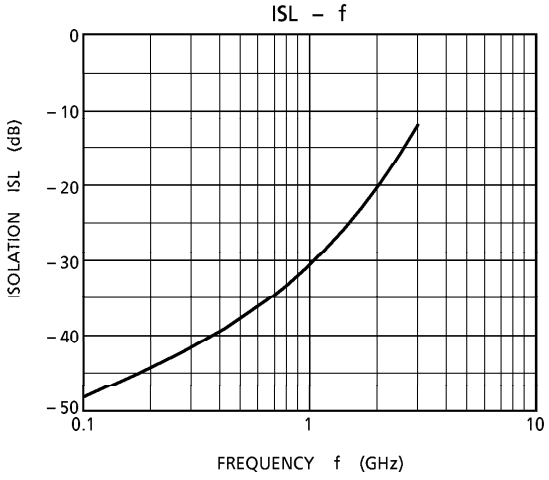
TEST CIRCUIT 1.



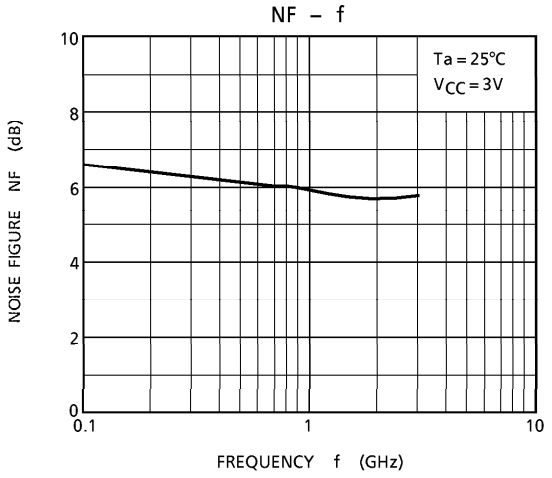


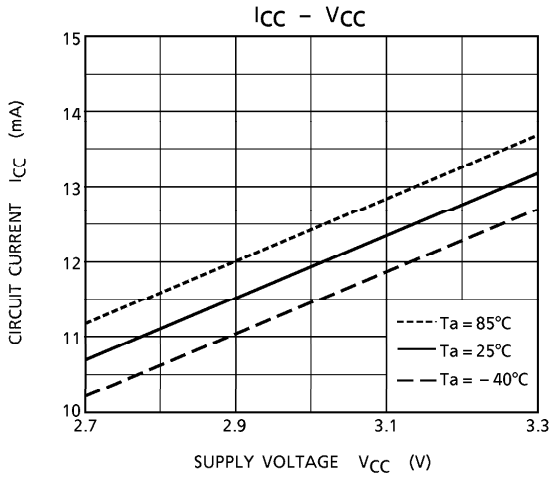


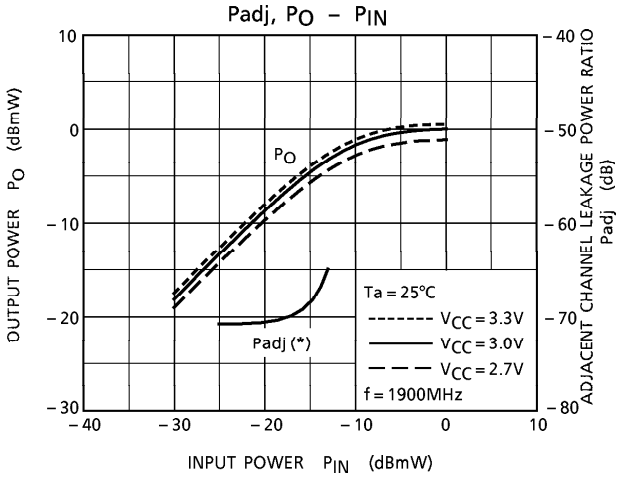




961001EBA2'







(*) Input signal is modulated to $\pi/4$ QPSK ($\alpha = 0.5$). Bit rate is 384kbps. $\Delta f = 600$kHz.