

TOSHIBA

TA4012F

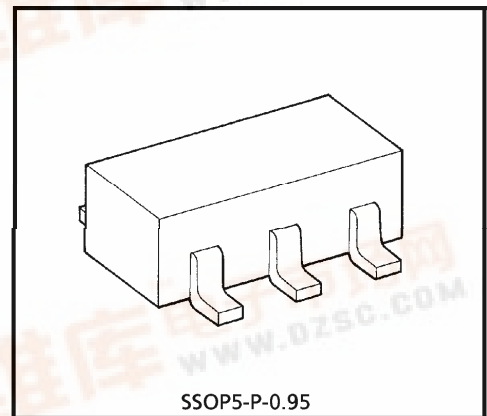
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA4012F

UHF WIDE BAND AMPLIFIER APPLICATIONS

FEATURES

- Low Current : $I_{CC} = 6.5\text{mA}$
- Wide Band : $f = 2.0\text{GHz}$ (3dB down)
- Operating Supply Voltage : $V_{CC} = 1.5\sim 3\text{V}$



SSOP5-P-0.95

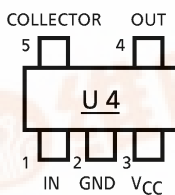
Weight : 0.014g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	4	V
Total Power Dissipation	P_D (Note 1)	300	mW
Operating Temperature	T_{opr}	-40~85	°C
Storage Temperature	T_{stg}	-55~150	°C

(Note 1) When mounted on the glass epoxy of 2.5cm² x 1.6t

PIN ASSIGNMENT

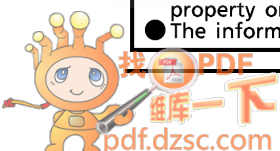


CAUTION

This device electrostatic sensitivity. Please handle with caution.

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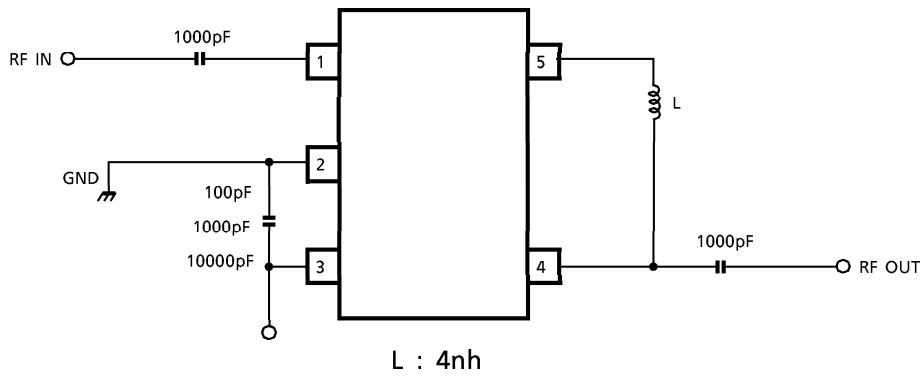


ELECTRICAL CHARACTERISTICS (Ta = 25°C, Zg = Zl = 50Ω)

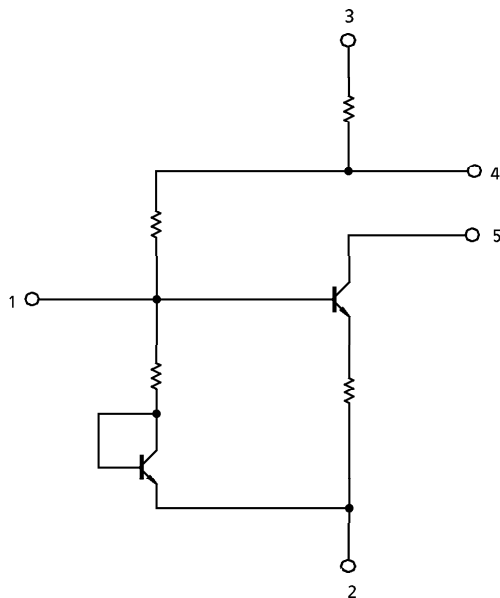
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Circuit Current	I _{CC}	V _{CC} = 2V, Non carrier	4.5	6.5	8.5	mA
Band Width	BW	V _{CC} = 2V (Note 2)	1.8	2.0	—	GHz
Insertion Gain	S ₂₁ ²	V _{CC} = 2V, f = 1.5GHz	10	12	—	dB
Noise Figure	NF	V _{CC} = 2V, f = 1.5GHz	—	6	7.5	dB
Isolation	S ₁₂ ²	V _{CC} = 2V, f = 1.5GHz	—	-22	—	dB
Input Return Loss	S ₁₁ ²	V _{CC} = 2V, f = 1.5GHz	—	-6.5	—	dB
Output Return Loss	S ₂₂ ²	V _{CC} = 2V, f = 1.5GHz	—	-7.5	—	dB
Output Power at 1dB Gain Compression	Po1dB	V _{CC} = 2V, f = 1.5GHz	—	0	—	dBmW

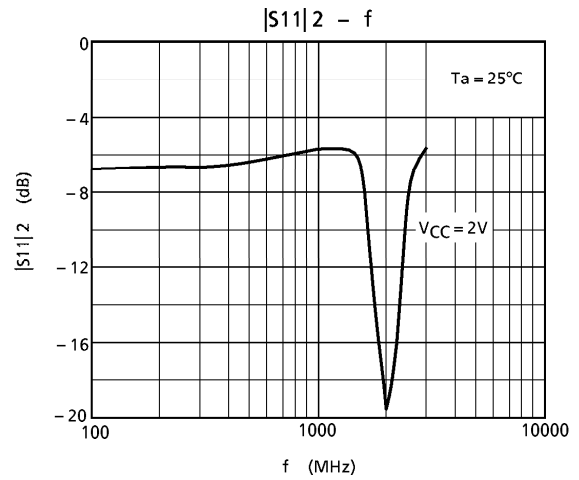
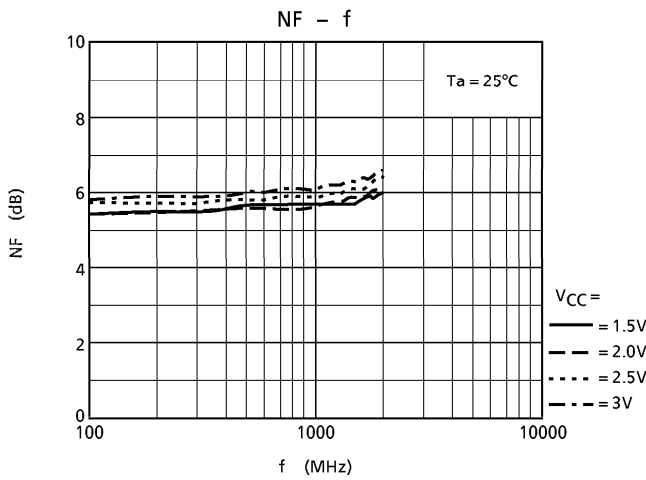
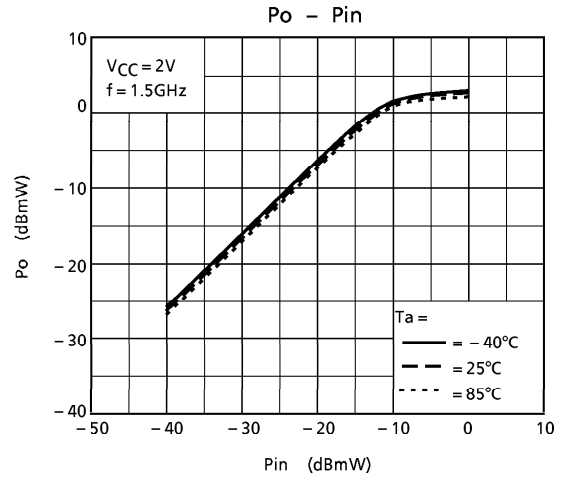
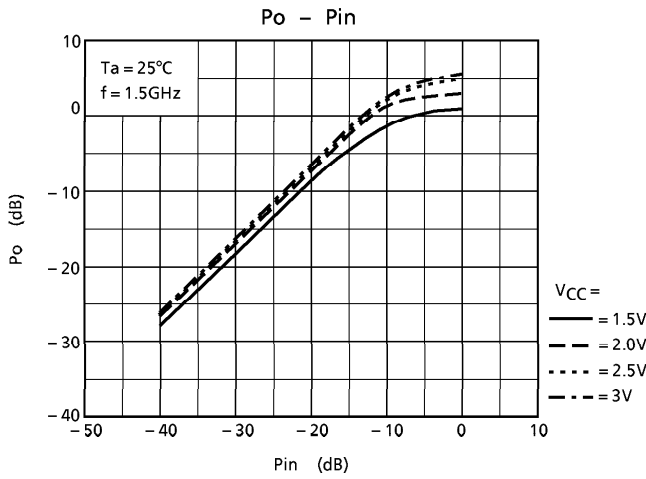
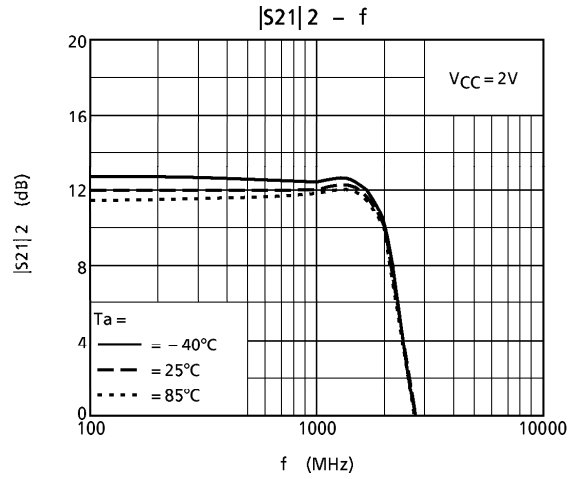
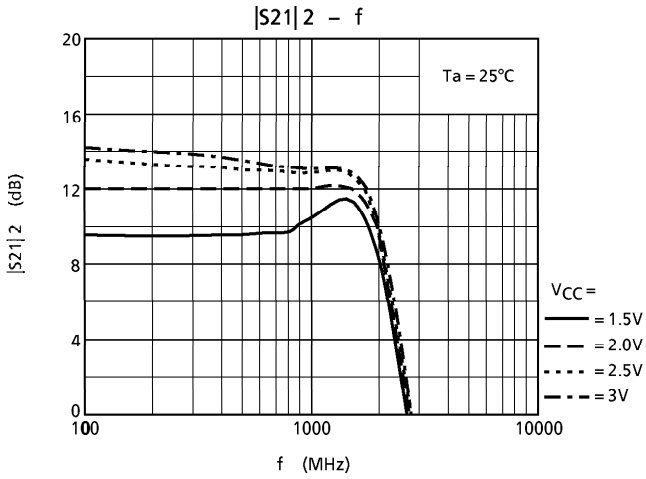
(Note 2) BW is the frequency of 3dB down from |S₂₁|² at 1.5GHz.

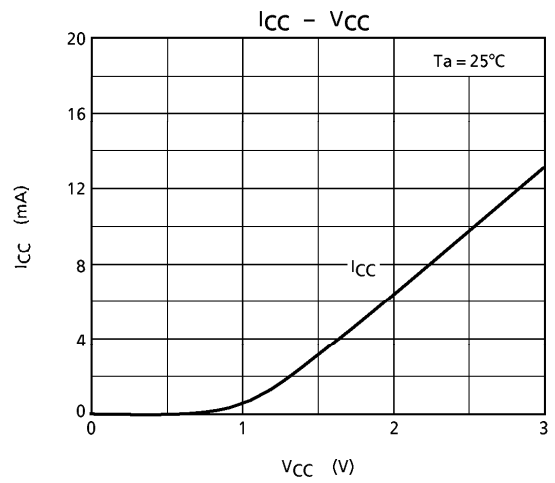
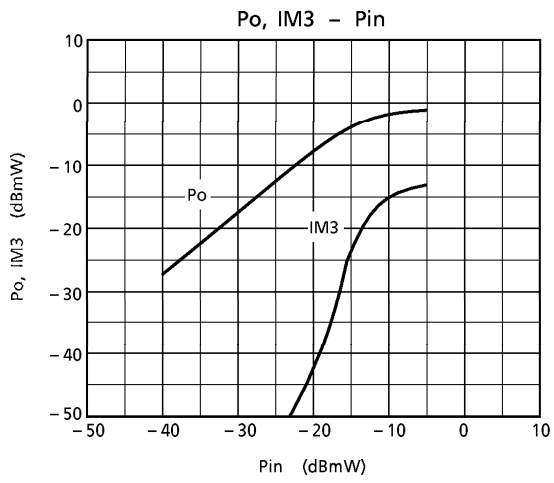
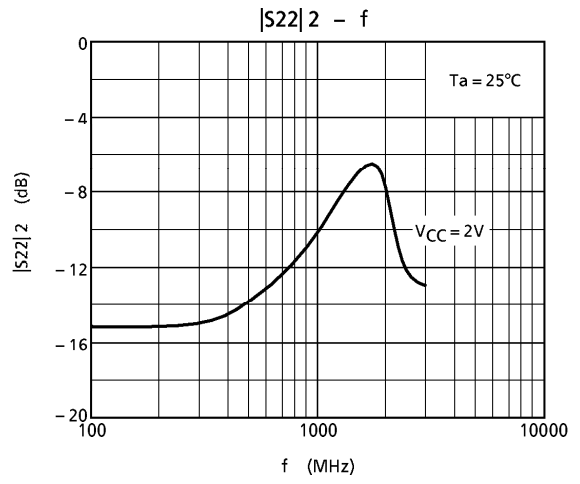
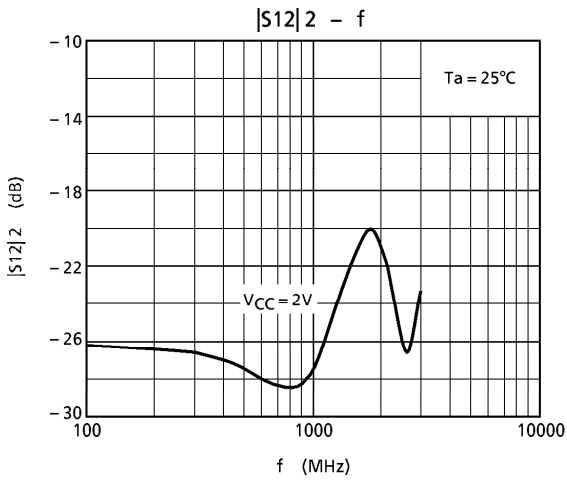
RF TEST CIRCUIT (TOP VIEW)



EQUIVALENT CIRCUIT

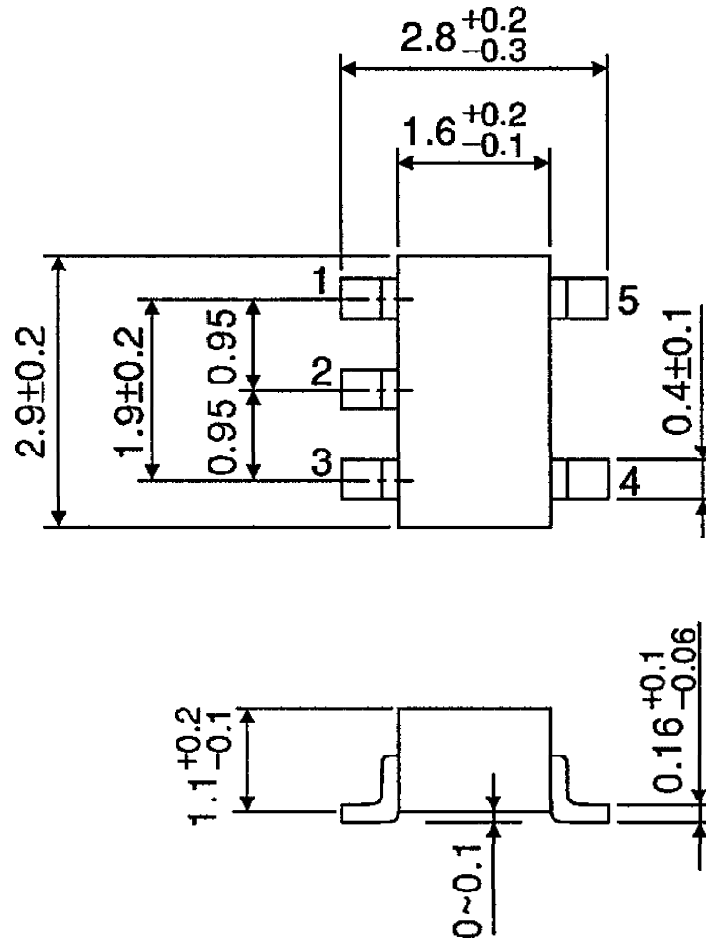






OUTLINE DRAWING
SSOP5-P-0.95

Unit : mm



Weight : 0.014g (Typ.)