TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

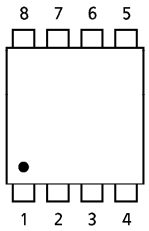
TA4101F

UHF VHF MIX APPLICATION

FEATURES

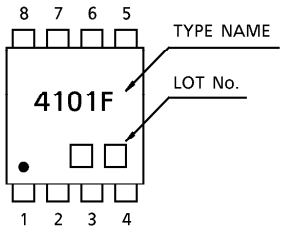
- Double Balance circuit

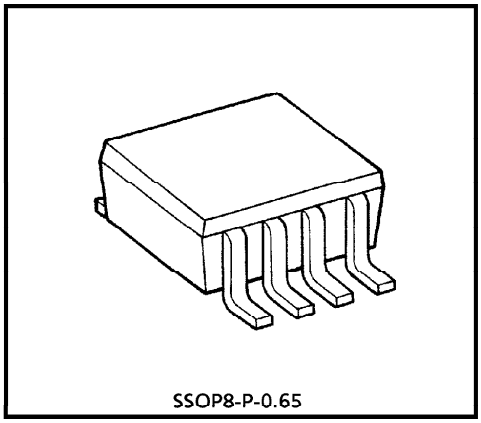
PIN ASSIGNMENT (TOP VIEW)



1. IF OUT
2. V_{CC}
3. OSC IN
4. Base
5. Base
6. Base
7. GND
8. Collector

MARKING





Weight : 0.02g (Typ.)

MAXIMUM RATING (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	6	V
Total Power Dissipation	P_D (*)	300	mW
Operating Temperature	T_{opr}	−40~85	°C
Storage Temperature Range	T_{stg}	−55~125	°C

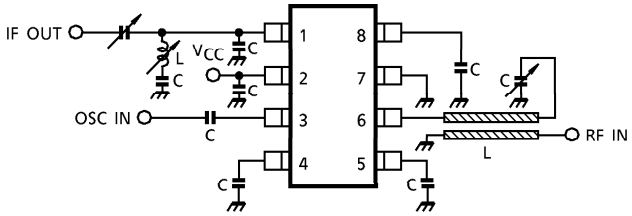
(*) When mounted the glass epoxy board of $2.5cm^2 \times 1.6t$

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

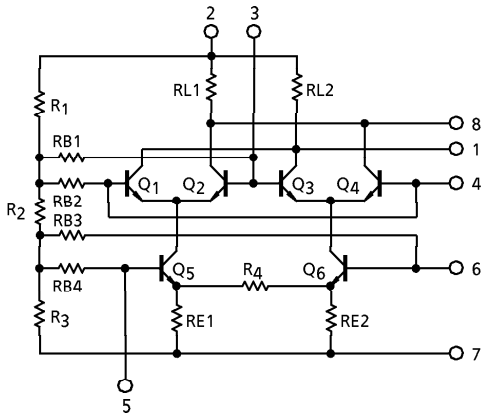
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Circuit Current	I_{CC}	—	V_{CC} = 5V	3.9	5.7	7.5	mA
MIXER Gain	G_{MIX}	1	V_{CC} = 5V, (*)	−6.0	−3.5	—	dB
MIXER NOISE Figure	NF_{MIX}	1	V_{CC} = 5V, (*)	—	9.0	12.0	dB
Maximum Output Level	P_O	1	V_{CC} = 5V, (*)	−12	−9	—	dBmW

(*) : f_{RF} = 800MHz, f_{LO} = 860MHz (0dBm), I_F = 60MHz

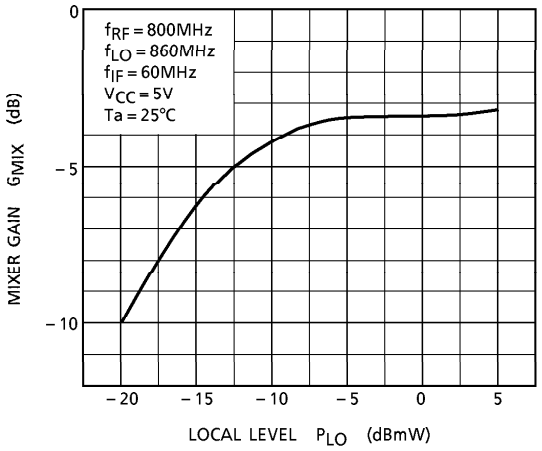
MEASUREMENT CIRCUIT 1.



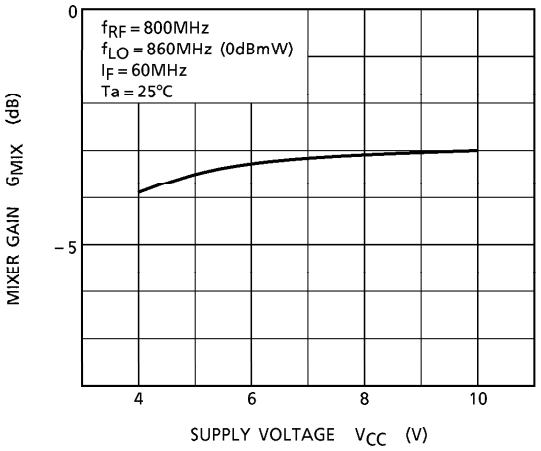
EQUIVALENT CIRCUIT



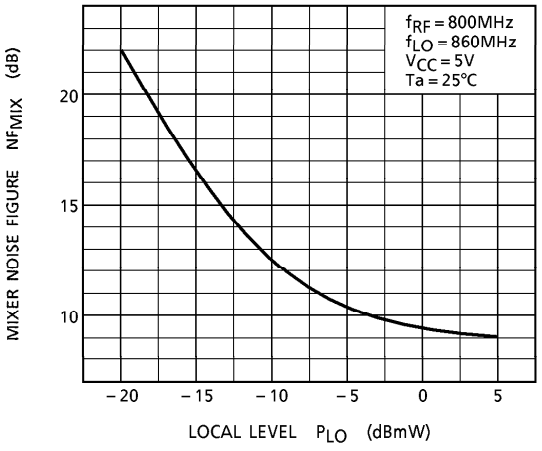
G_{MIX} – P_{LO}



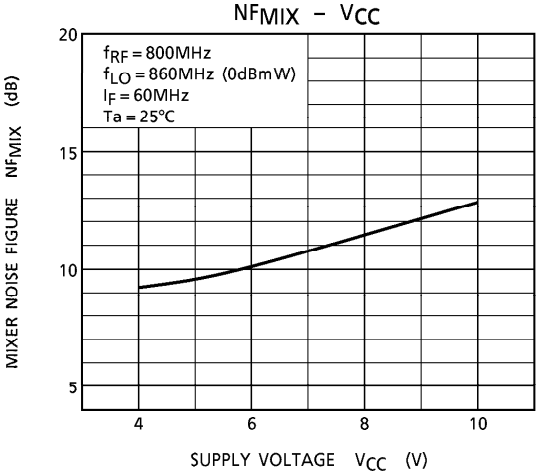
G_{MIX} – V_{CC}



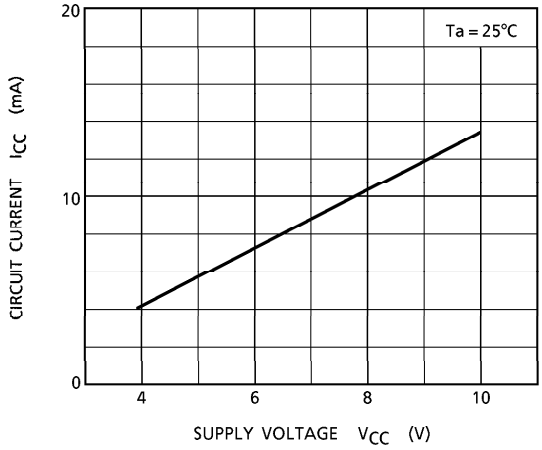
NF_{MIX} – P_{LO}



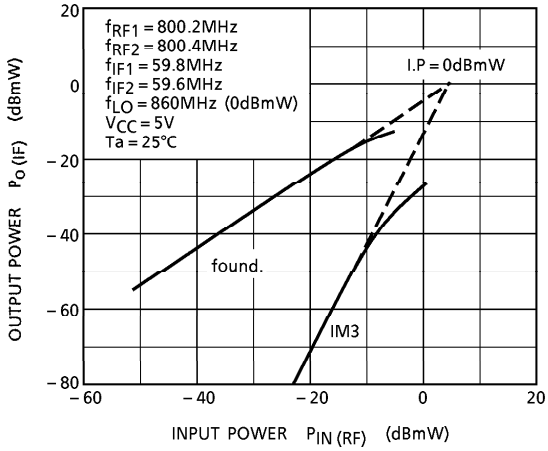
NF_{MIX} – V_{CC}



V_{CC} – I_{CC}



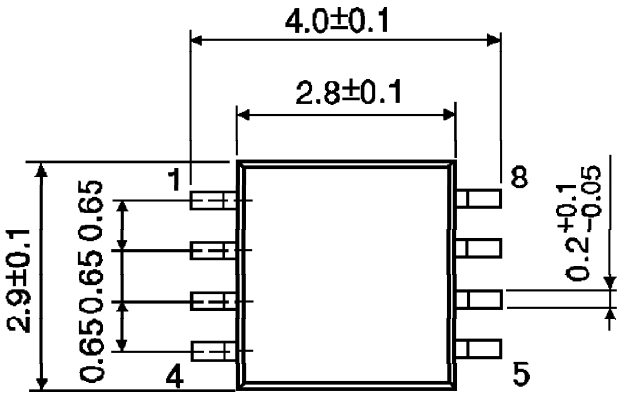
P_O – P_{IN}

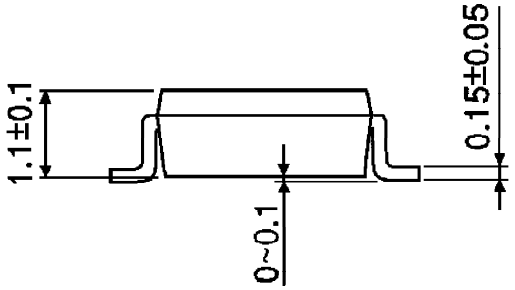


OUTLINE DRAWING

SSOP8-P-0.65

Unit : mm





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