

TOSHIBA MOS TYPE INTEGRATED CIRCUIT SILICON MONOLITHIC

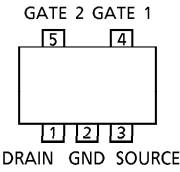
TA4007F

TV TUNER VHF RF AMPLIFIER APPLICATIONS.
FM TUNER RF AMPLIFIER APPLICATIONS.

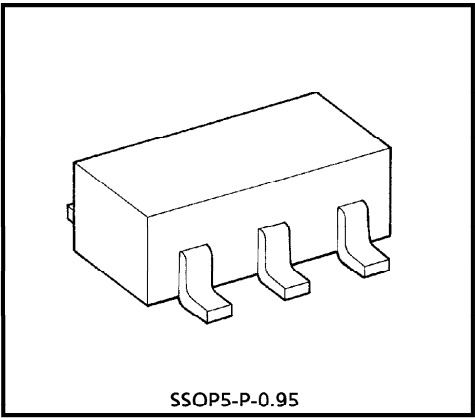
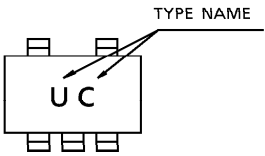
FEATURES

- On account of this Device built in Bias Circuit, Cut down number of articles.
- Low Noise Figure : NF = 1.3dB (Typ.)
- Operating Voltage : $V_{DD} = 6 \sim 11V$

PIN ASSIGNMENT (TOP VIEW)



MARKING



Weight : 0.014g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{DD}	11	V
Gate 2-Source Voltage	V_{G2S}	± 8	V
Supply Current	I_{DD}	30	mA
Power Dissipation	P_D^*	250	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

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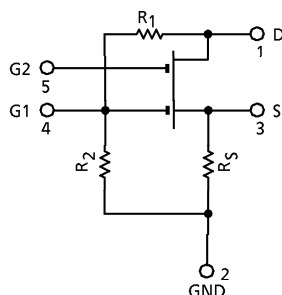
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 2 Leakage Current	I_{G2SS}	—	$V_{DS} = 0, V_{G1S} = 0, V_{G2S} = \pm 6V$	—	—	± 50	nA
Gate 2- Source Cut-off Voltage	$V_{G2S} (OFF)$	—	$V_{DD} = 5V, I_{DD} = 150\mu A$	0.5	1.0	1.5	V
Supply Current	I_{DD}	—	$V_{DD} = 9V, V_{G2} = 7V$	6	—	14	mA
Input Capacitance	C_{iss}	—	$V_{DD} = 9V, V_{G2} = 7V$ $f = 1MHz$	2.4	3.4	4.0	pF
Output Capacitance	C_{oss}	—		1.5	2.0	2.5	pF
Power Gain	G_{ps}	1	$V_{DD} = 9V, V_{G2} = 7V$ $f = 200MHz$	24	28.0	—	dB
Noise Figure	NF	1		—	1.3	2.2	dB

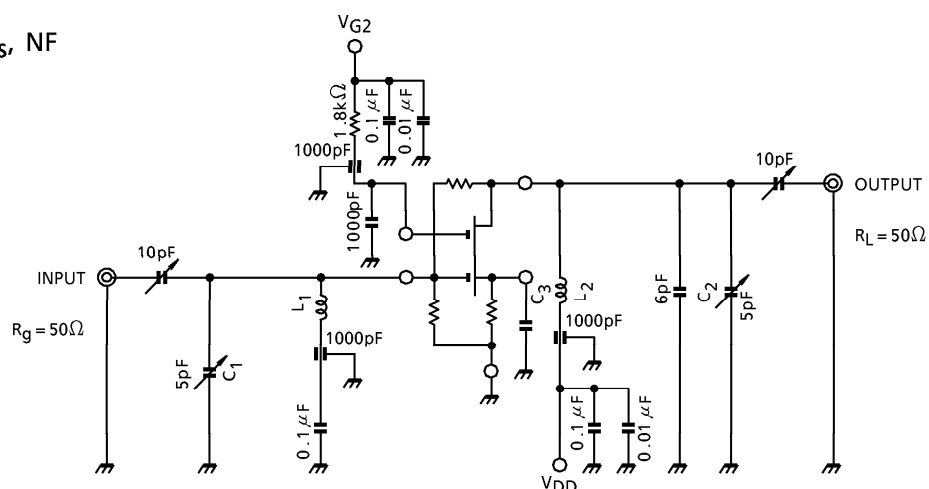
I_{DD} Classifications : Y : 6~10mA, GR : 8~12mA, BL : 10~14mA.

EQUIVALENT CIRCUIT



TEST CIRCUIT 1

200MHz, G_{ps} , NF


$$C_3 : 1000\text{pF} + 10000\text{pF}$$

L₁ : 1mm ϕ Ag Plated Copper Wire, 2 Turns, 8mm ID

L2 : 1mm ϕ Ag Plated Copper Wire, 2.5 Turns, 8mm ID

