

# TOSHIBA

## MICROWAVE POWER GaAs MMIC

S9751A

### PRELIMINARY

#### Features

- High power
  - $P_o = 35$  dBm at  $P_{in} = 4$  dBm
- Super low distortion
  - $P_{adj} = -67$  dBc at  $P_o = 34$  dBm, 600 kHz offset
- High gain
  - $G_p = 31$  dB at  $P_{in} = 4$  dBm
- Input/output port matched to  $50\Omega$
- Hermetically sealed package

#### RF Performance Specifications ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Condition	Unit	Min.	Typ.	Max.
Output Power	$P_o$	$V_{DD1} = V_{DD2} = V_{DD3} = 9V$ $V_{GG} = -5V, f = 1.9$ GHz $P_{in} = 4$ dBm	dBm	34	35	-
Power Gain	$G_p$		dB	30	31	-
Drain Current	$I_{DD}^*$		A	-	1.5	1.9
Adjacent Channel Leakage Power	$P_{adj}$	$V_{DD1} = V_{DD2} = V_{DD3} = 9V$ $V_{GG} = -5V, f = 1.9$ GHz $P_o = 34$ dBm $\pi / 4$ -QPSK Modulation 600 kHz Offset	dBc	-	-67	-65

\* $I_{DD} = I_{DD1} + I_{DD2} + I_{DD3}$

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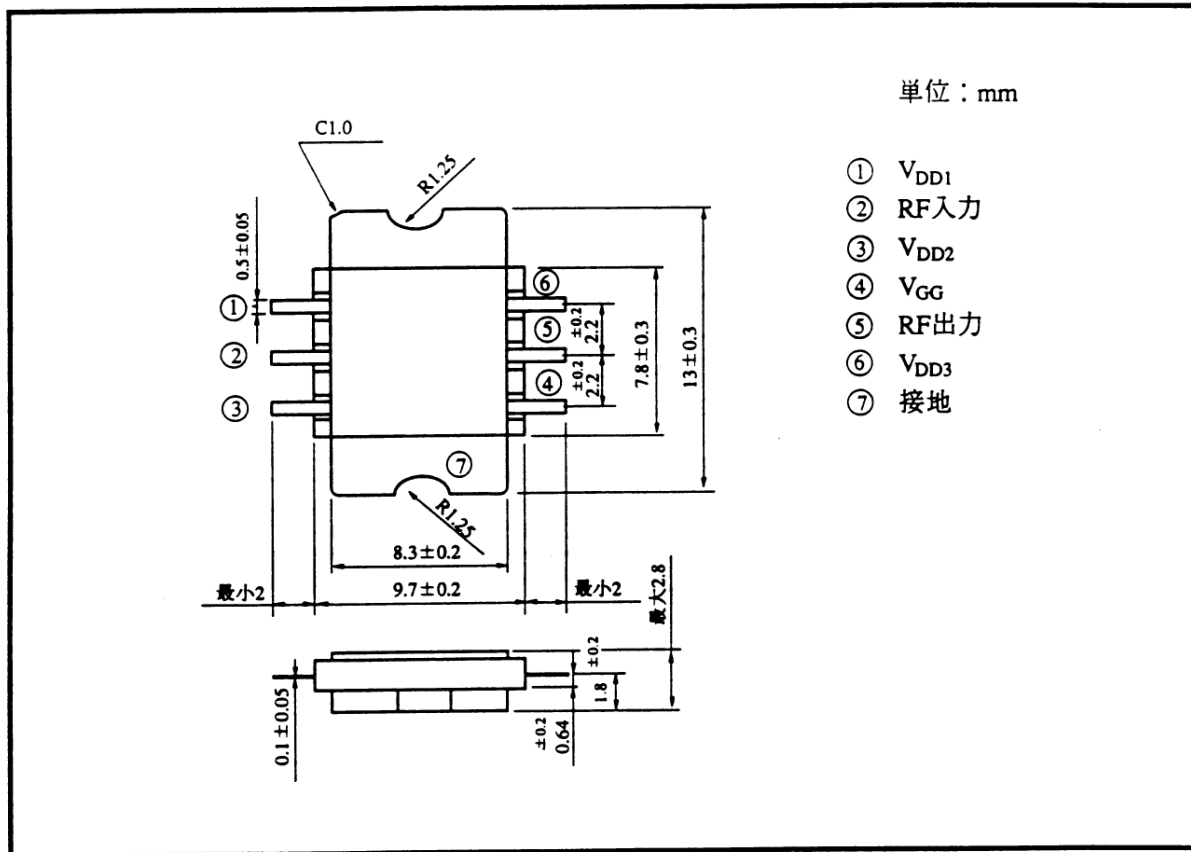


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### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Unit	Rating
Drain Supply Voltage	$V_{DD1}, V_{DD2}, V_{DD3}$	V	15
Gate Supply Voltage	$V_{GG}$	V	-15
Input Power	Pin	dBm	13
Flange Temperature	$T_f$	$^\circ\text{C}$	-30 ~ +80
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-65 ~ +175

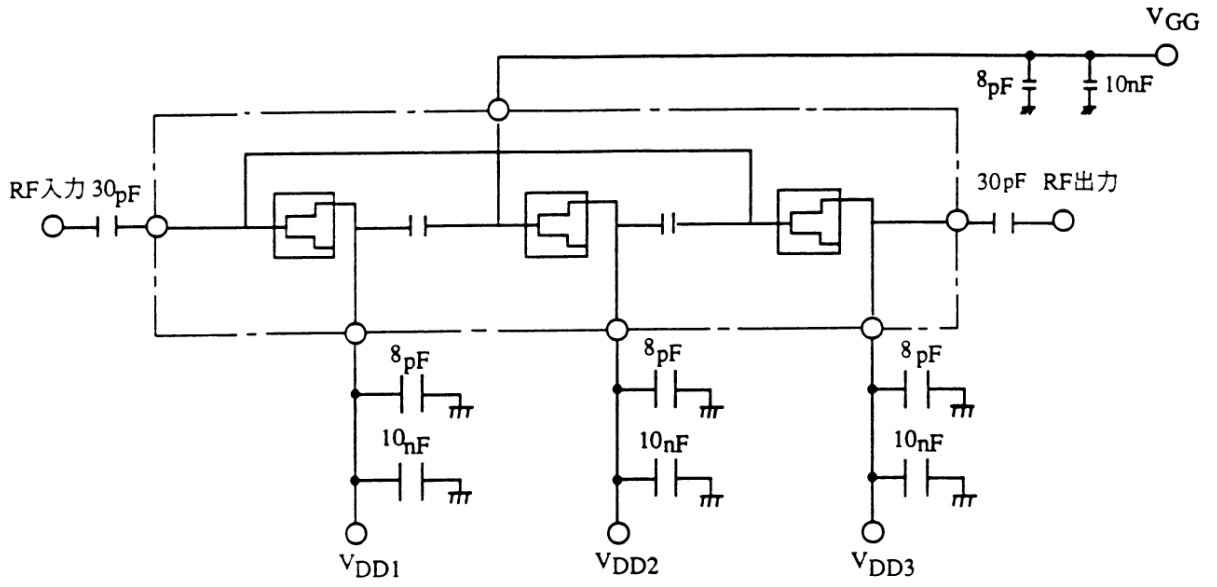
### Package Outline (2-8N1B)



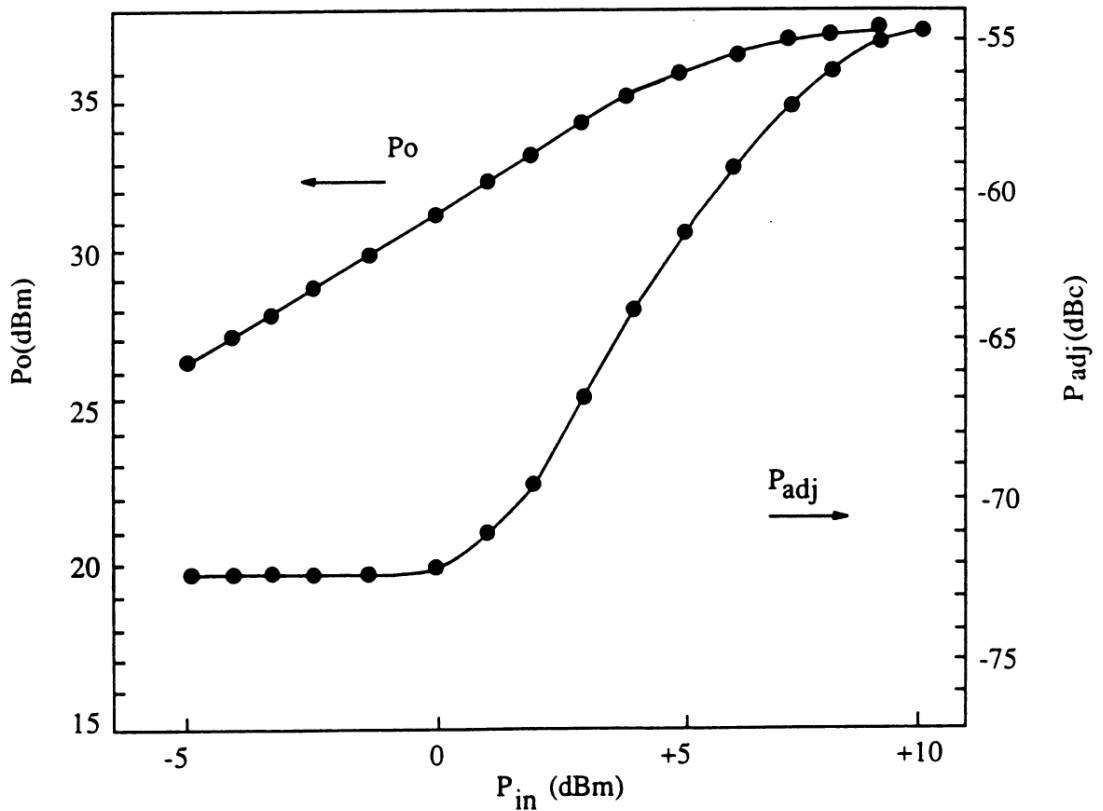
### Handling Precautions for Packaged Type

Soldering iron should be grounded and the operating time should not exceed 10 seconds at  $260^\circ\text{C}$ .

MMIC Schematic



RF Performance



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