TOSHIBA

MICROWAVE POWER GaAs MMIC S9747

Features

- High power
  - Po = 26 dBm at Pin = 5 dBm
- Super low distortion
  - P_{adj} = -62 dBc at Po = 25 dBm, 600 kHz offset
- High gain
  - Gp = 21 dB at Pin = 5 dBm
- Input/output port matched to 50Ω
- Hermetically sealed package

RF Performance Specifications (T_a = 25°C)

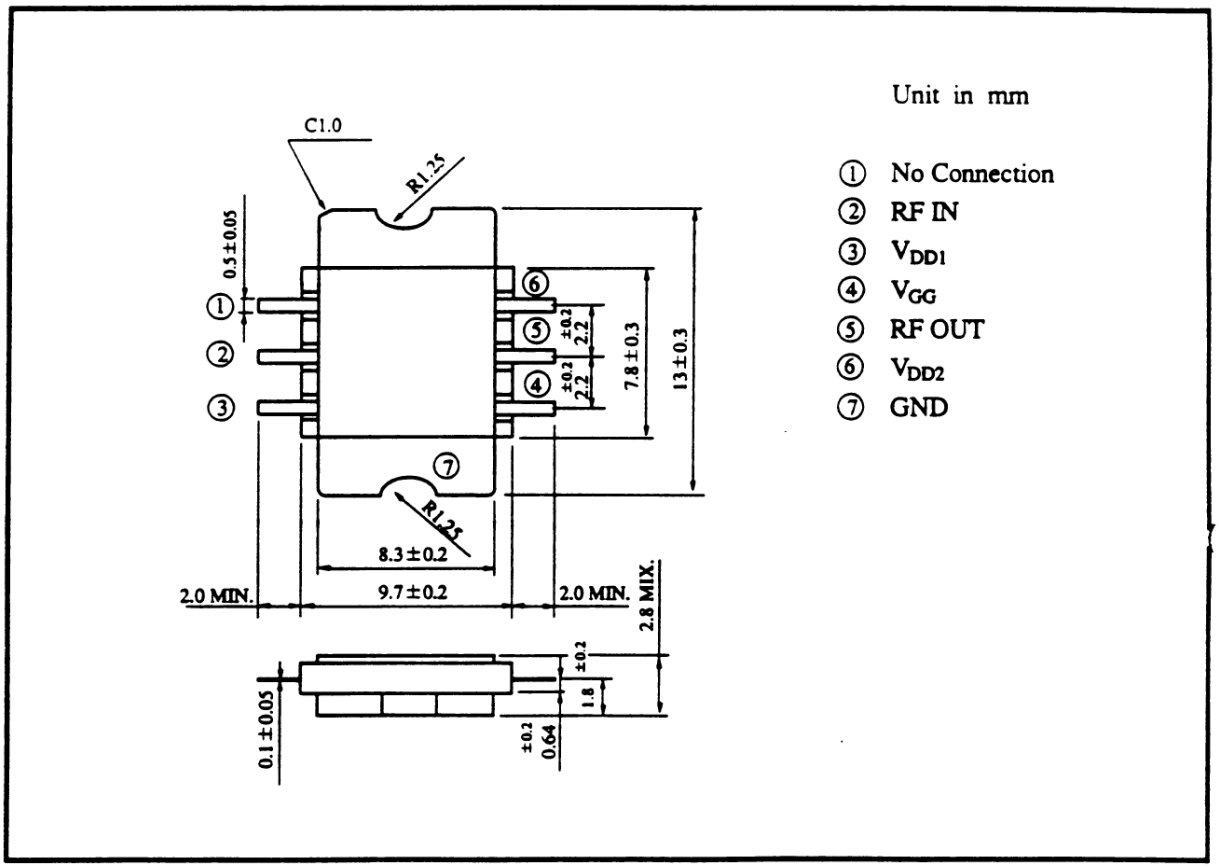
Characteristic	Symbol	Condition	Unit	Min.	Typ.	Max.
Output Power	Po	$V_{DD1} = V_{DD2} = 6V$ V_{GG} = -5V, f = 1.9 GHz Pin = 5 dBm	dBm	25	26	–
Power Gain	Gp		dB	20	21	–
Drain Current	I_{DD}*		mA	–	280	350
Adjacent Channel Leakage Power	P_{adj}	$V_{DD1} = V_{DD2} = 6V$ V_{GG} = -5V, f = 1.9 GHz Po = 25 dBm π / 4-QPSK Modulation 600 kHz Offset	dBc	–	-62	-60

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

Absolute Maximum Ratings (T_a = 25°C)

Characteristic	Symbol	Unit	Rating
Drain Supply Voltage	V_{DD1}, V_{DD2}	V	15
Gate Supply Voltage	V_{GG}	V	-15
Input Power	Pin	dBm	10
Flange Temperature	Tf	°C	-30 ~ +80
Storage Temperature	T_{stg}	°C	-65 ~ +175

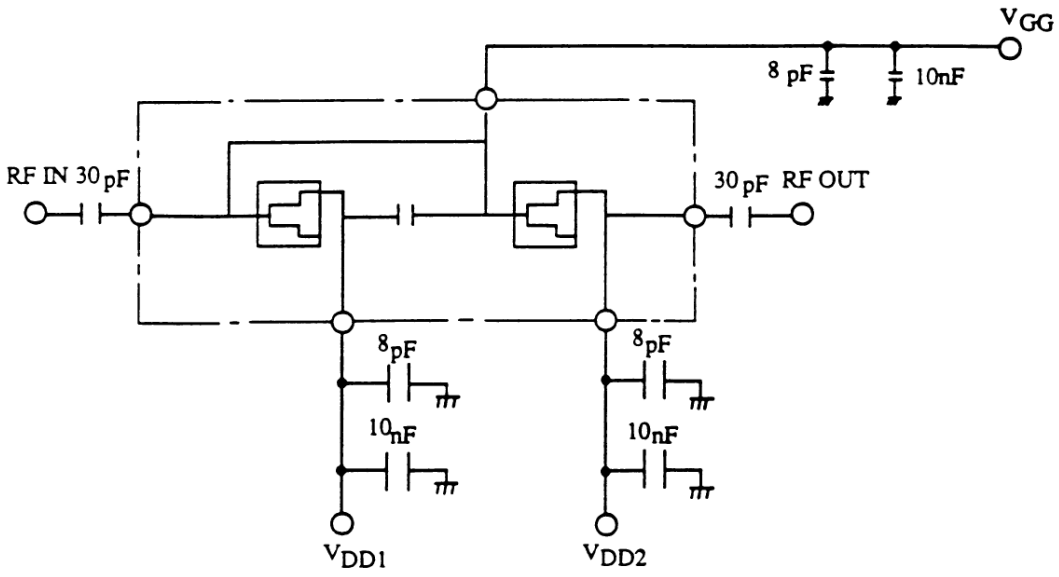
Package Outline (2-8N1A)



Handling Precautions for Packaged Type

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

MMIC Schematic



RF Performance