TOSHIBA

MICROWAVE SEMICONDUCTOR
TECHNICAL DATA

MICROWAVE POWER MMIC AMPLIFIER

JS9770-AS (CHIP FORM)

FEATURES

- High Output Power
  P1dB=25.0dBm
- High Power Gain
  G1dB=13dB
- 50 Ω Input / Output Broadband Matched
  @ f=27.5 – 29.5GHz.

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATINGS
DRAIN SUPPLY VOLTAGE	VDD	V	11
GATE SUPPLY VOLTAGE	VGG	V	-5
INPUT POWER	Pin	dBm	16
FLANGE TEMPERATURE	Tf	°C	-30 - +80
STORAGE TEMPERATURE	Tstg	°C	-65+ - 175

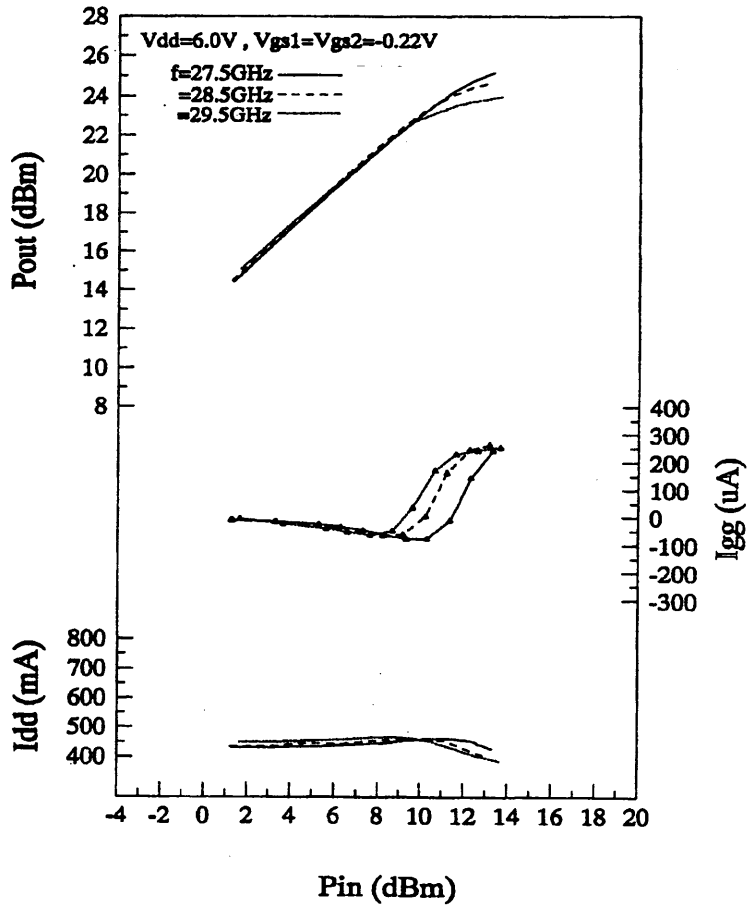
RF PERFORMANCE SPECIFICATIONS (Ta=25 °C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Operaing Frequency	f		GHz	27.5	–	29.5
Output Power at 1dB Gain Compression Point	P1dB	VDD=6V VGG ≈-0.3V IDD RFoff ≈500mA	dBm	23.0	25.0	–
Power Gain at 1dB Gain Compression Point	G1dB		dB	12.0	13.0	–
Drain Current	IDD		mA	–	510	700
VSWRin(small signal)	VSWRin			–	1.7	1.9
VSWRout(small signal)	VSWRout			–	1.7	1.9

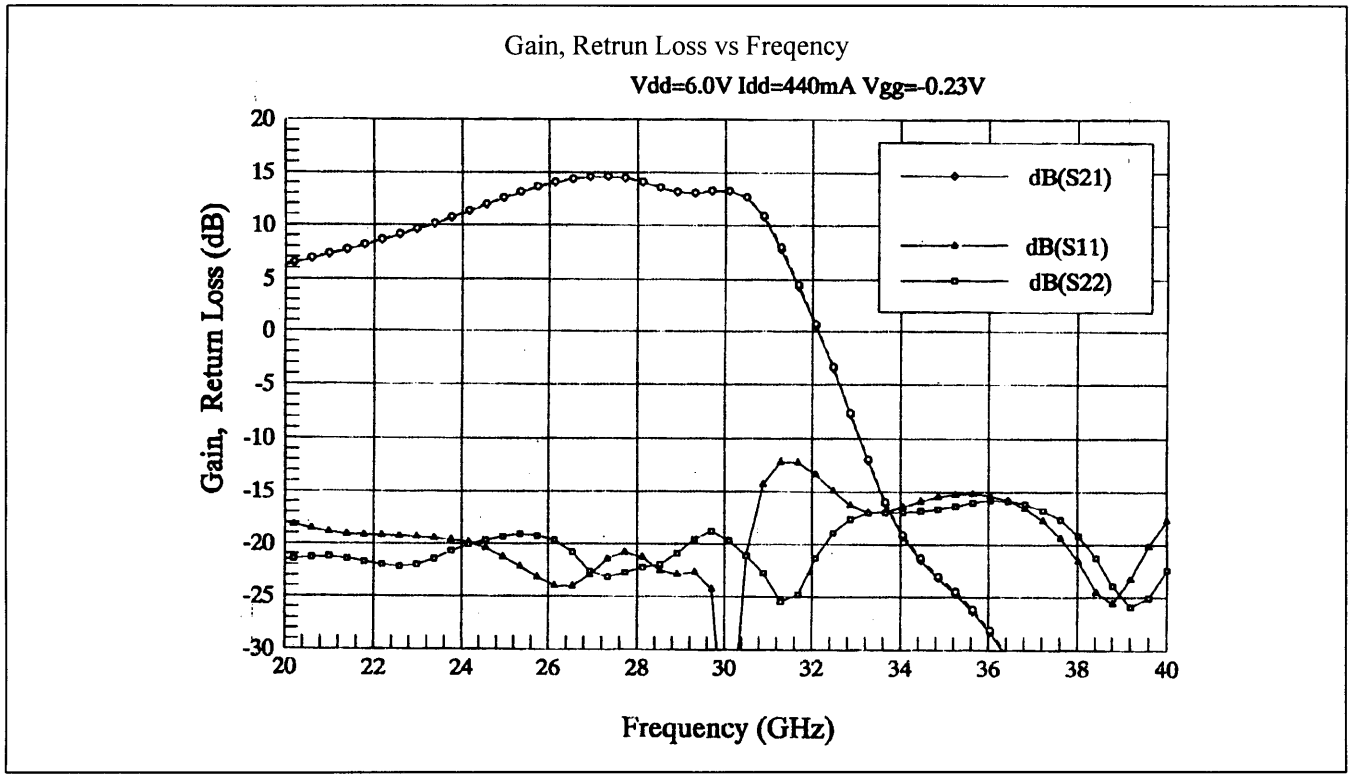
Assembly Precautions For Chip

The operations must be performed in a clean and dry environment. The chips must be kept in the same environment when they are not used. All test instruments, assembly machines, benches, tweezers and operators should be grounded to avoid damage due to electronic discharge. Careful attention must be paid in handling chips with tweezers because GaAs is more brittle than Si.

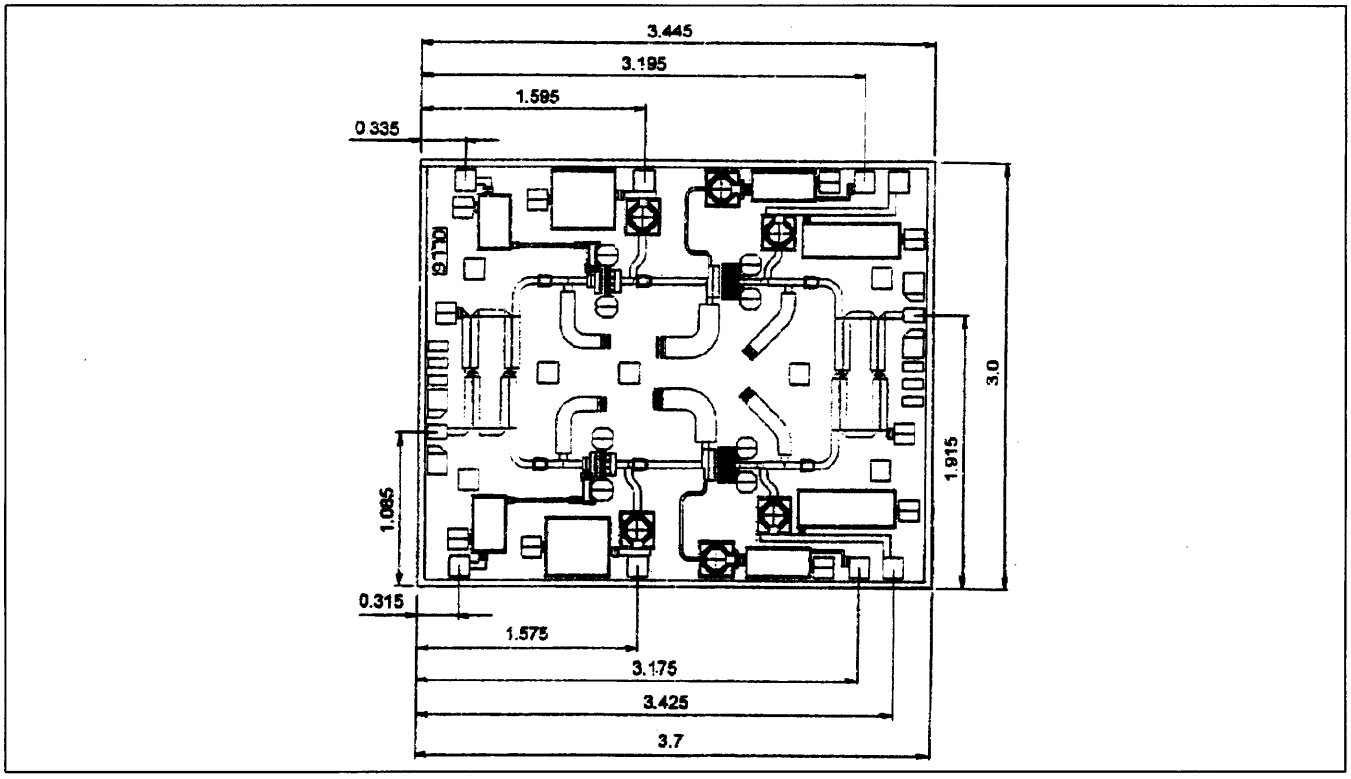
Typical RF Performance



Typical RF Performance(Cont'd)



Chip Outline



Recommended Bias Configuration