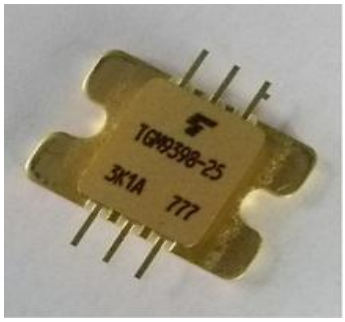
MICROWAVE POWER GaN AMPLIFIER

TGM9398-25

FEATURES

- **BROAD BAND 2-STAGE AMPLIFIER**
- **HIGH POWER**
  Pout= 44.0dBm at Pin= 23.0dBm
- **HIGH GAIN**
  GL= 24dB(Typ) at Pin= 7dBm
- **HERMETICALLY SEALED PACKAGE**



RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

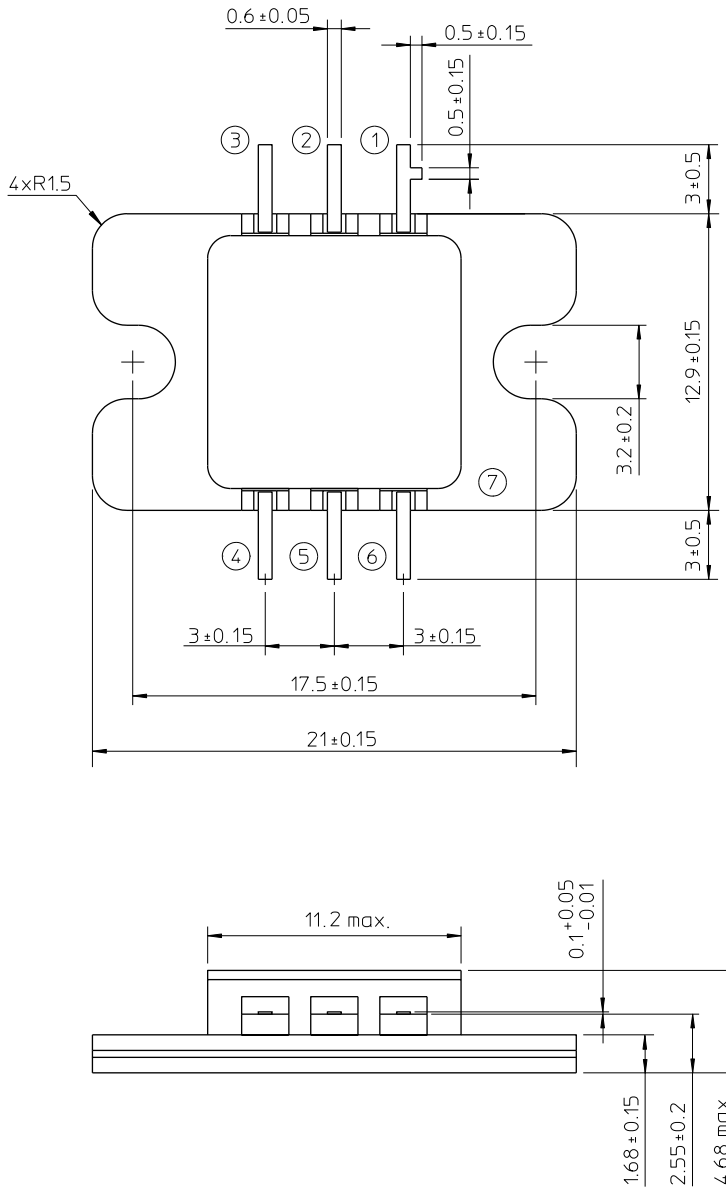
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power	Pout	VDD1,VDD2= 24V IDDset= 1.2A @Pin= 23.0dBm f = 9.3 to 9.8GHz	dBm	43.0	44.0	—
Drain Current	IDD*		A	—	2.6	3.5
Power Added Efficiency	ηadd		%	—	38	—
Linear Gain	GL	@Pin= 7dBm	dB	20	24	—

∗IDD=IDD1+ IDD2

ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain- Source Voltage	VDD1, VDD2	V	50
Gate- Source Voltage	VGG1,VGG2	V	-10
Drain Current	IDD1	A	1.25
	IDD2	A	7.5
Flange Temperature	Tf	°C	-40 to +90
Input Power	Pin	dBm	+27
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (7-BA42B)



Unit in mm

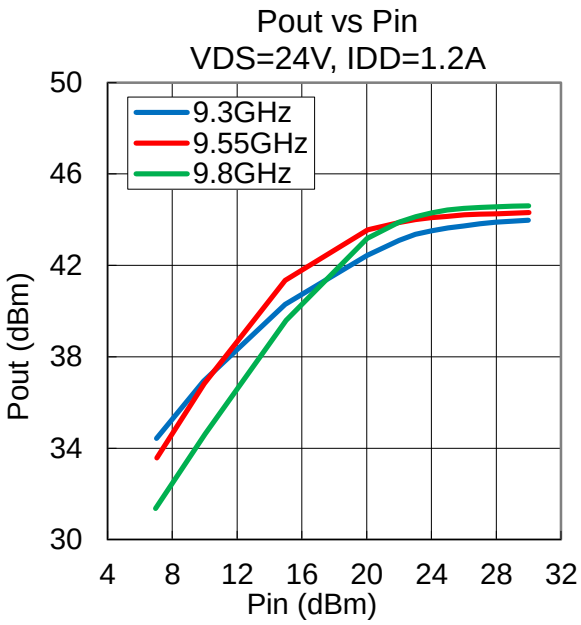
① VGG2
② VDD1
③ RF Input
④ VGG1
⑤ VDD2
⑥ RF Output
⑦ GND (package)

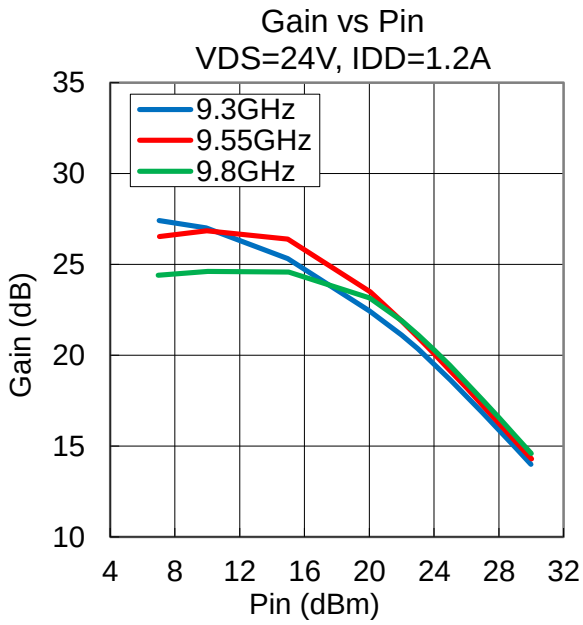
HANDLING PRECAUTIONS FOR PACKAGE MODEL

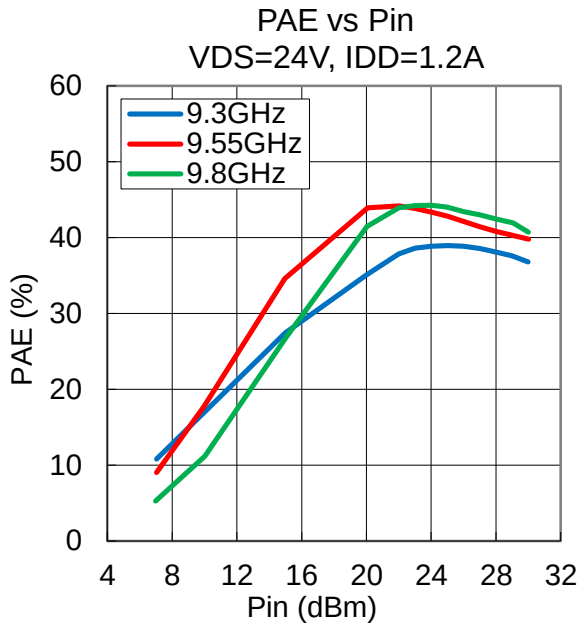
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds 350°C. Flanges of devices should be attached using screws and washers. Recommended torque is 0.18-0.20 N·m.

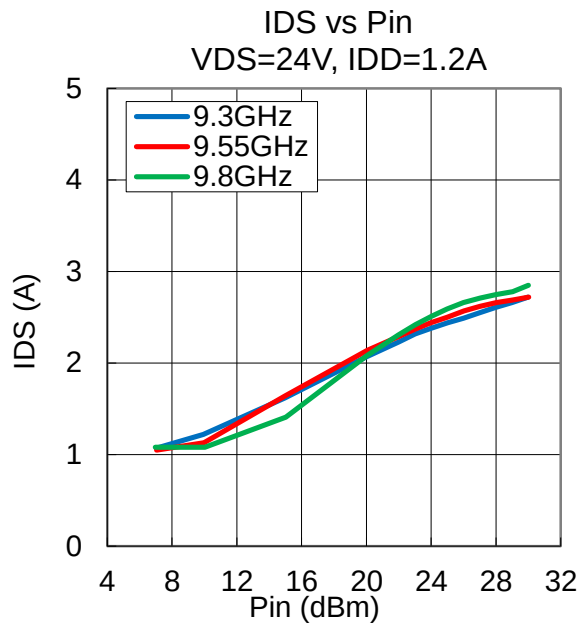
·Pout , Gain , PAE , IDS vs. Pin

VDS= 24 V, IDDset= 1.2 A, f= 9.3, 9.55, 9.8 GHz, Ta= +25 ℃



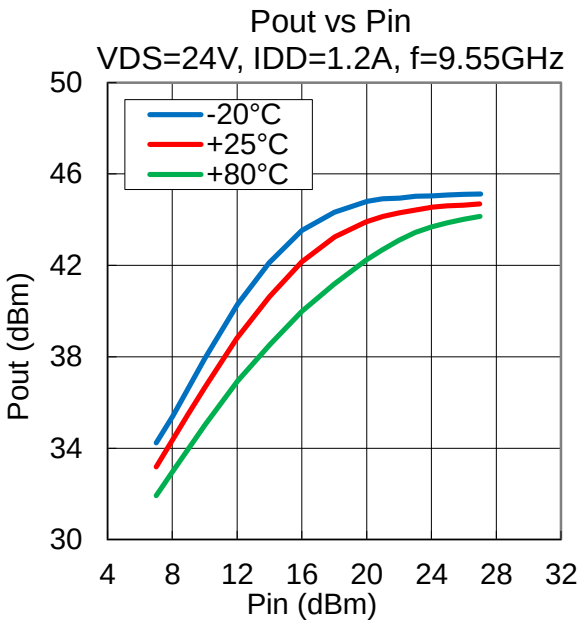


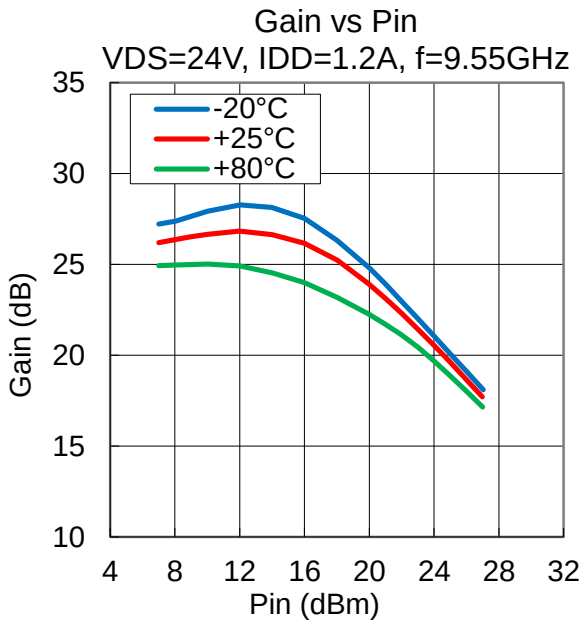


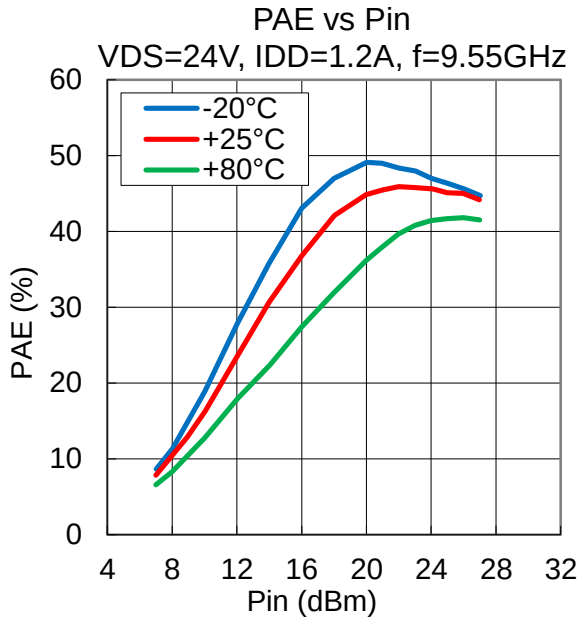


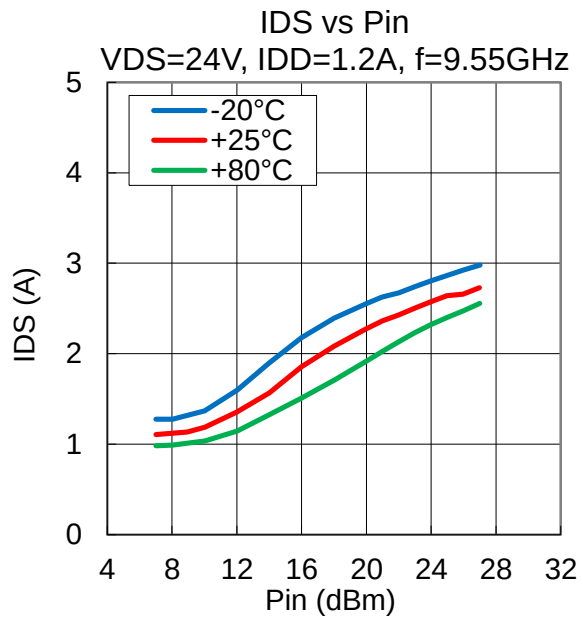
·Pout , Gain , PAE , IDS vs. Pin vs. Temperature

VDS= 24 V, IDDset= 1.2 A, f= 9.55 GHz, Ta= -20, +25, +80 ℃



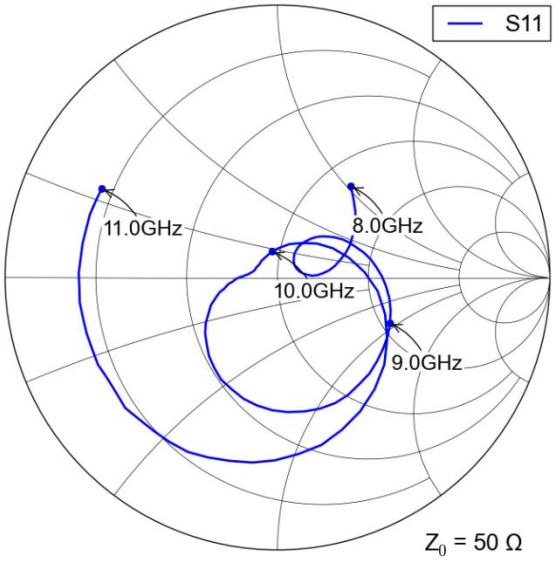


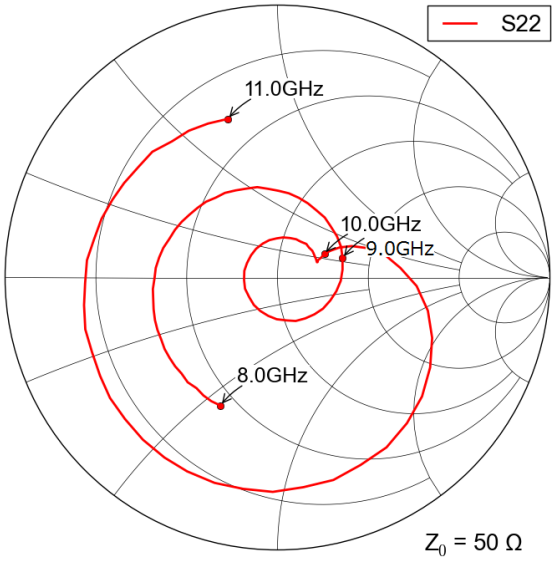


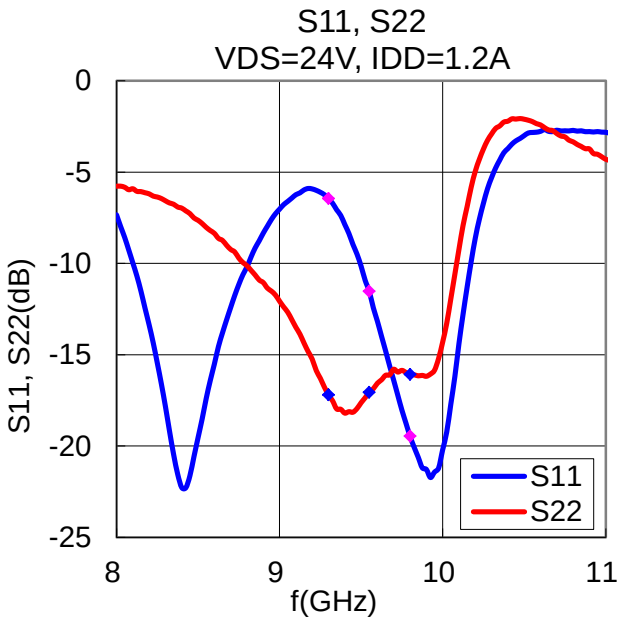


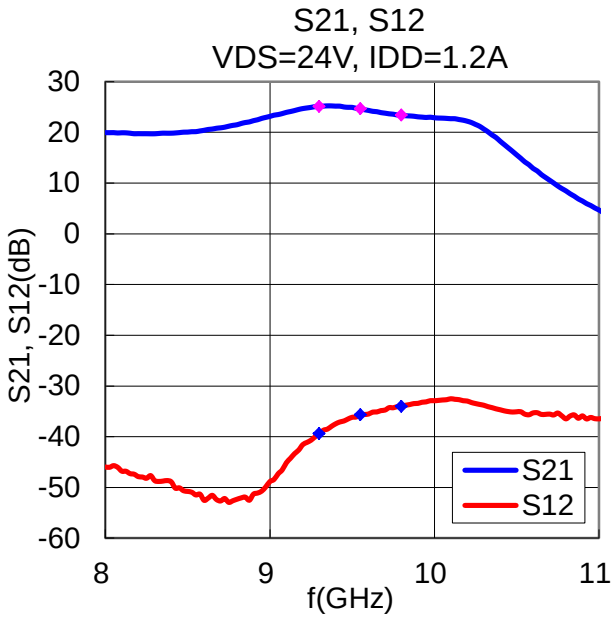
·S-Parameters

VDS= 24 V, IDDset= 1.2 A, f= 8.0 to 11.0 GHz, Ta= +25 ℃

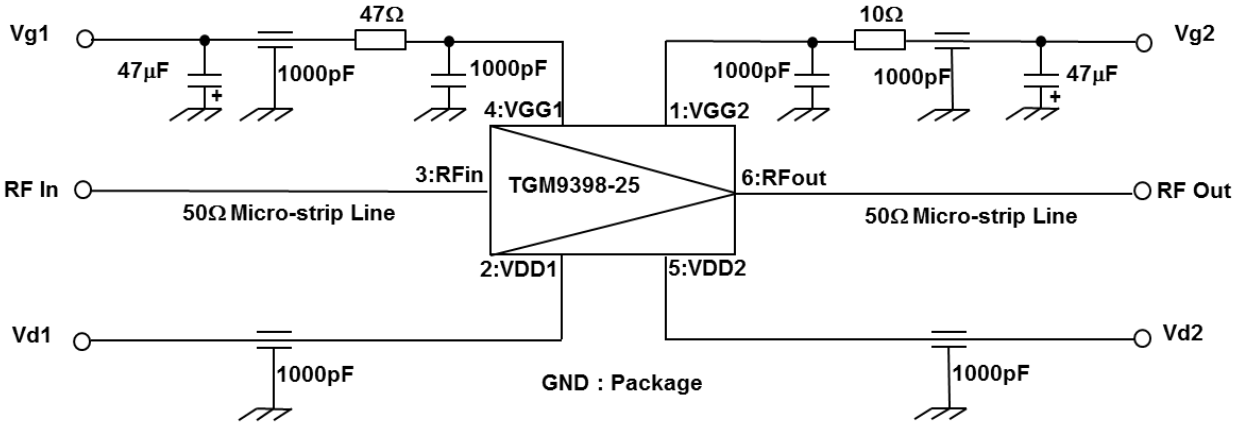








MEASUREMENT CIRCUIT SCHEMATIC



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