

FEATURES

- **INTERNALLY MATCHED HEMT**
- **HIGH POWER**
Pout= 50.0dBm at Pin= 42dBm
- **HIGH GAIN**
GL= 12.0dB at 9.0GHz to 9.8GHz
- **HERMETICALLY SEALED PACKAGE**
- **PULSE OPERATION**
Pulse width= 100µs, Duty cycle= 10%



RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power (pulsed)	Pout	VDS= 24V IDSset= 6A	dBm	49.0	50.0	—
Drain Current (pulsed)	IDS1	f= 9.0 to 9.8 GHz @Pin= 42dBm	A	—	10.0	13.0
Power Added Efficiency	ηadd	Pulse width=100µs Duty cycle=10%	%	—	40	—
Linear Gain	GL	@Pin= 35dBm	dB	—	12.0	—

Recommended Gate Resistance (Rg): 10 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 5V IDS= 10.0A	S	—	9	—
Pinch-off Voltage	VGSoff	VDS= 5V IDS= 46mA	V	-1	-4	-6
Gate-Source Breakdown Voltage	VGSO	IGS= -20mA	V	-10	—	—
Thermal Resistance	Rth(c-c)	Channel to Case(*)	°C/W	—	0.8	—

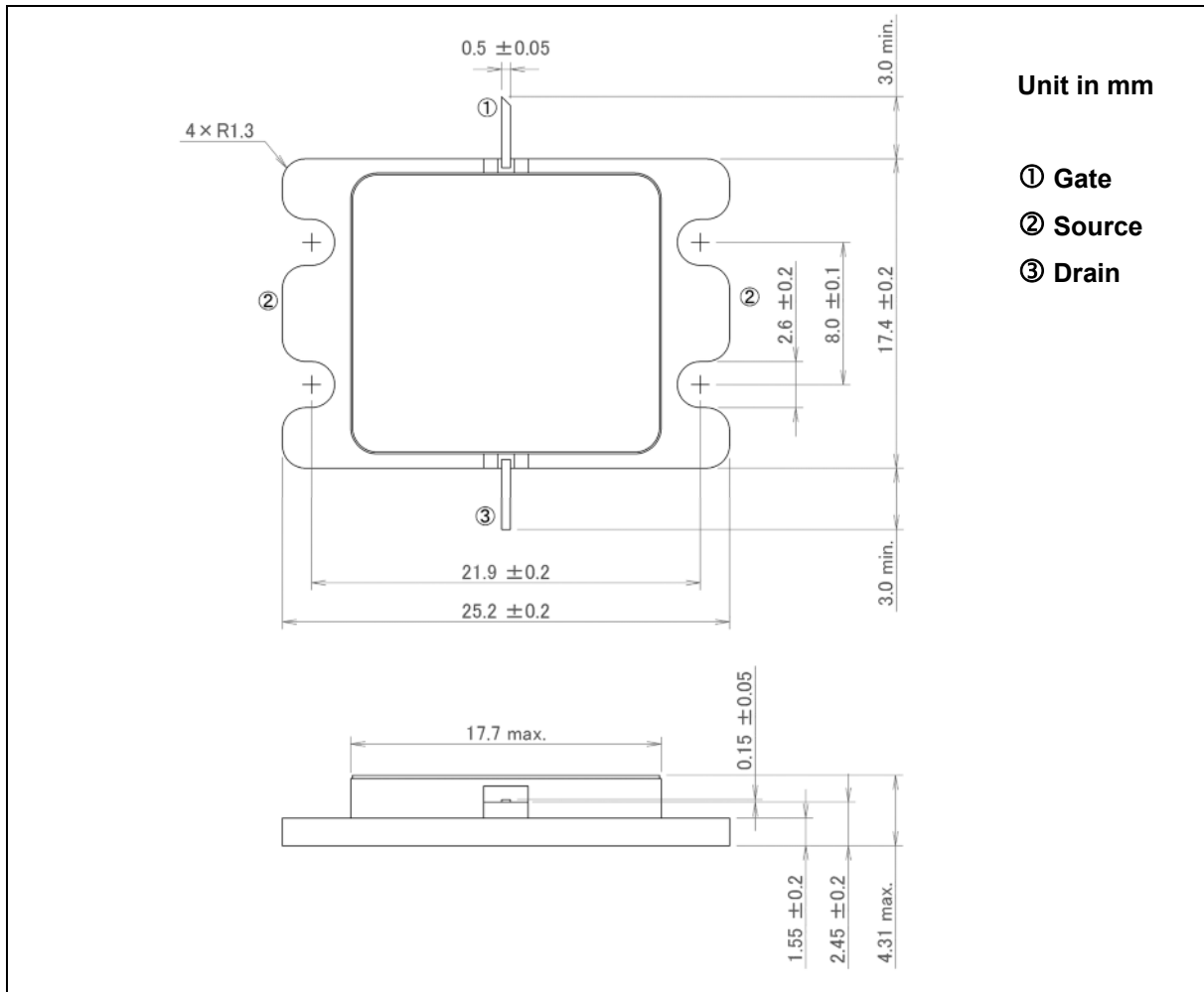
(*) measured at CW condition

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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	50
Gate-Source Voltage	VGS	V	-10
Drain Current	IDS	A	40
Total Power Dissipation (Tc= 25°C)	PT	W	280
Channel Temperature	Tch	°C	250
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (7-AA03B)



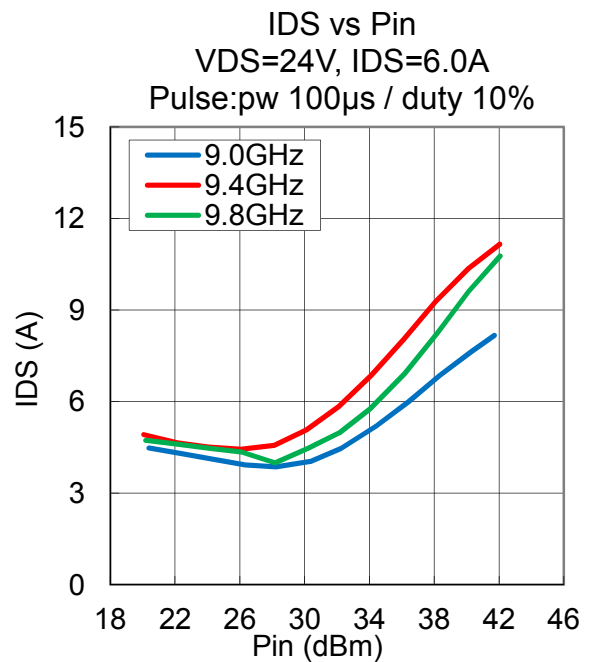
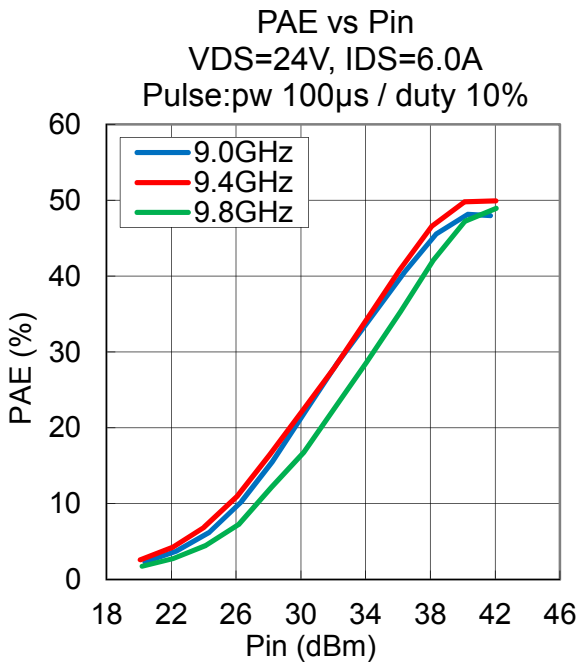
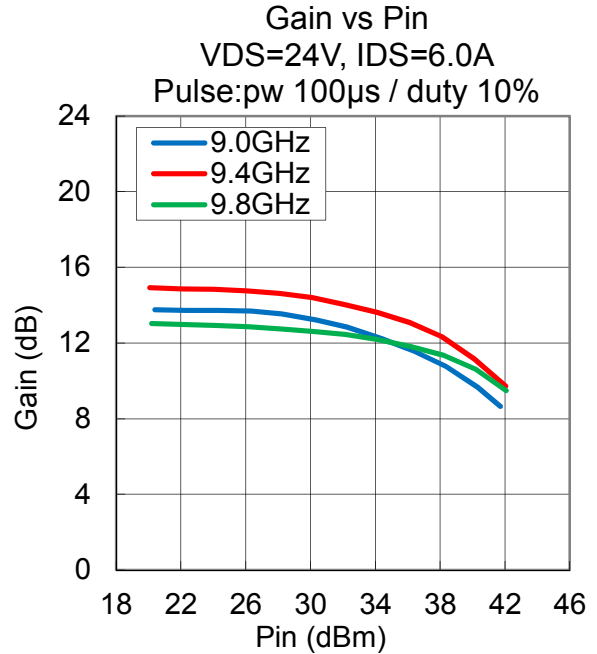
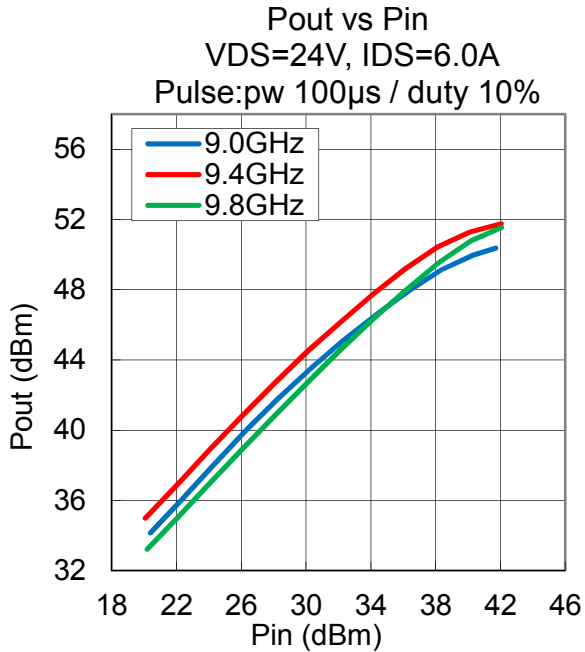
HANDLING PRECAUTIONS FOR PACKAGE MODEL

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

TYPICAL RF PERFORMANCE

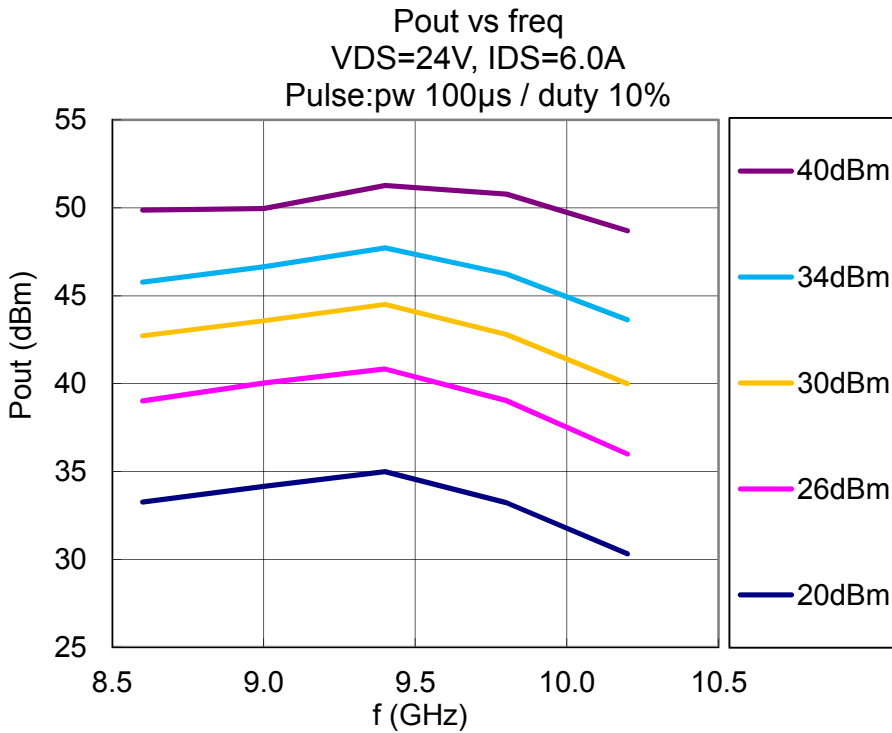
•Pout , Gain , PAE , IDS vs. Pin

VDS= 24 V, IDSset= 6.0 A, f= 9.0, 9.4, 9.8 GHz, Pulse width=100μs, Duty cycle=10%, Ta= +25 °C

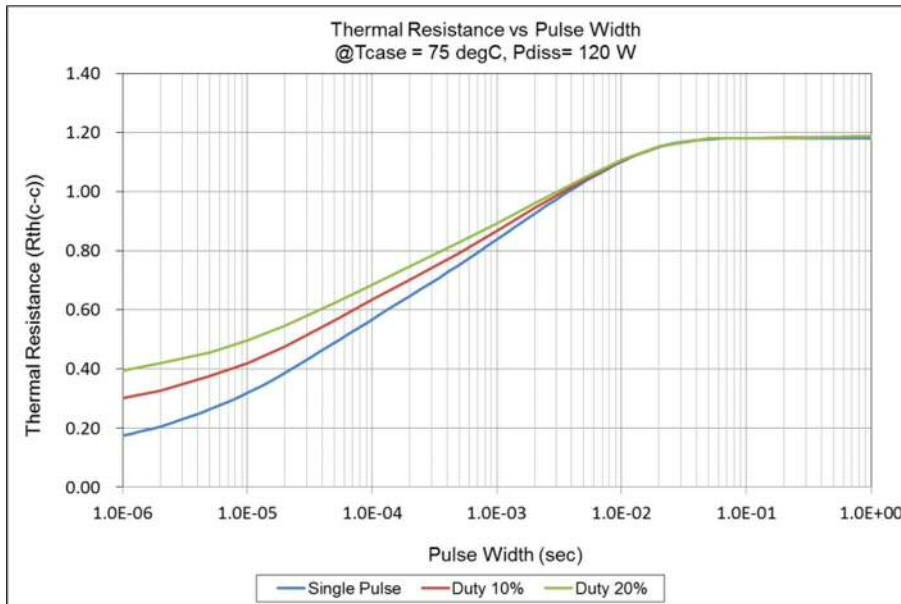


·Pout vs. Frequency

VDS= 24 V, IDSset= 6.0 A, f= 9.0, 9.4, 9.8 GHz, Pulse width=100μs, Duty cycle=10%, Ta= +25 °C

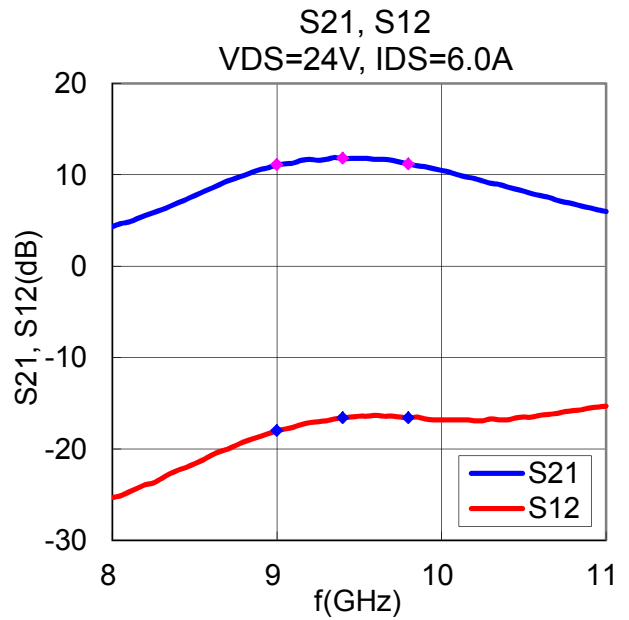
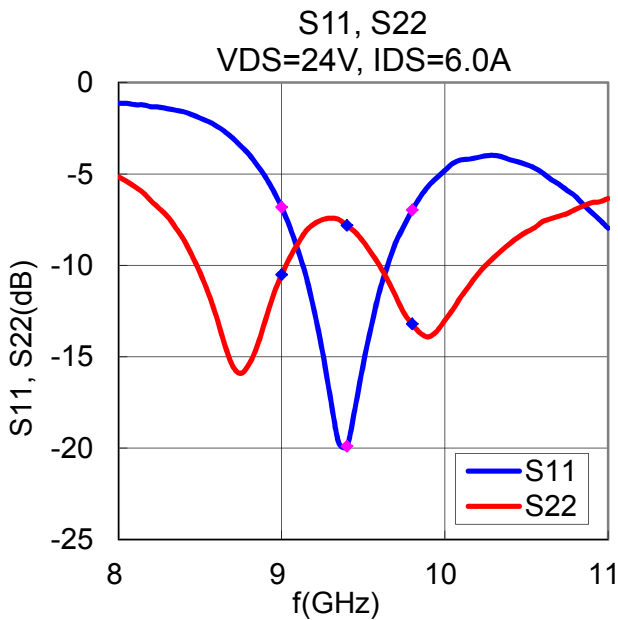
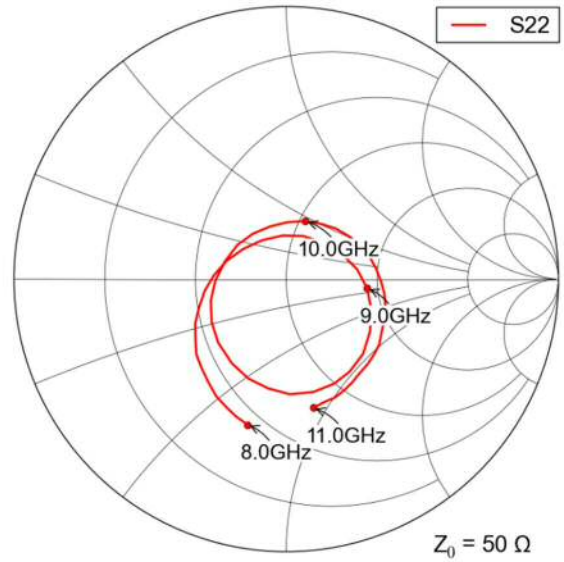
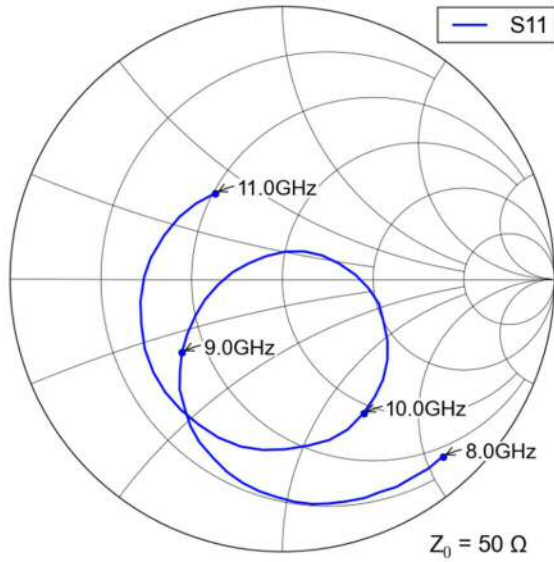


·Rth(c-c) vs. Pulse Width



-S-Parameters

VDS= 24 V, IDSset= 6.0 A, f= 8.0 to 11.0 GHz, Ta= +25 °C



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