

**FEATURES**

- **BROAD BAND INTERNALLY MATCHED FET**
- **HIGH POWER**  
P1dB= 48.0dBm at 4.4GHz to 5.0GHz
- **HIGH GAIN**  
G1dB= 9.5dB at 4.4GHz to 5.0GHz
- **LOW INTERMODULATION DISTORTION**  
IM3(MIN.) = -42dBc at Pout= 36.5dBm (Single Carrier Level)
- **HERMETICALLY SEALED PACKAGE**



**RF PERFORMANCE SPECIFICATIONS ( Ta= 25°C )**

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	VDS= 10V IDSset= 9.5A f= 4.4 to 5.0GHz	dBm	47.0	48.0	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	8.5	9.5	—
Drain Current	IDS1		A	—	13.2	15.0
Gain Flatness	ΔG		dB	—	—	±0.8
Power Added Efficiency	ηadd		%	—	42	—
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 36.5dBm, Δf= 5MHz (Single Carrier Level)	dBc	-42	-45	—
Drain Current	IDS2		A	—	—	11.8
Channel Temperature Rise	ΔTch	(VDS × IDS + Pin - P1dB) × Rth(c-c)	°C	—	—	100

**Recommended Gate Resistance(Rg): 28 Ω**

**ELECTRICAL CHARACTERISTICS ( Ta= 25°C )**

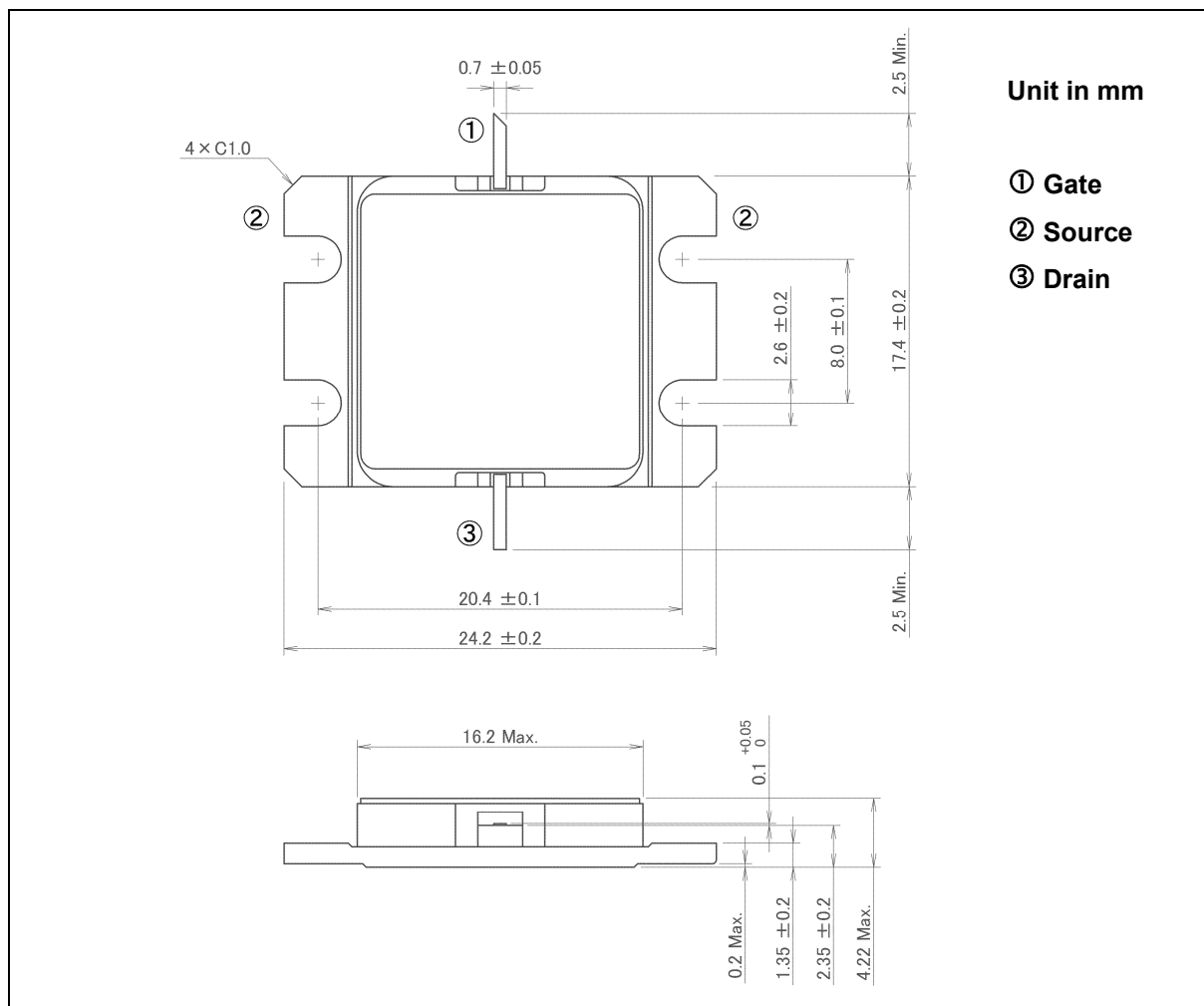
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 12.0A	S	—	20	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 200mA	V	-1.0	-1.8	-3.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	38	—
Gate-Source Breakdown Voltage	VGSO	IGS= -1.0mA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	0.6	0.8

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**ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)**

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	A	20
Total Power Dissipation (Tc= 25°C)	PT	W	187
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

**PACKAGE OUTLINE (2-16G1B)**



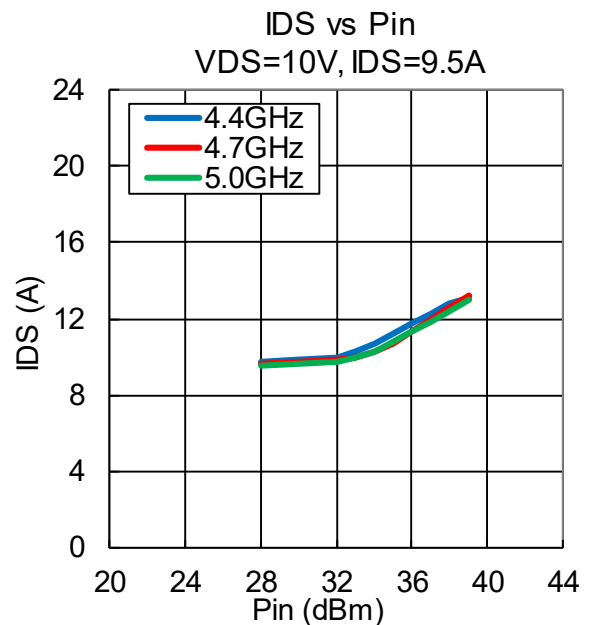
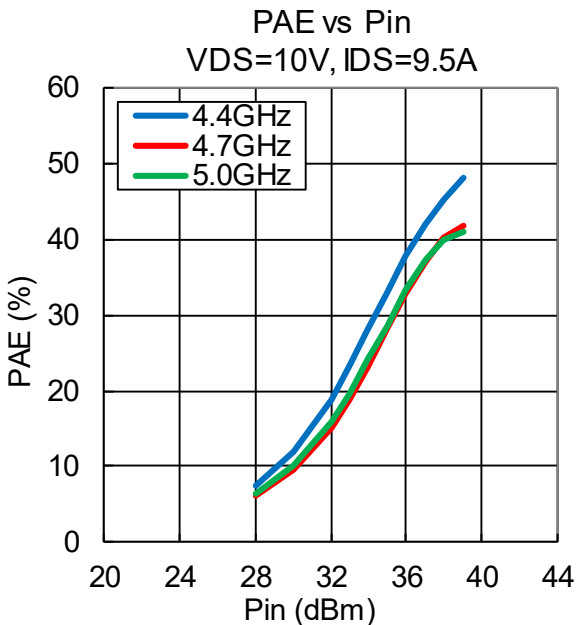
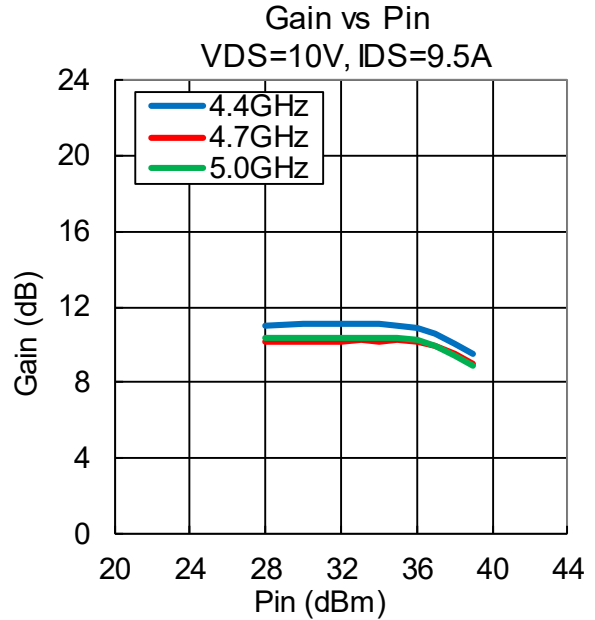
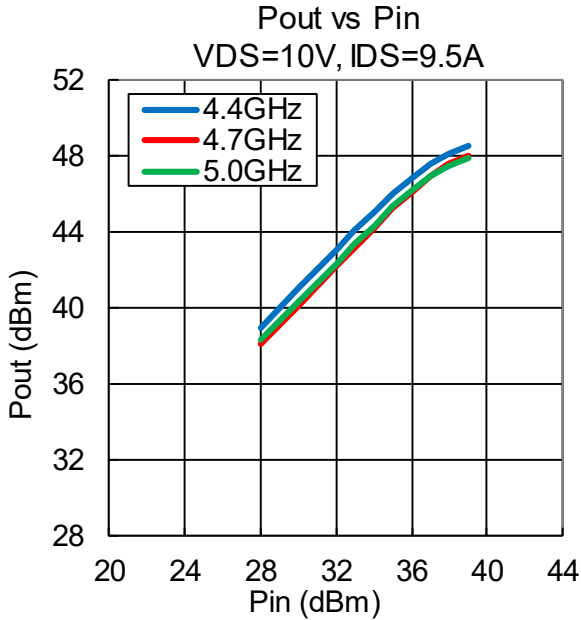
**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

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**

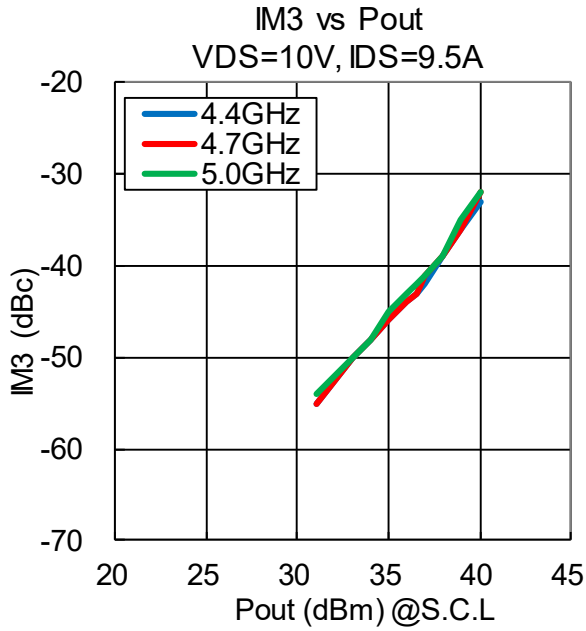
•Pout , Gain , PAE , IDS vs. Pin

VDS= 10 V, IDSset= 9.5 A, f= 4.4, 4.7, 5.0 GHz, Ta= +25 °C



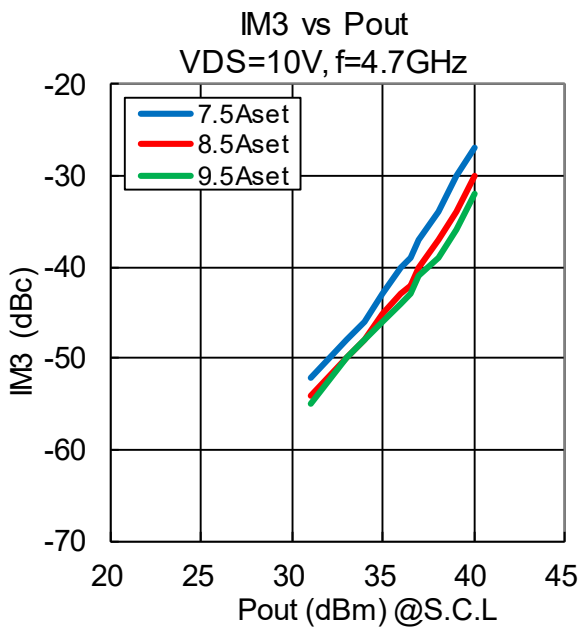
**·IM3 vs. Pout**

VDS= 10 V, IDSset= 9.5 A, f= 4.4, 4.7, 5.0 GHz, Δf= 5 MHz , Ta= +25 °C



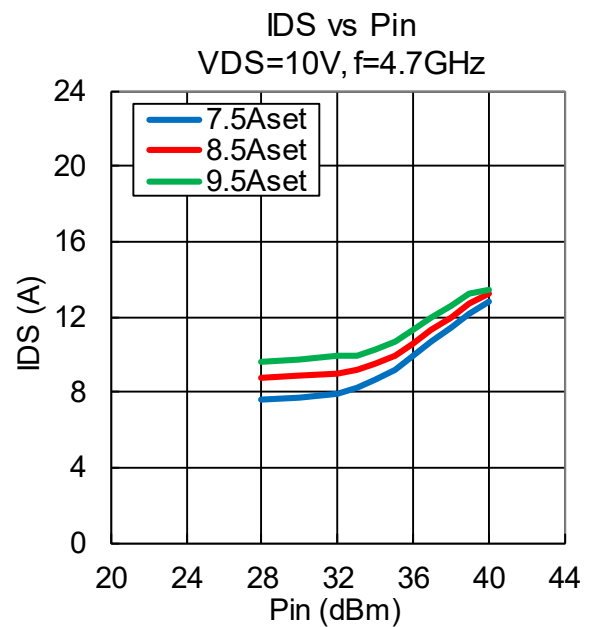
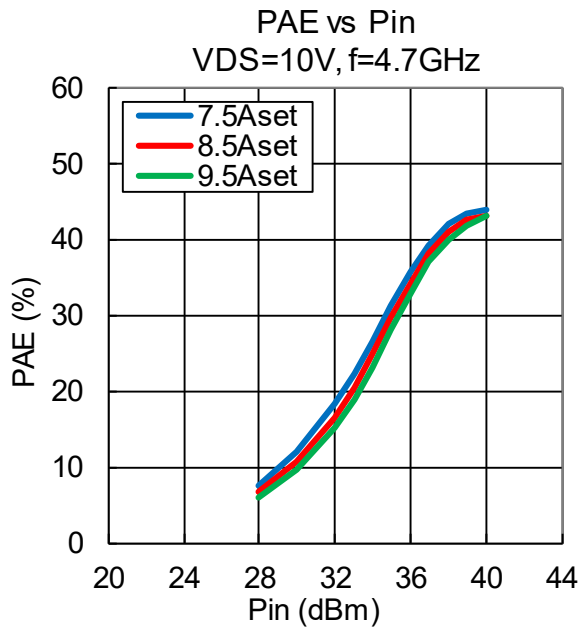
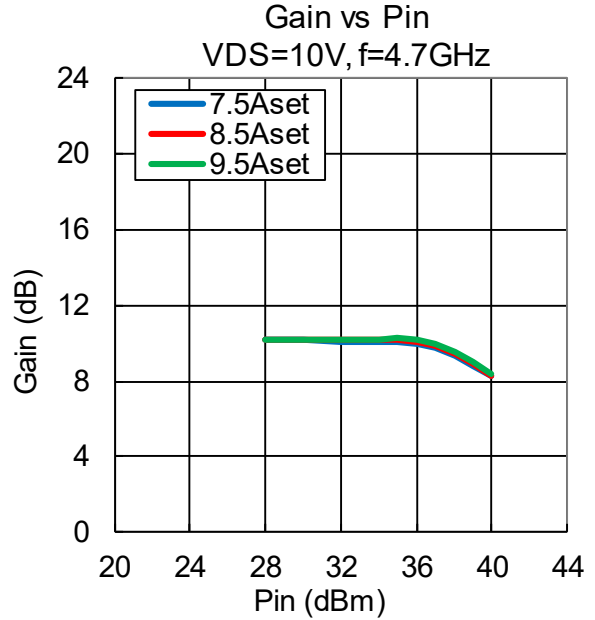
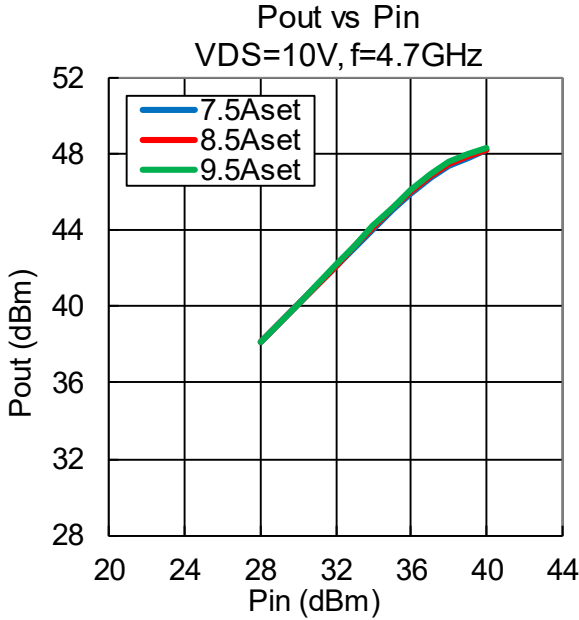
**·IM3 vs. Pout vs. IDSset**

VDS= 10 V, f= 4.7 GHz, IDSset= 7.5A, 8.5A, 9.5A, Δf= 5 MHz , Ta= +25 °C



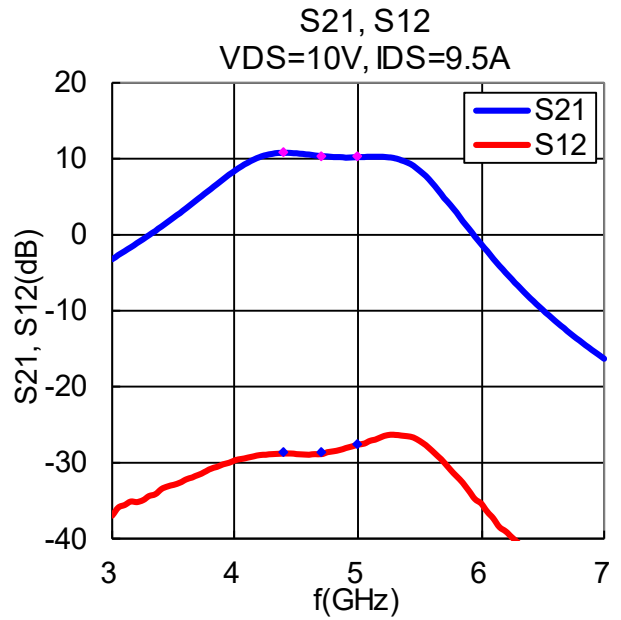
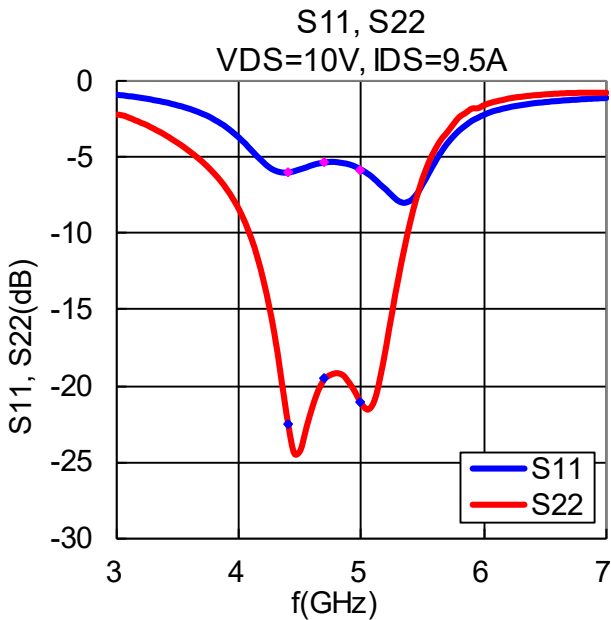
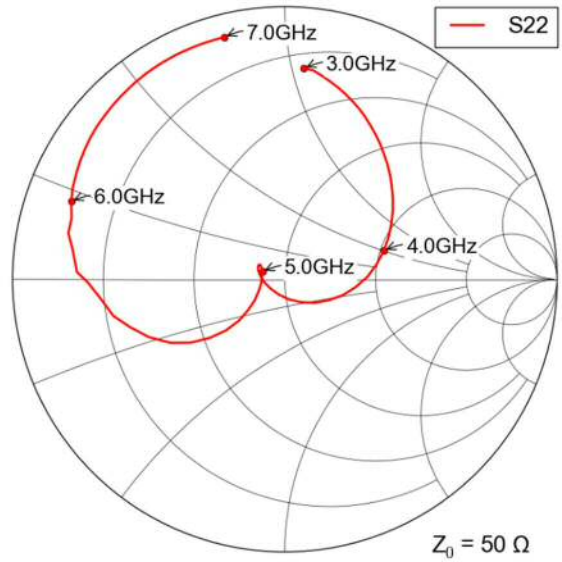
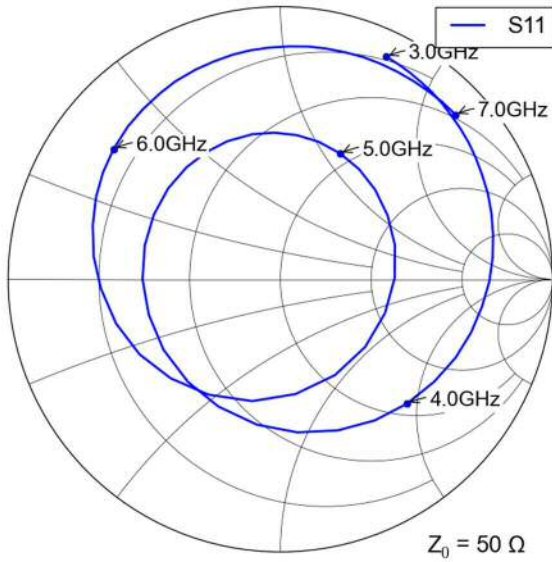
•Pout , Gain , PAE , IDS vs. Pin vs. IDSset

VDS= 10 V, IDSset= 7.5, 8.5, 9.5 A, f= 6.15 GHz, Ta= +25 °C



**-S-Parameters**

VDS= 10 V, IDSset= 9.5 A, f= 3.0 to 7.0 GHz, Ta= +25 °C



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