

### FEATURES

- BROAD BAND INTERNALLY MATCHED HEMT
- HIGH POWER  
Pout= 51.0dBm at Pin= 43.0dBm
- HIGH GAIN  
GL= 13.5dB at Pin= 20.0dBm
- LOW INTERMODULATION DISTORTION  
IM3(Min.)= -25dBc at Pout= 44.0dBm  
Single Carrier Level
- HERMETICALLY SEALED PACKAGE



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

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power	Pout	VDS= 24V IDSset= 4.0A f = 5.9 to 6.4GHz @Pin= 43dBm	dBm	50.0	51.0	—
Drain Current	IDS1		A	—	10.0	12.0
Power Added Efficiency	$\eta_{add}$		%	—	44	—
Linear Gain	GL	@Pin= 20dBm	dB	12.5	13.5	—
Gain flatness	$\Delta G$		dB	—	—	$\pm 0.8$
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 44.0dBm, $\Delta f$ = 5MHz (Single Carrier Level)	dBc	-25	-30	—
Drain Current	IDS2		A	—	—	8.0
Channel Temperature Rise	$\Delta T_{ch}$	(VDS X IDS + Pin – Pout) X Rth(c-c)	°C	—	120	140

Recommended Gate Resistance(Rg): 28  $\Omega$

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

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 5V IDS= 10.0A	S	—	8.0	—
Pinch-off Voltage	VGSoff	VDS= 5V IDS= 46mA	V	-2.6	-4.0	-6.0
Saturated Drain Current	IDSS	VDS= 5V VGS= 0V	A	—	28	—
Gate-Source Breakdown Voltage	VGSO	IGS= -20mA	V	-10	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	0.6	0.8

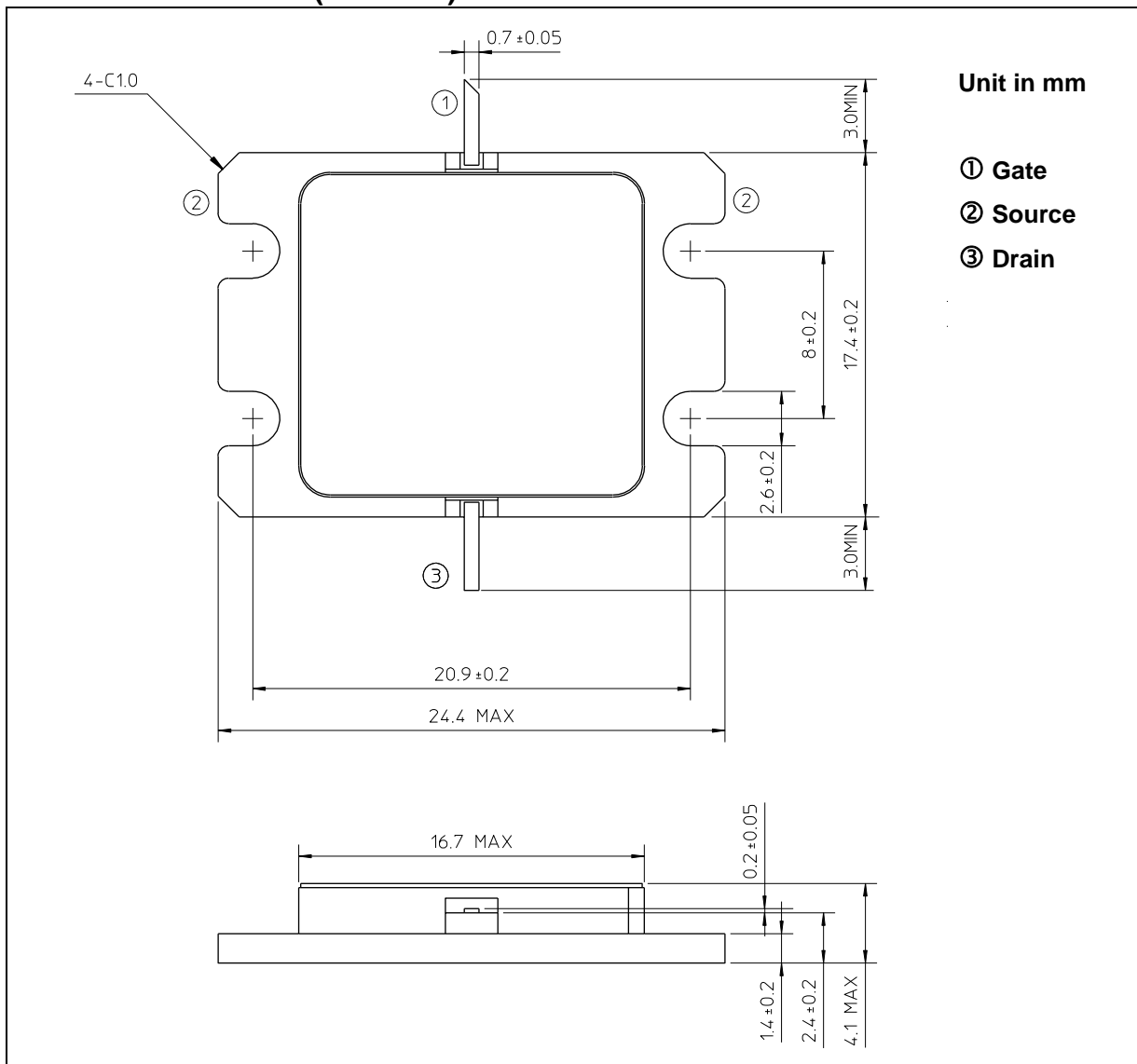
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incorporating this product.

**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	18
Total Power Dissipation (Tc= 25°C)	PT	W	280
Channel Temperature	Tch	°C	250
Storage Temperature	Tstg	°C	-65 to +175

**PACKAGE OUTLINE (7-AA06A)**



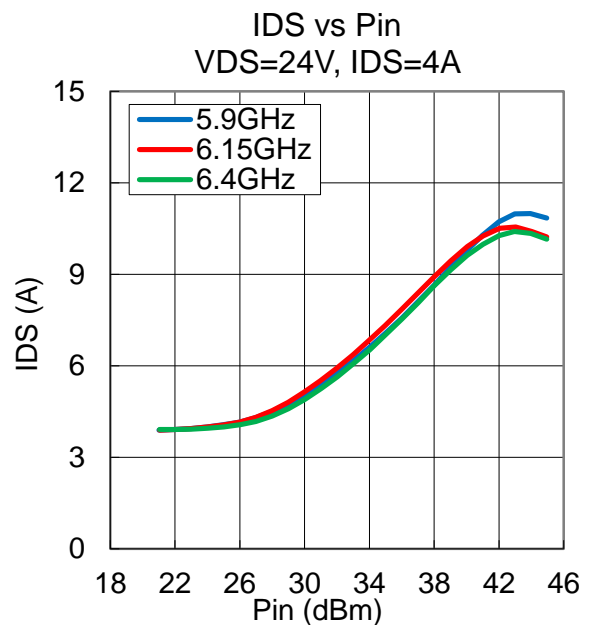
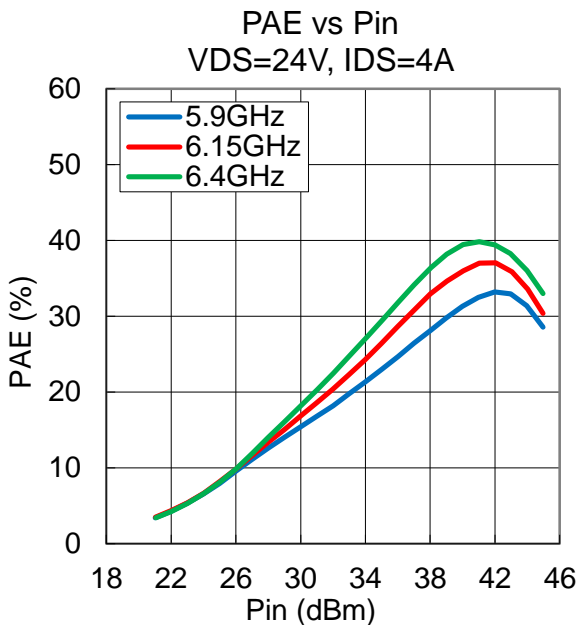
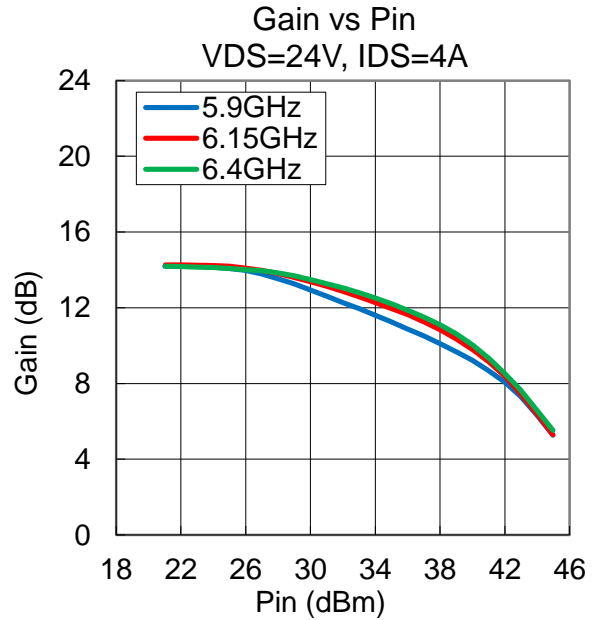
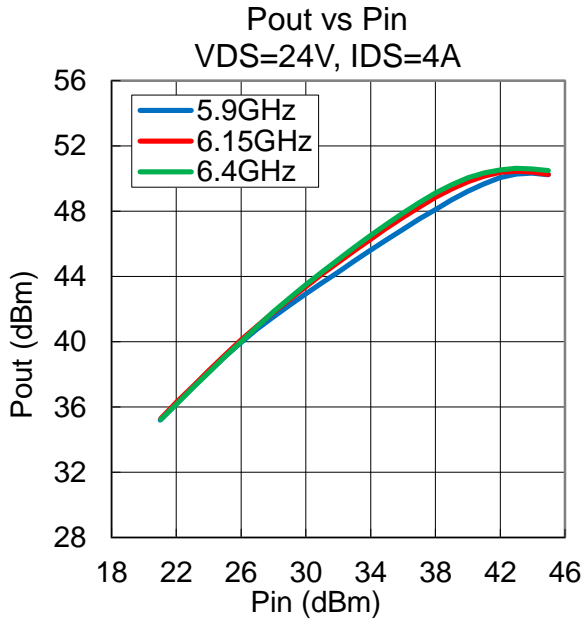
**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

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

350°C.

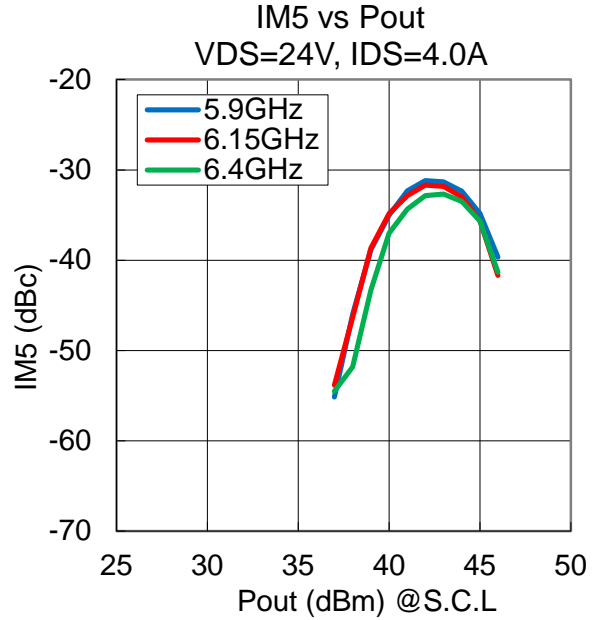
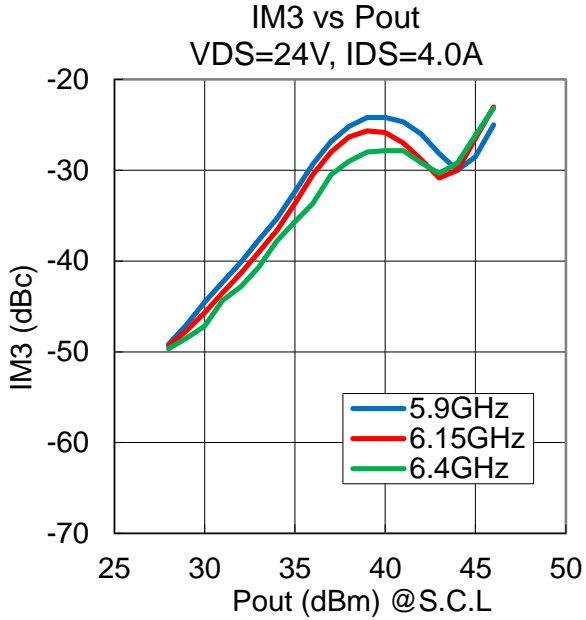
**·Pout , Gain , PAE , IDS vs. Pin**

VDS= 24V, IDSset= 4.0A, f= 5.9, 6.15, 6.4GHz, Ta= +25 °C

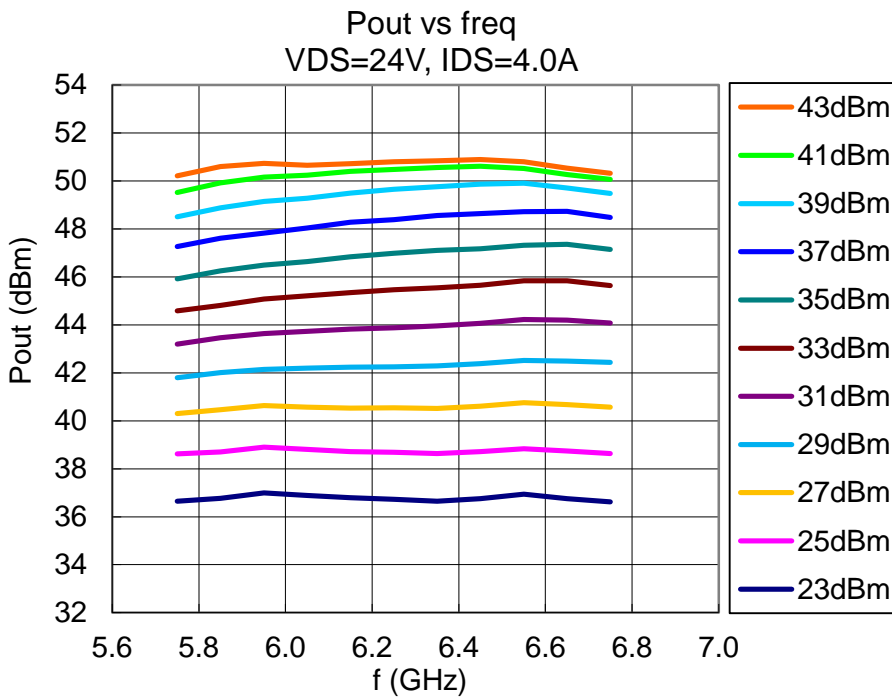


**•IM3, IM5 vs. Pout**

VDS=24V, IDSset=4.0A, f=5.9, 6.15, 6.4GHz, Δf=5MHz, Ta=+25°C

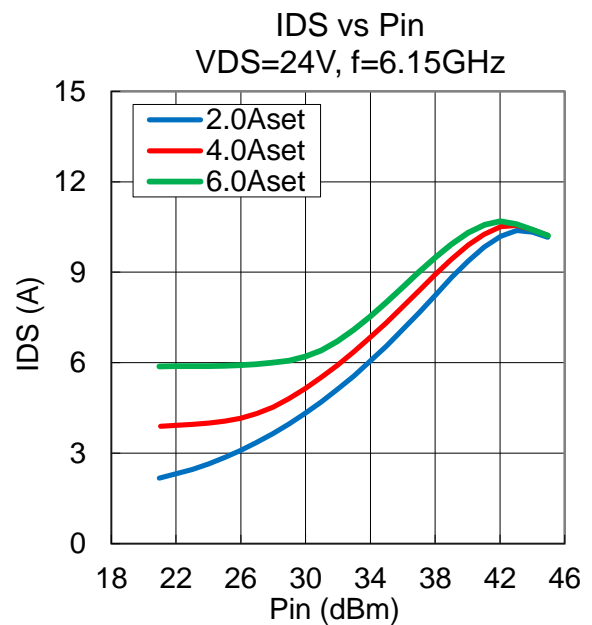
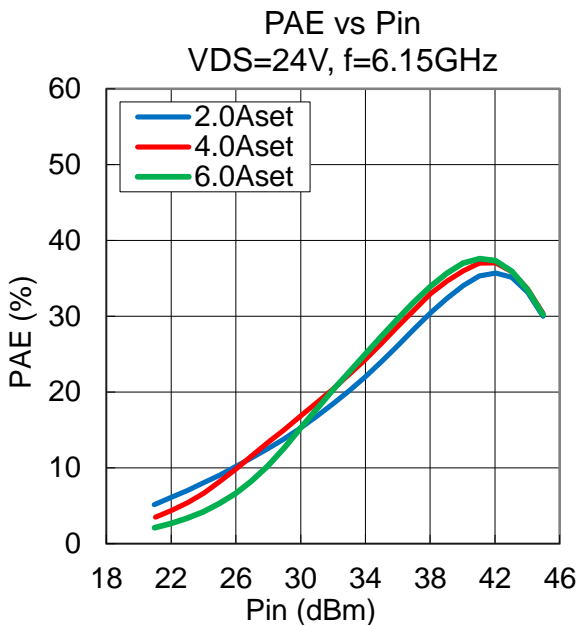
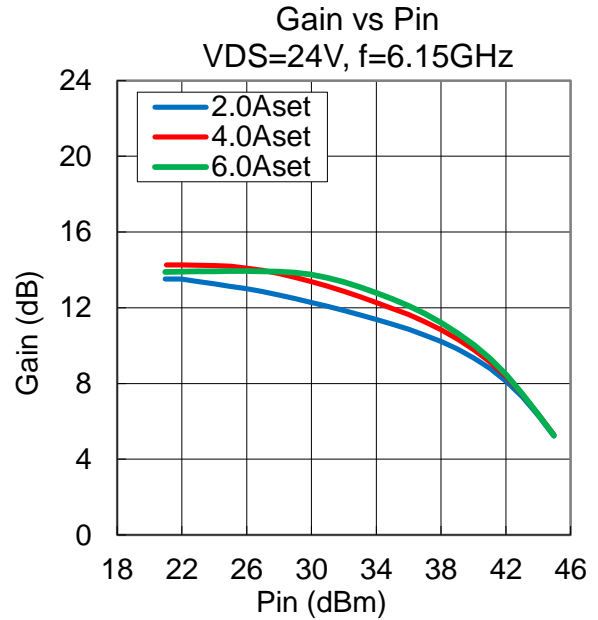
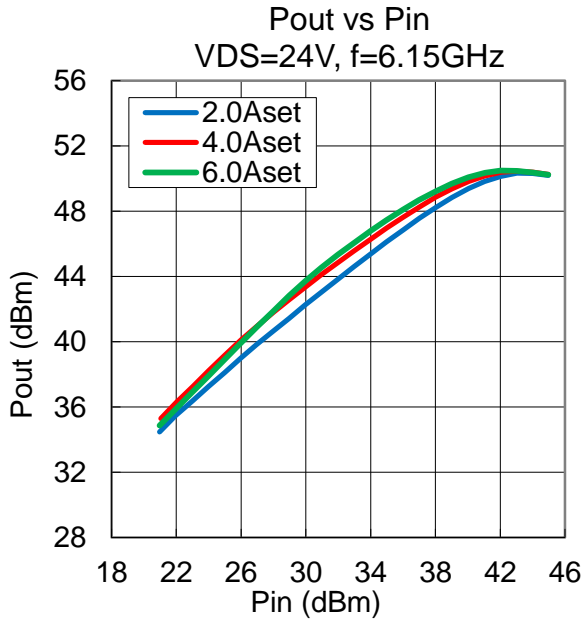


**•Pout vs. Frequency**



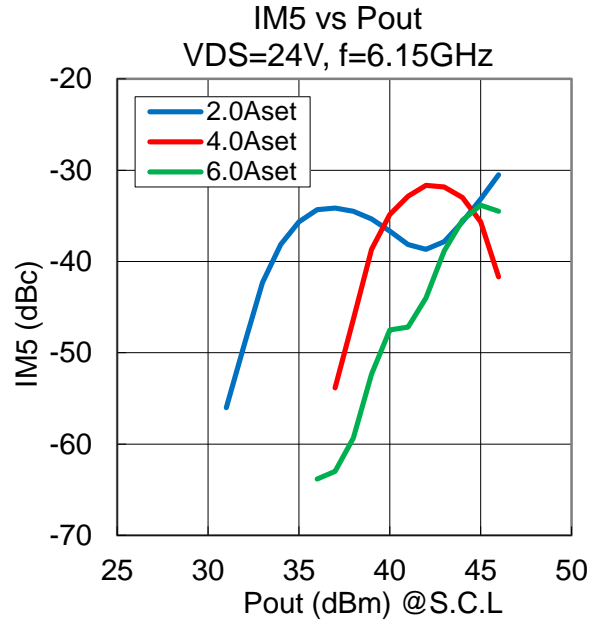
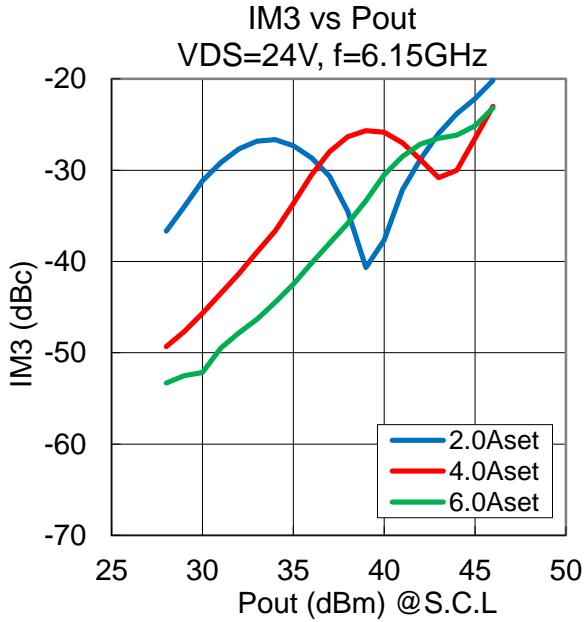
**-Pout , Gain , PAE , IDS vs. Pin vs. IDSset**

VDS=24V IDSset= 2.0 4.0 6.0A f=6.15GHz Ta= +25 °C



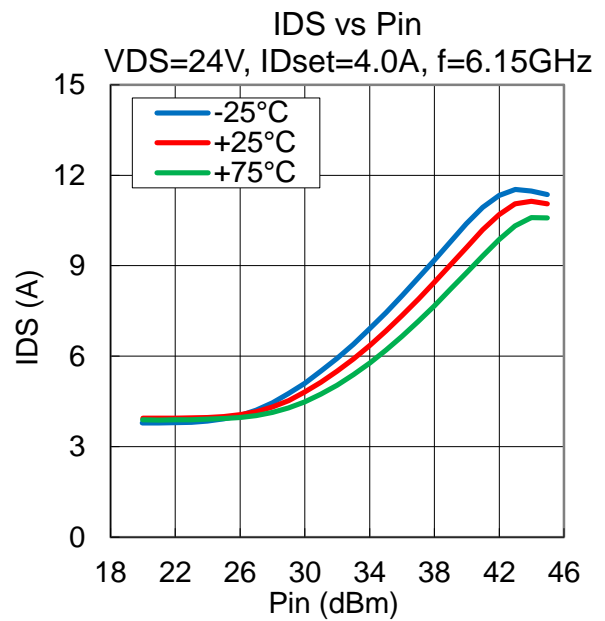
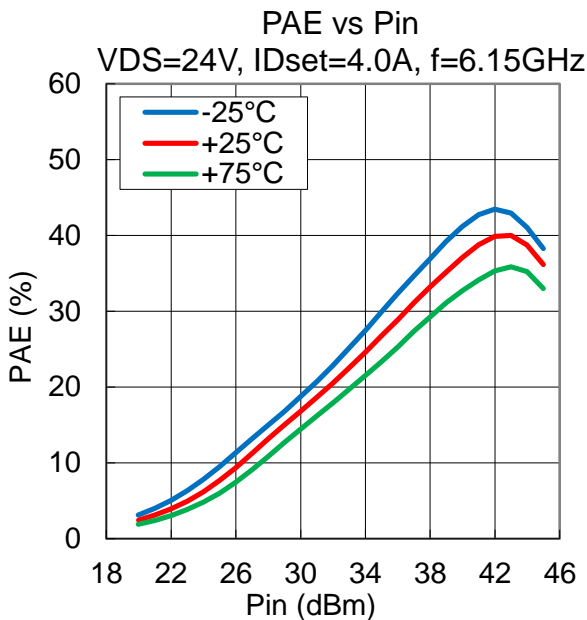
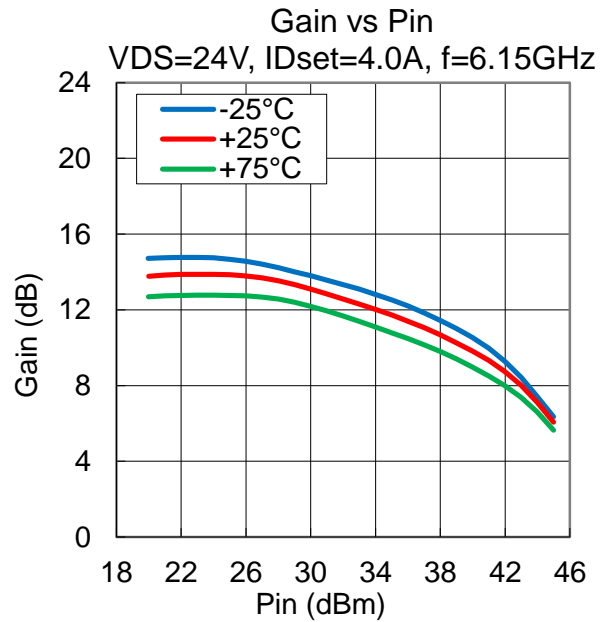
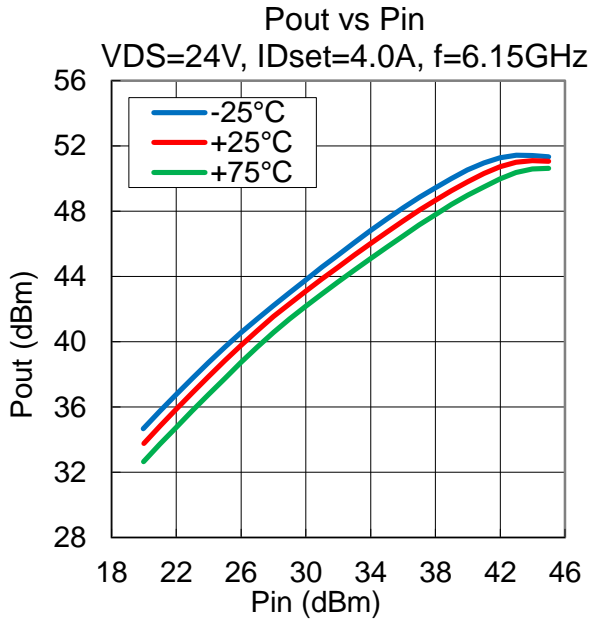
**·IM3, IM5 vs. Pout vs. IDSset**

VDS= 24 V IDSset= 2.0 4.0 6.0 A f= 6.15 GHz Af= 5 MHz Ta= +25 °C



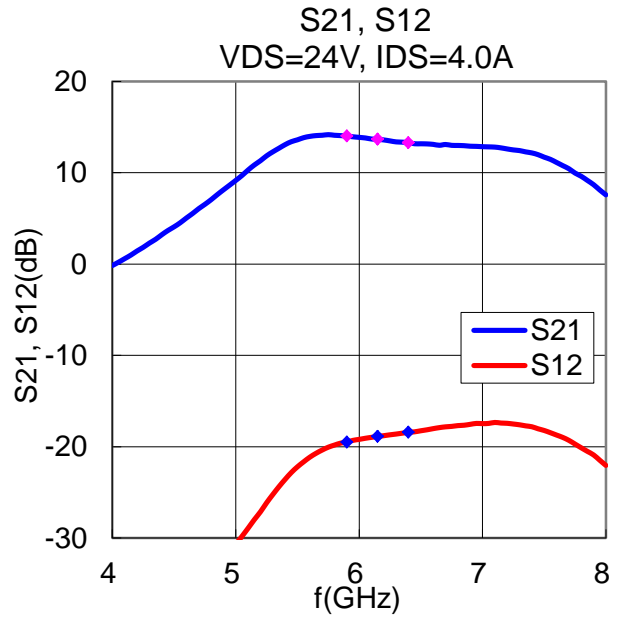
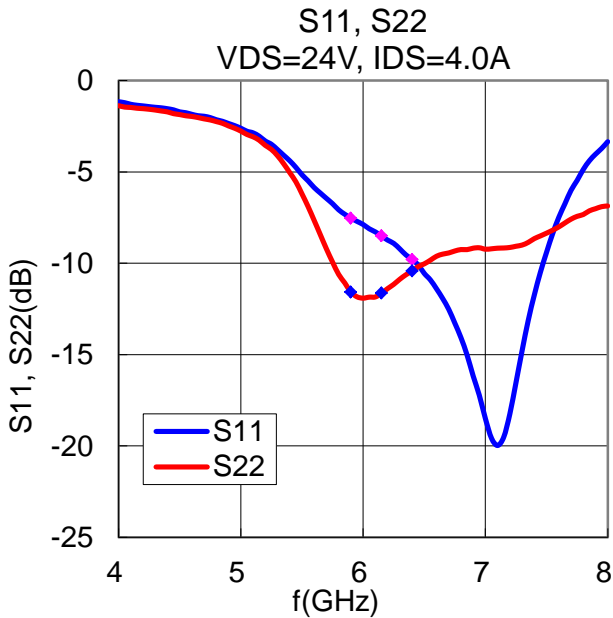
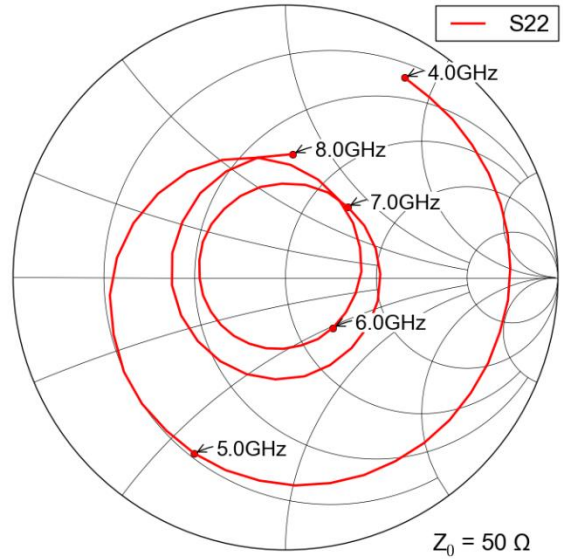
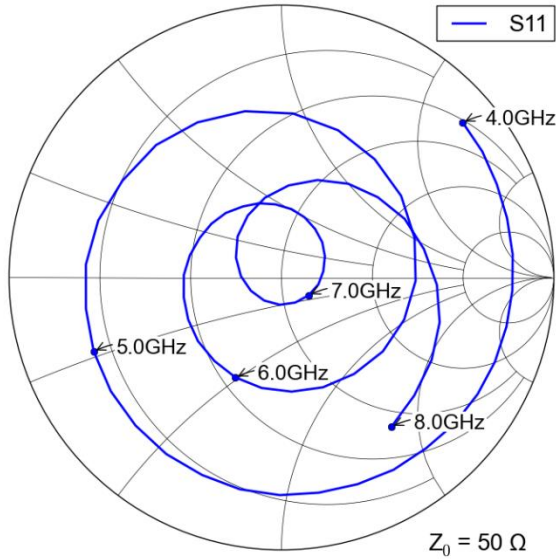
**-Pout , Gain , PAE , IDS vs. Pin vs. Temperature**

VDS= 24 V, IDSet= 4.0 A, f= 6.15 GHz, Ta= -25, +25, +75 °C



**-S-Parameters**

VDS= 24 V, IDSset= 4.0 A, f= 4.0 to 8.0 GHz, Ta= +25 °C





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