

**FEATURES**

· **BROAD BAND INTERNALLY MATCHED HEMT**

· **HIGH POWER**

Pout= 51.0dBm at Pin= 44dBm

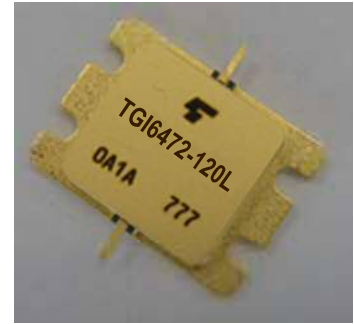
· **HIGH GAIN**

GL= 11.5dB at Pin= 20dBm

· **LOW INTERMODULATION DISTORTION**

IM3(MIN.) = -25dBc at Pout= 44dBm (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= 6.4 to 7.2GHz @Pin= 44dBm	dBm	50.0	51.0	—
Drain Current	IDS1		A	—	11.0	12.0
Power Added Efficiency	$\eta_{add}$		%	—	38	—
Linear Gain	GL	@Pin= 20dBm	dB	10.5	11.5	—
Gain flatness	$\Delta G$		dB	—	—	$\pm 0.8$
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 44dBm, $\Delta f$ = 5MHz (Single Carrier Level)	dBc	-25	-28	—
Drain Current	IDS2		A	—	—	8.0
Channel Temperature Rise	$\Delta T_{ch}$	(VDS $\times$ IDS + Pin – Pout) $\times$ Rth(c-c)	°C	—	120	140

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

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

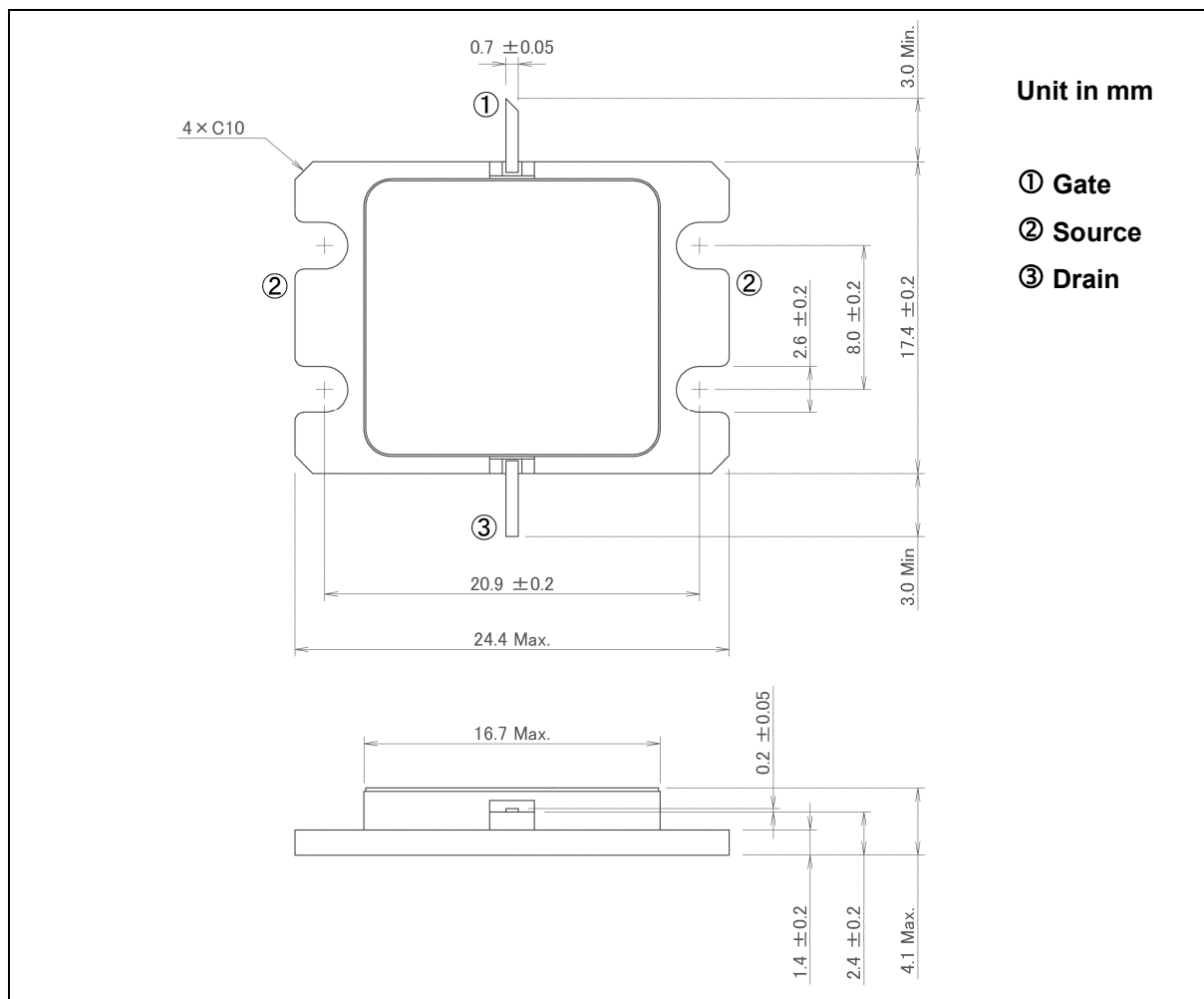
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 5V IDS= 10.0A	S	—	8.0	—
Pinch-off Voltage	VGSoff	VDS= 5V IDS= 46mA	V	-2.0	-4.0	-6.0
Saturated Drain Current	IDSS	VDS= 5V VGS= 0V	A	—	28	—
Gate-Source Breakdown Voltage	VGSO	IGS= -20mA	V	-10	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	0.6	0.8

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**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)**



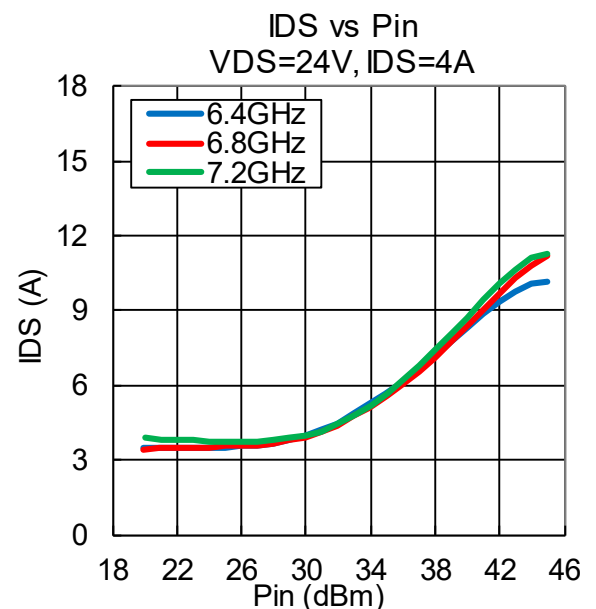
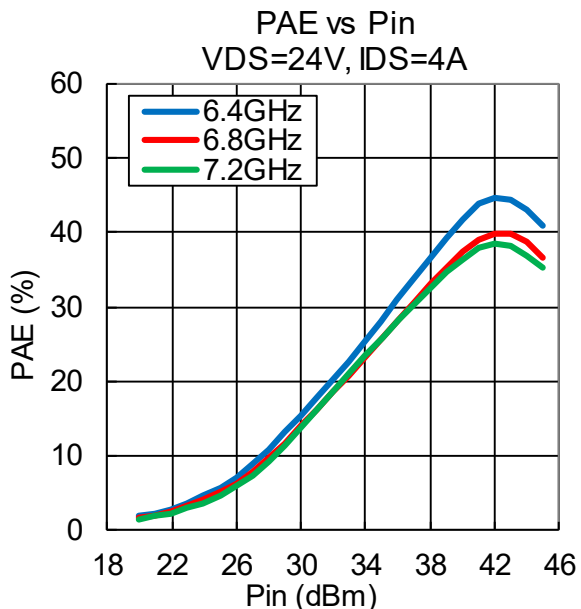
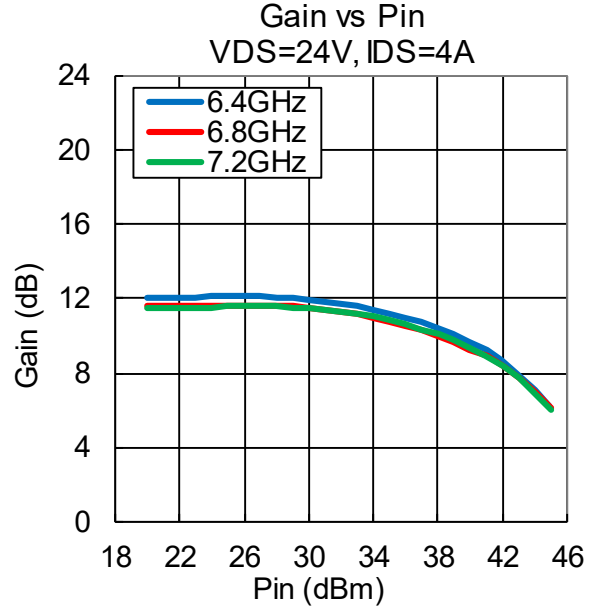
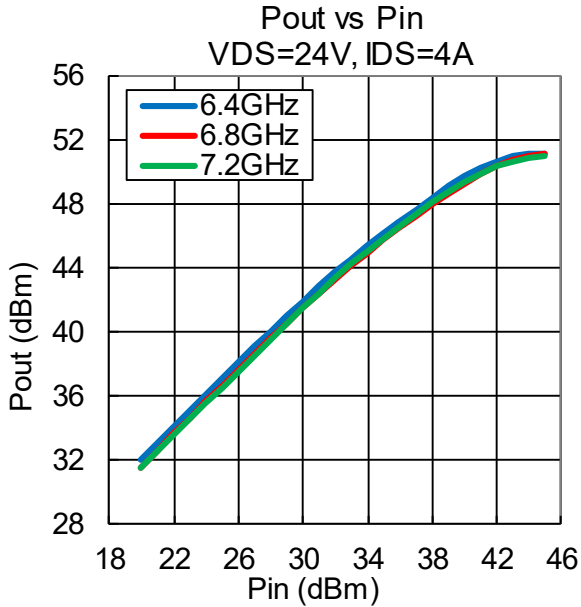
**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

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

**TYPICAL RF PERFORMANCE**

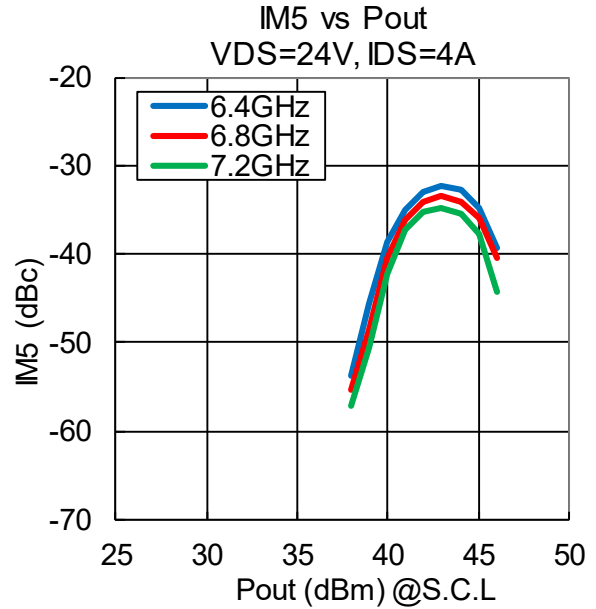
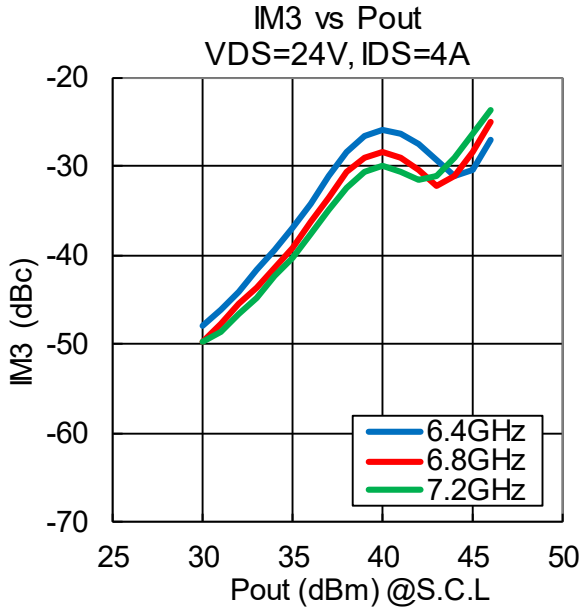
•Pout , Gain , PAE , IDS vs. Pin

VDS= 24 V, IDSset= 4.0 A, f= 6.4, 6.8, 7.2 GHz, Ta= +25 °C



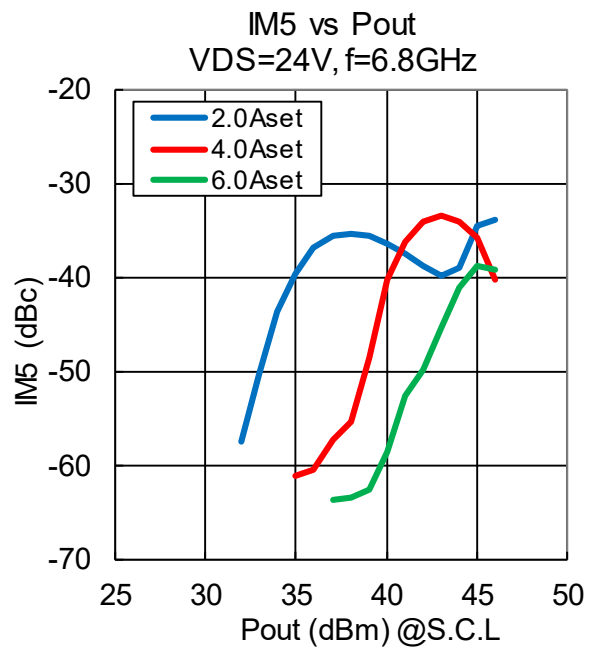
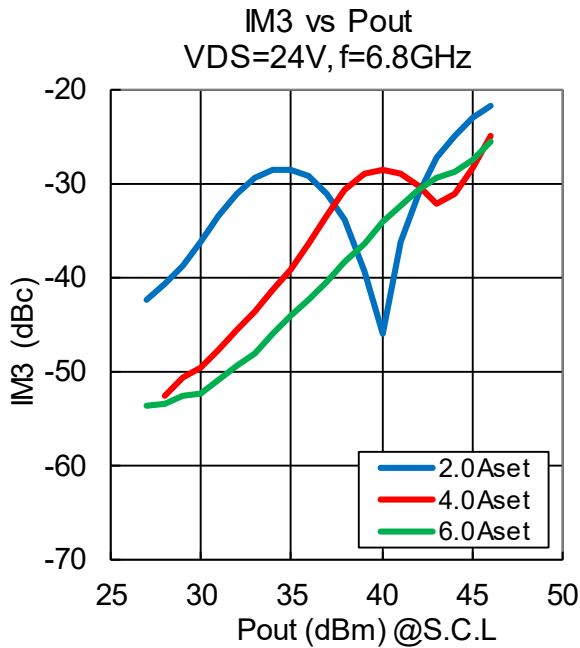
**•IM3, IM5 vs. Pout**

VDS= 24 V, IDSset= 4.0 A, f= 6.4, 6.8, 7.2 GHz, Δf= 5 MHz , Ta= +25 °C



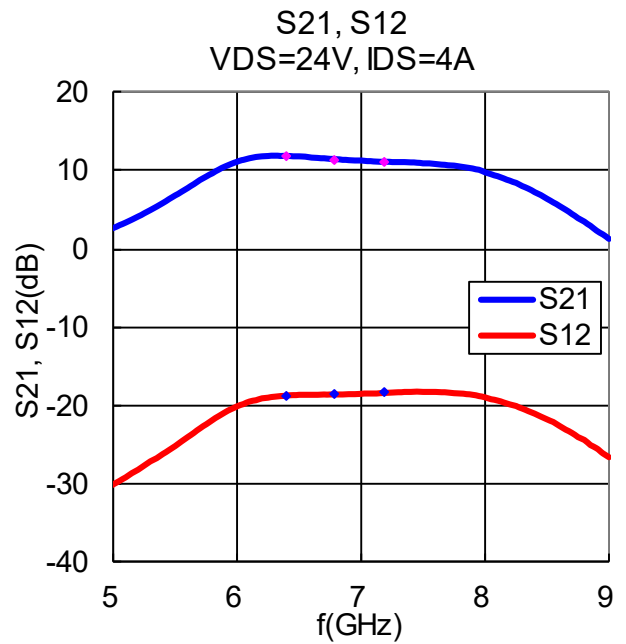
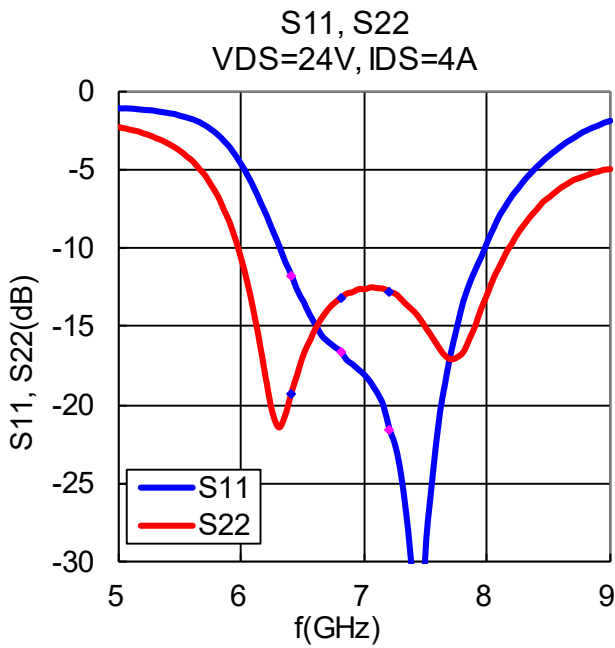
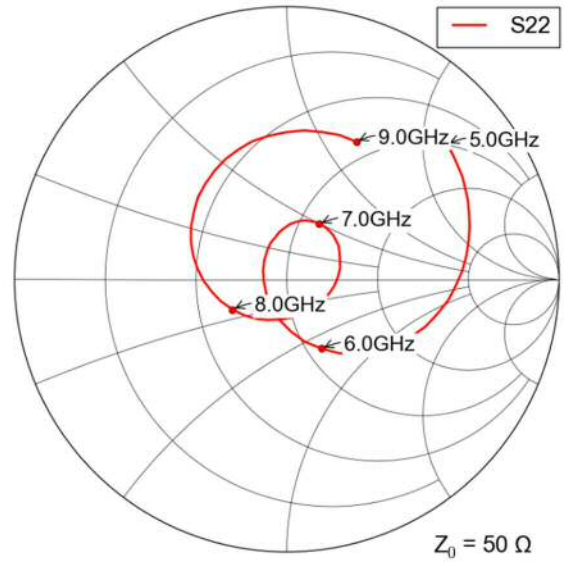
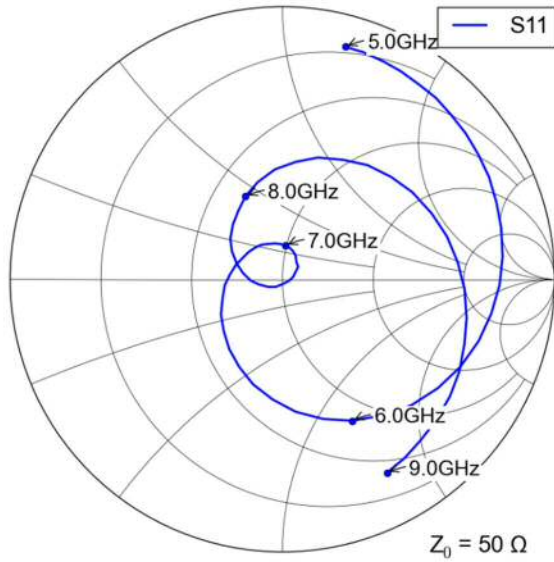
**•IM3, IM5 vs. Pout vs. IDSset**

VDS= 24 V, IDSset= 2.0, 4.0, 6.0 A, f= 6.8 GHz, Δf= 5 MHz, Ta= +25 °C



**-S-Parameters**

VDS= 24 V, IDSset= 4.0 A, f= =5.0 to 9.0 GHz, Ta= +25 °C



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