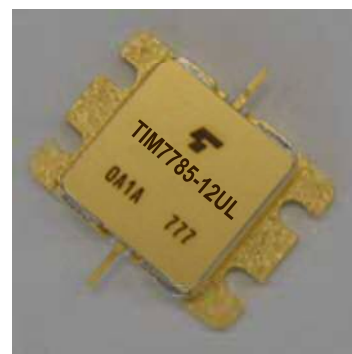


FEATURES

- BROAD BAND INTERNALLY MATCHED FET
- HIGH POWER
P1dB= 41.5dBm at 7.7GHz to 8.5GHz
- HIGH GAIN
G1dB= 8.5dB at 7.7GHz to 8.5GHz
- LOW INTERMODULATION DISTORTION
IM3(MIN.) = -44dBc at Pout= 30.5dBm (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= 2.6A f= 7.7 to 8.5GHz	dBm	40.5	41.5	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	7.5	8.5	—
Drain Current	IDS1		A	—	3.2	3.8
Gain Flatness	ΔG		dB	—	—	±0.6
Power Added Efficiency	ηadd		%	—	38	—
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 30.5dBm, Δf= 5MHz (Single Carrier Level)	dBc	-44	-47	—
Drain Current	IDS2		A	—	2.6	3.0
Channel Temperature Rise	ΔTch	(VDS × IDS + Pin - P1dB) × Rth(c-c)	°C	—	—	80

Recommended Gate Resistance(Rg): 68 Ω

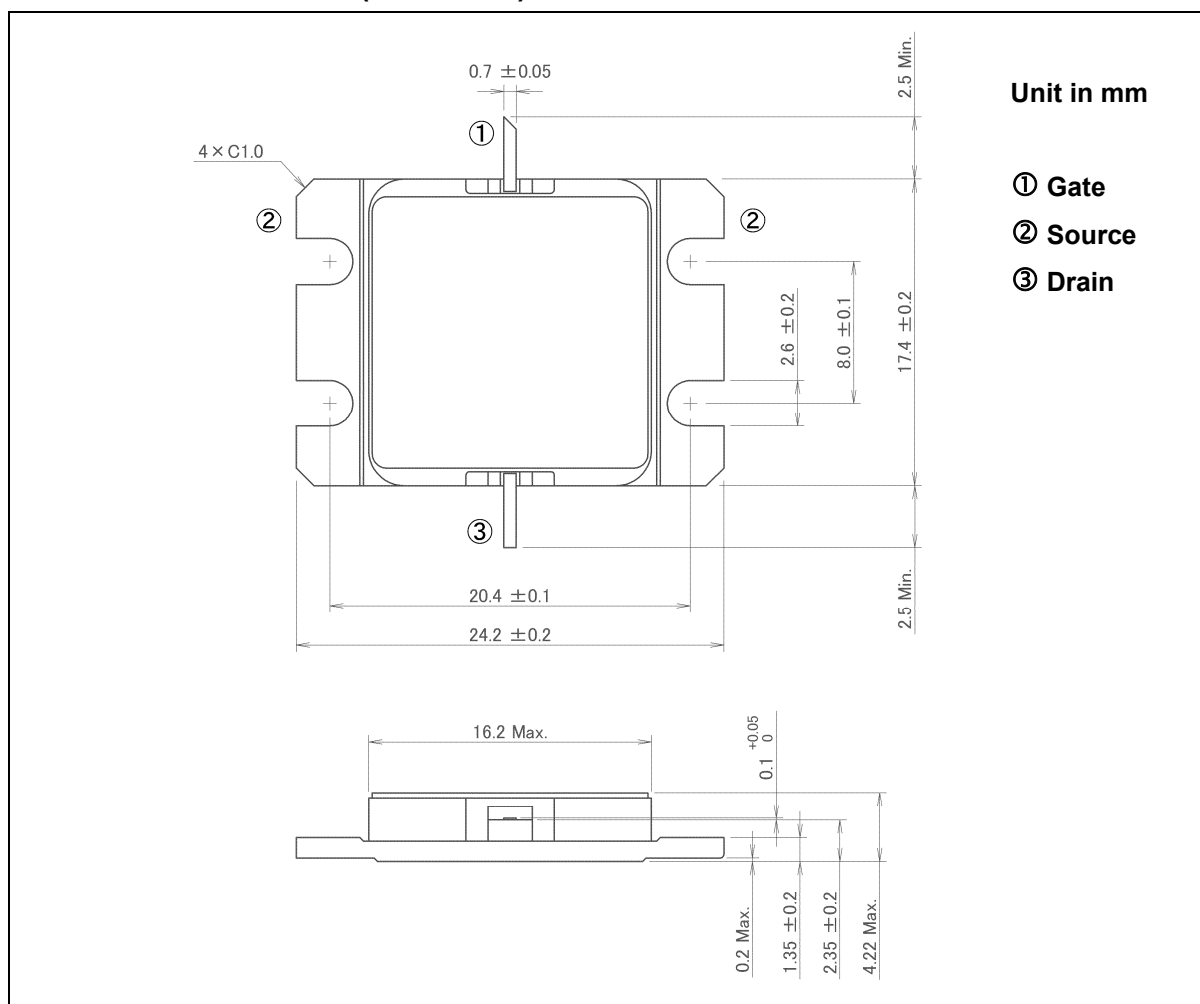
ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 4.0A	S	—	2.5	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 40mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	7.2	—
Gate-Source Breakdown Voltage	VGSO	IGS= -140μA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	2.0	2.4

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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	10.0
Total Power Dissipation (Tc= 25°C)	PT	W	62.5
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

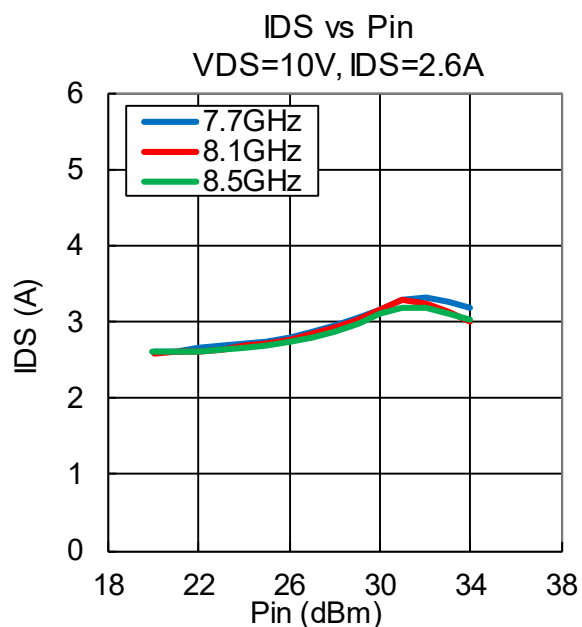
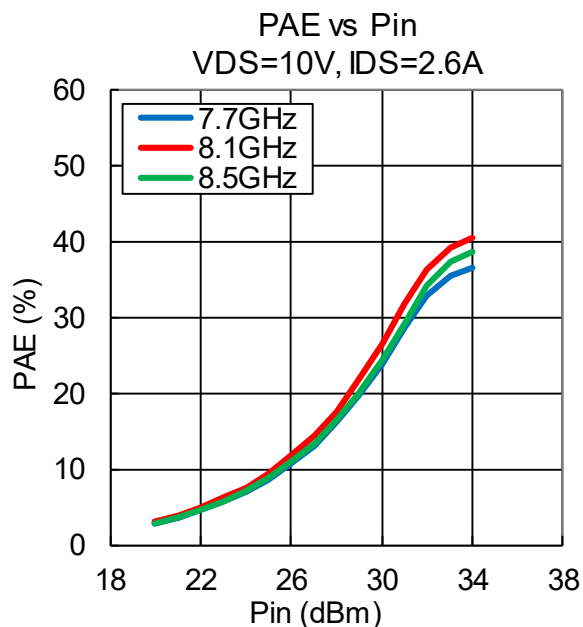
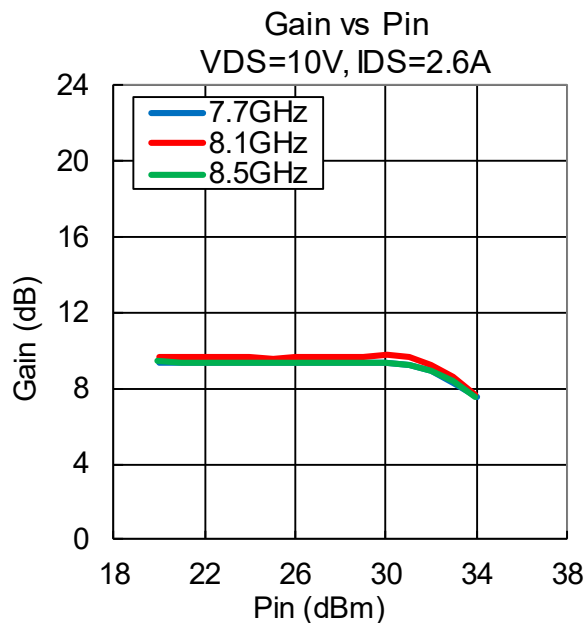
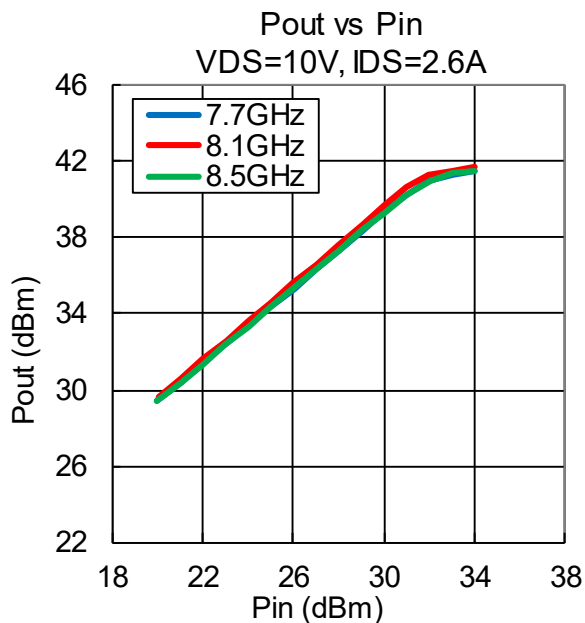
PACKAGE OUTLINE (2-16G1B)

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

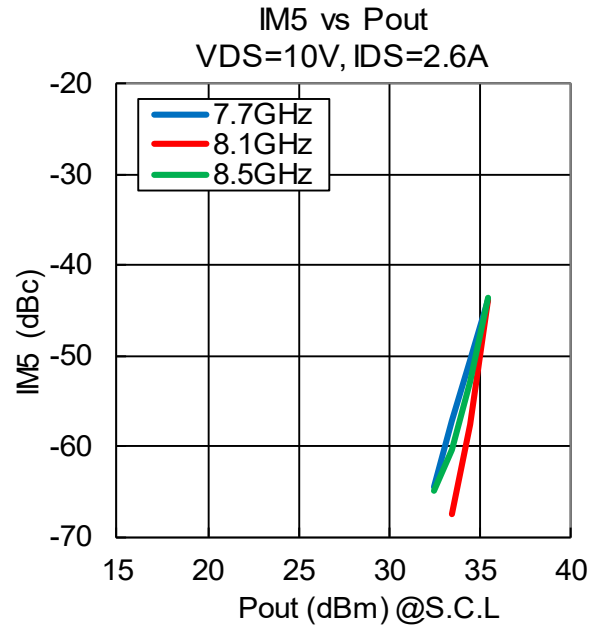
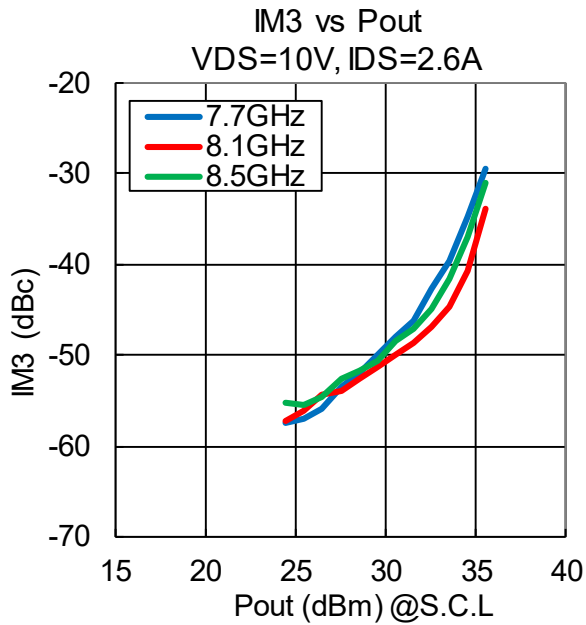
• Pout , Gain , PAE , IDS vs. Pin

VDS= 10 V, IDSset= 2.6 A, f= 7.7, 8.1, 8.5 GHz, Ta= +25 °C



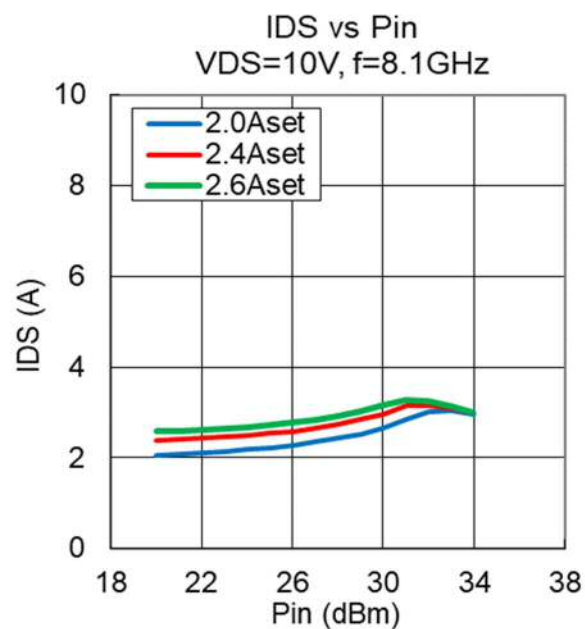
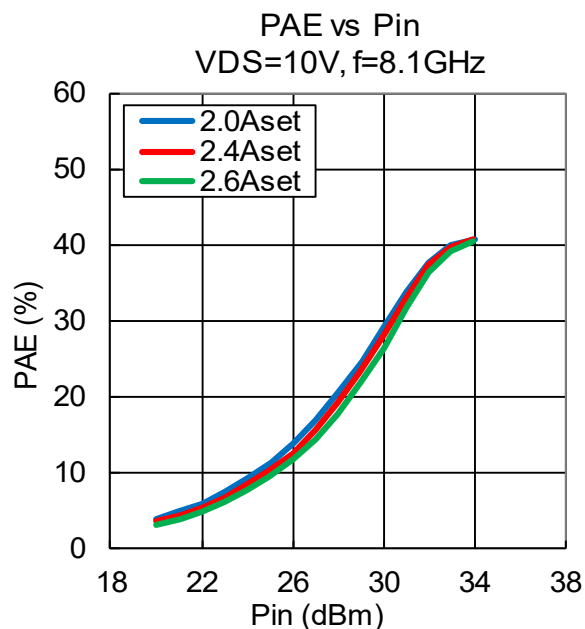
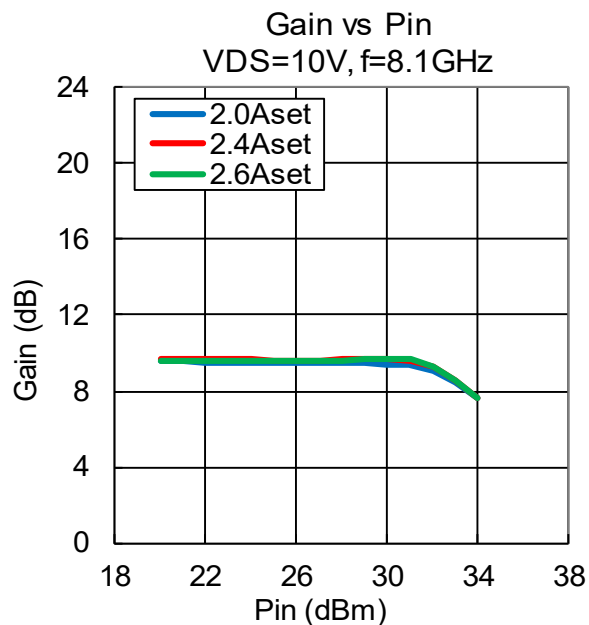
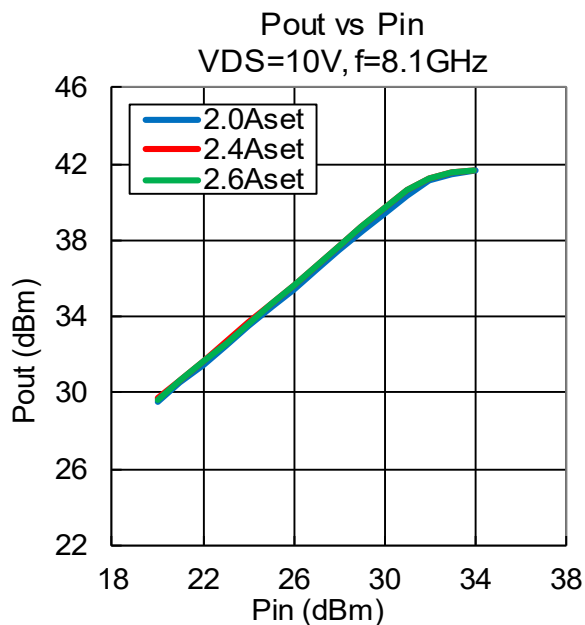
IM3, IM5 vs. Pout

VDS= 10 V, IDSset= 2.6 A, f= 7.7, 8.1, 8.5 GHz, Δf= 5 MHz, Ta= +25 °C



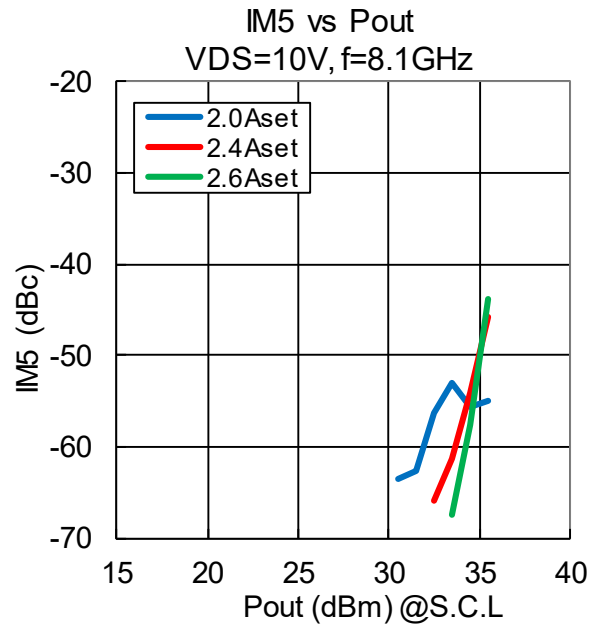
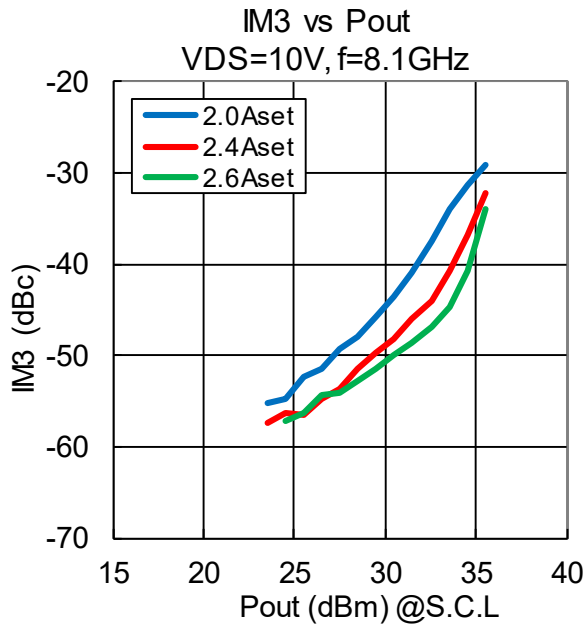
•Pout , Gain , PAE , IDS vs. Pin

VDS= 10 V, IDSset= 2.0, 2.4, 2.6 A, f= 8.1 GHz, Ta= +25 °C



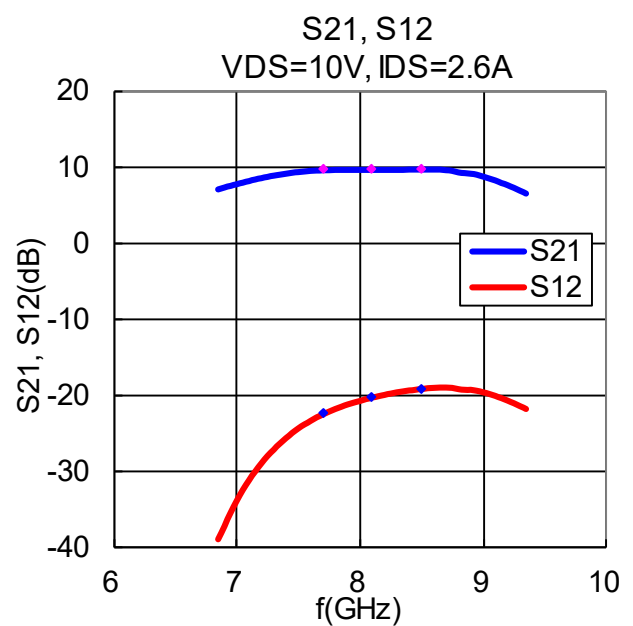
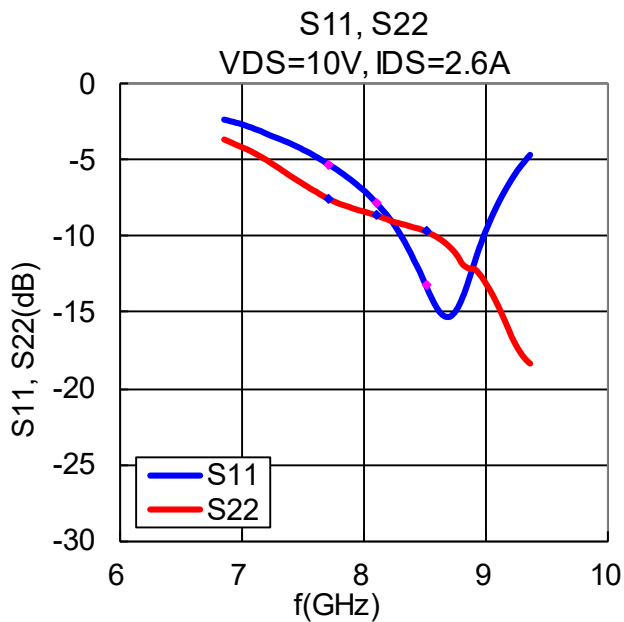
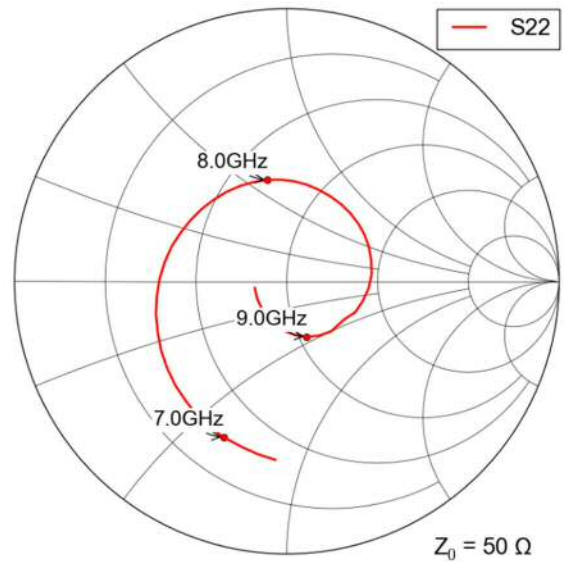
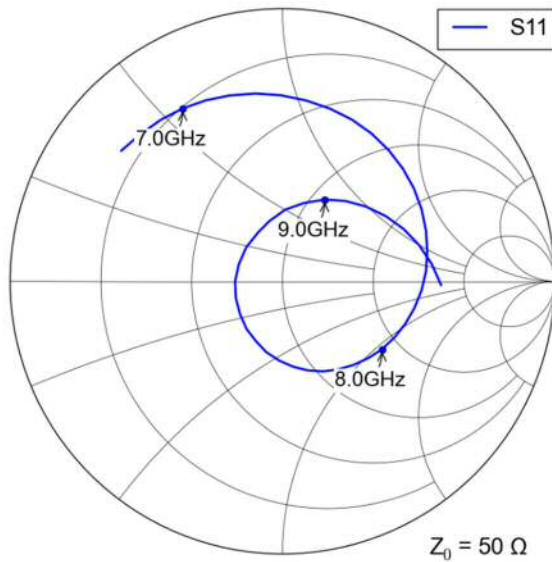
IM3, IM5 vs. Pout

$V_{DS} = 10\text{ V}$, $I_{DSset} = 2.0, 2.4, 2.6\text{ A}$, $f = 8.1\text{ GHz}$, $\Delta f = 5\text{ MHz}$, $T_a = +25\text{ }^{\circ}\text{C}$



•S-Parameters

$V_{DS} = 10\text{ V}$, $I_{DSset} = 2.6\text{ A}$, $f = 6.85\text{ to }9.35\text{ GHz}$, $T_a = +25\text{ }^{\circ}\text{C}$



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