

Product Features

- Frequency Range: 7-11GHz
- Noise Figure: 1.6dB
- Small Signal Gain: 27.9dB
- Saturated Power: 14.6dBm
- IMD: 54dBc(@Pout/tone=0dBm)
- Bias: VD= 2V, IDQ= 42mA, VG= -0.55V

Applications

- General Purpose
- Communication System
- Radar System
- Satellite Communication



Recommended Operating Conditions

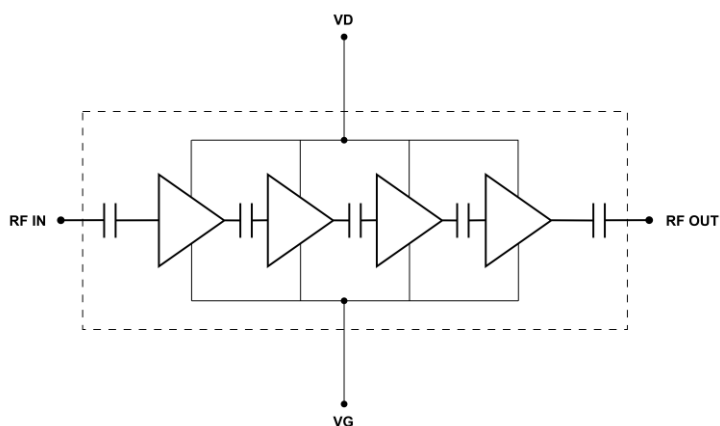
Parameter	Value	Units
Drain Voltage	2	V
Drain Current (quiescent, IDQ)	42	mA
Gate Voltage (typical)	-0.55	V
Operating Temperature Range	-40 to 85	°C

Electrical specifications are measured at specified test conditions. Specifications are not guaranteed over all recommended operating conditions.

Specifications (Tc=25°C, F0=9GHz, VDD=2V, IDQ=42mA)

Parameter	MIN	TYP	MAX	Units
Frequency	7		11	GHz
Small Signal Gain		27.9		dB
Noise Figure		1.6		dB
1dB Gain Compression Point		12.4		dBm
Input Return Loss		-14.7		dB
Output Return Loss		-11.7		dB
3rd Order Intermodulation Distortion		54		dBc
Output TOI (Pout/tone=0dBm)		27		dBm

Functional Block Diagram

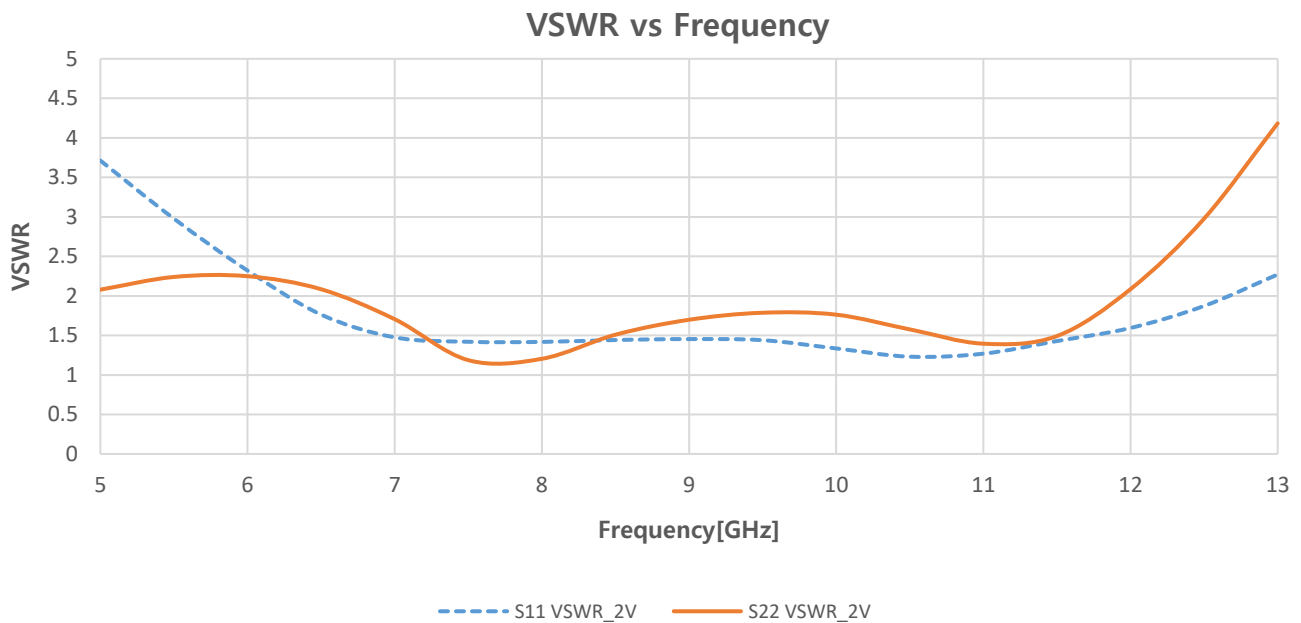
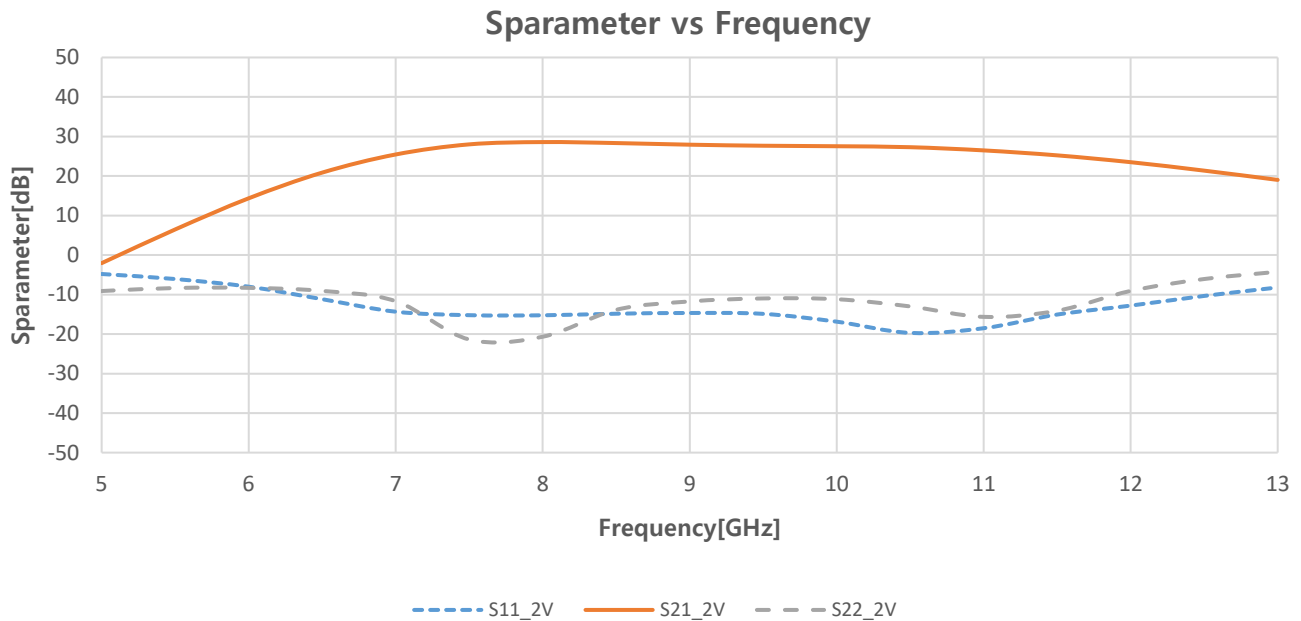




Small Signal Performance ($T_c = 25^\circ\text{C}$)

Drain Voltage=2V, IDQ=42mA

CW-Mode

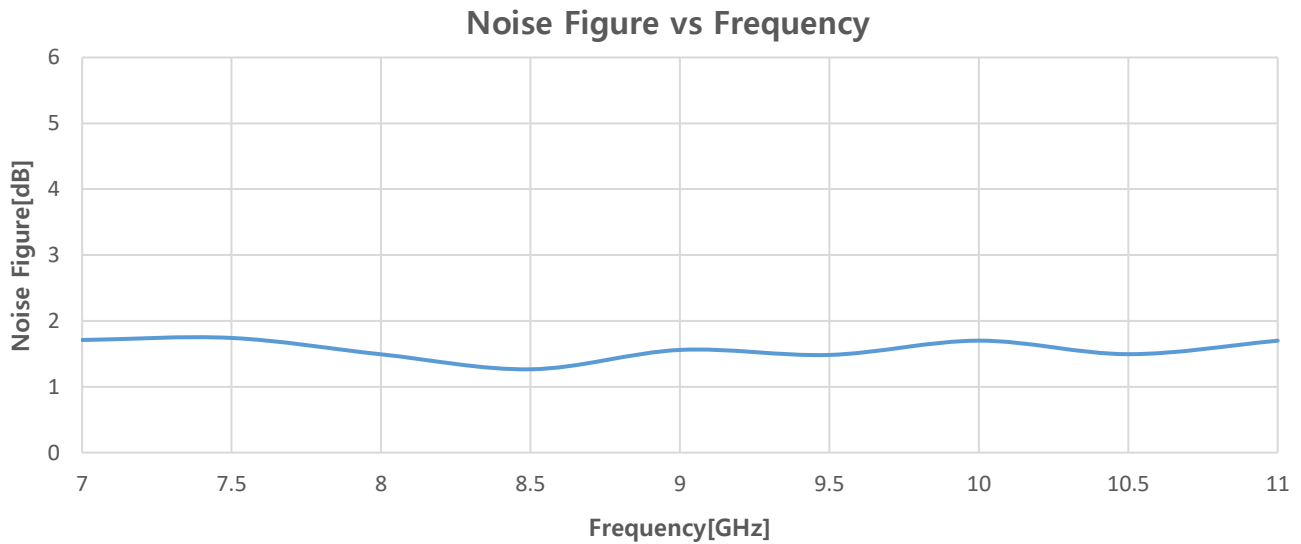




Noise Figure Performance (Tc=25°C)

Drain Voltage=2V, IDQ=42mA

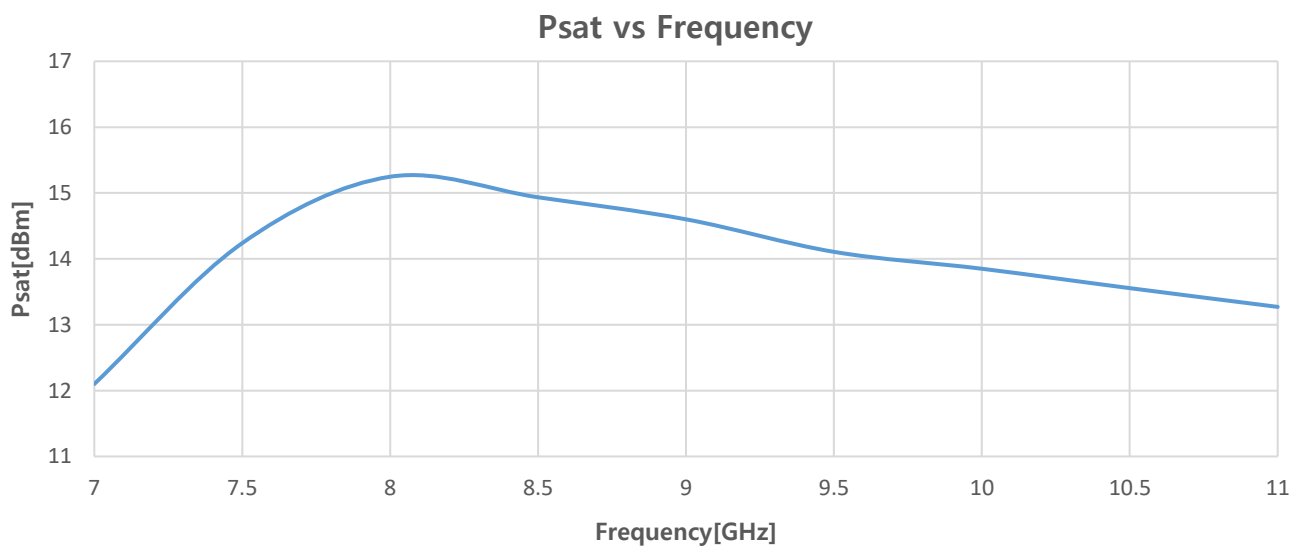
CW-Mode



Power Performance (Tc=25°C)

Drain Voltage=2V, IDQ=42mA

CW-Mode



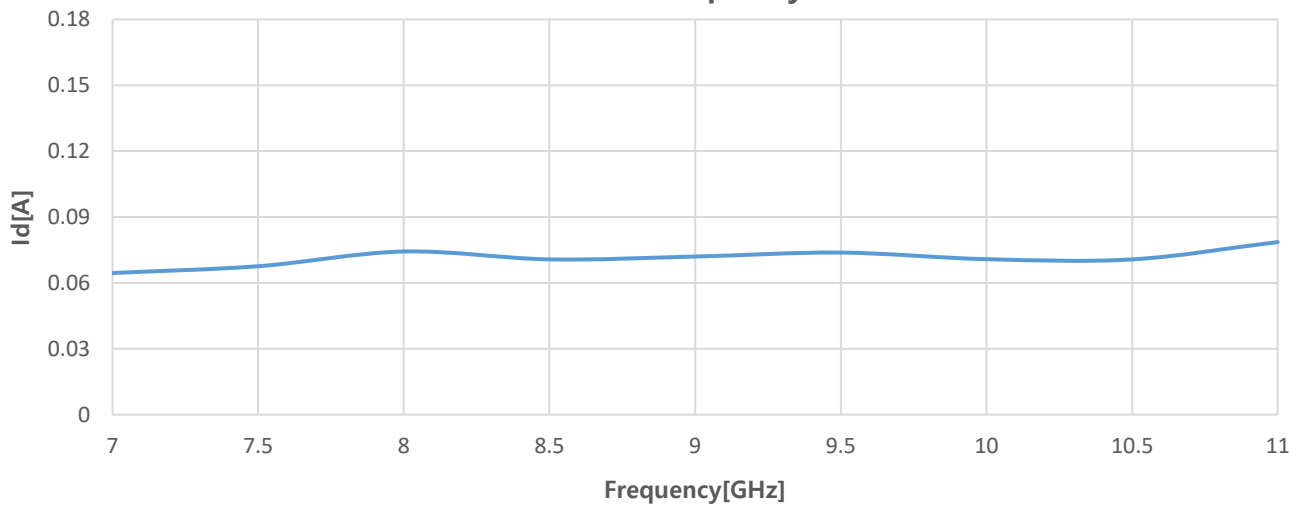


Power Performance (Tc=25°C)

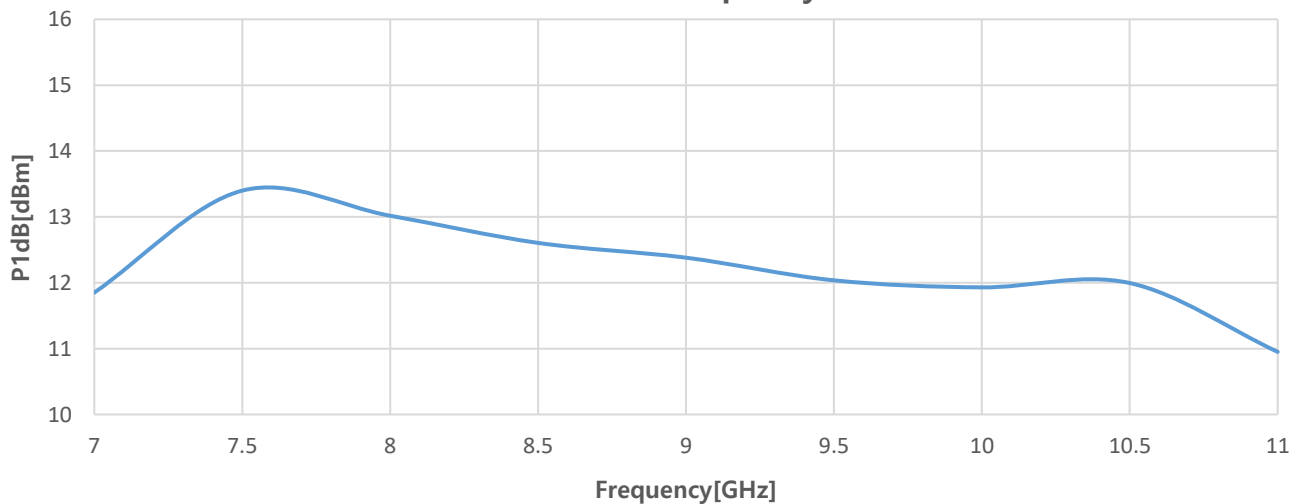
Drain Voltage=2V, IDQ=42mA

CW-Mode

Id vs Frequency



P1dB vs Frequency

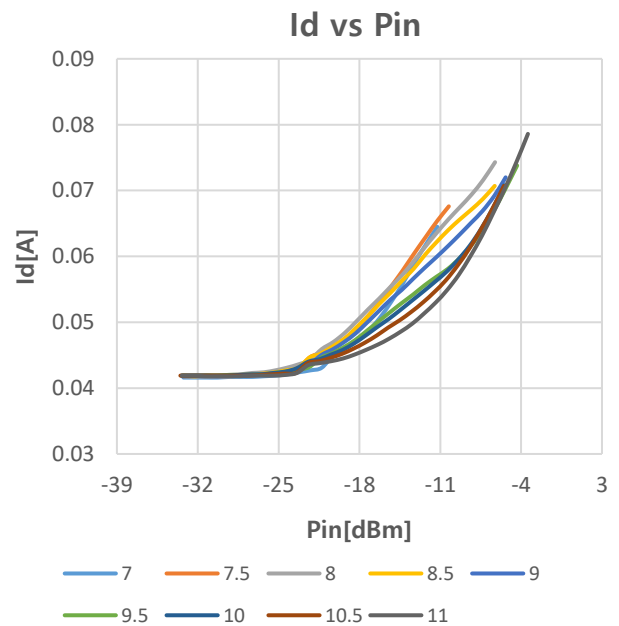
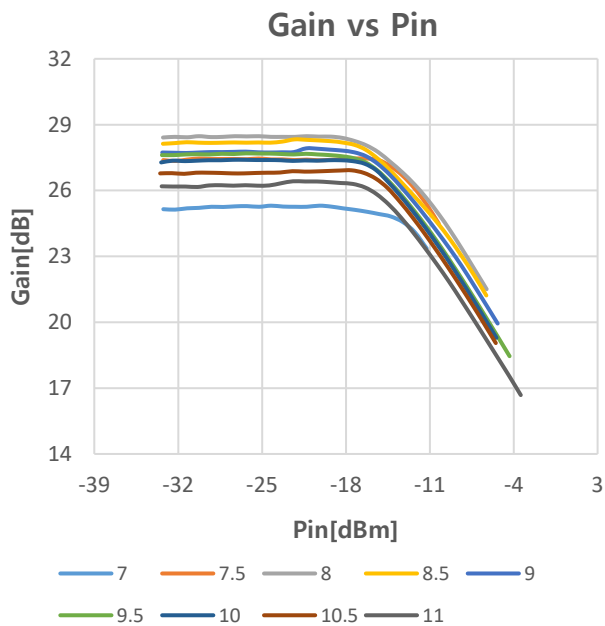
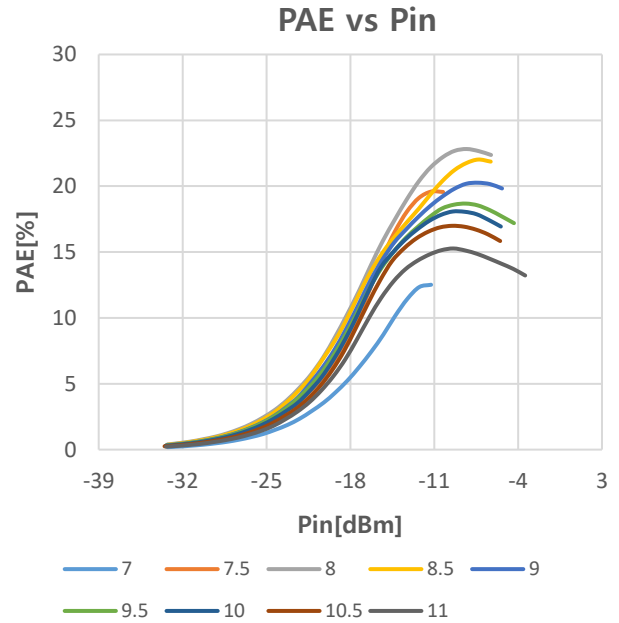
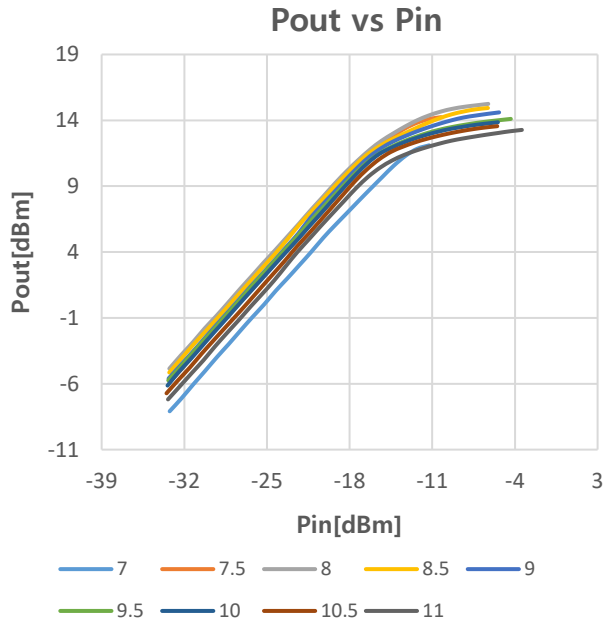




Power Sweep Performance ($T_c = 25^\circ\text{C}$)

Drain Voltage=2V, IDQ=42mA

CW-Mode



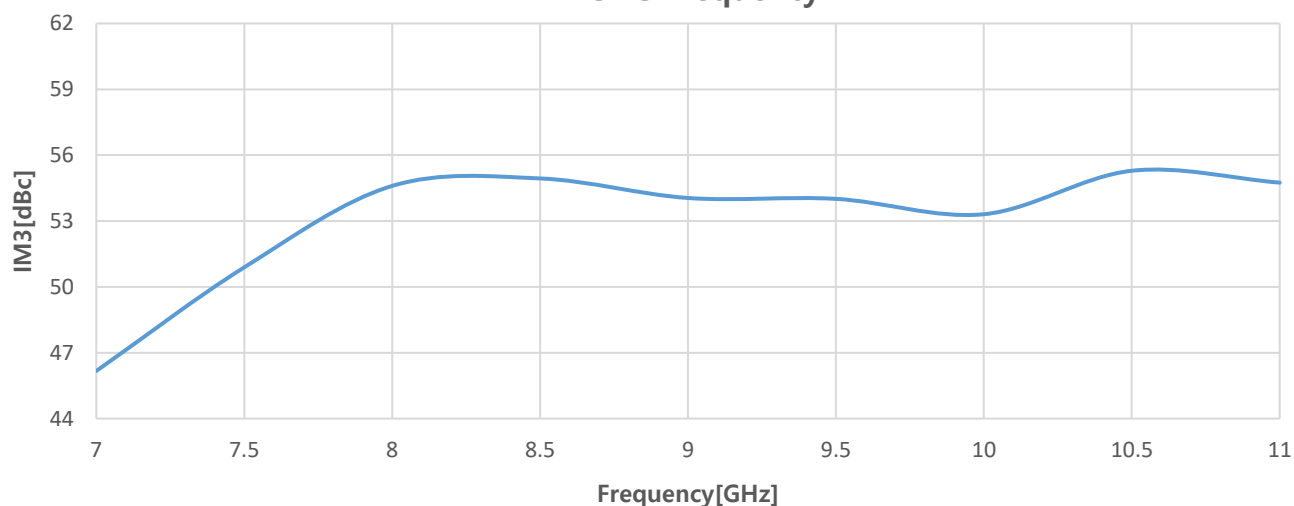


Linearity Performance ($T_c = 25^\circ\text{C}$)

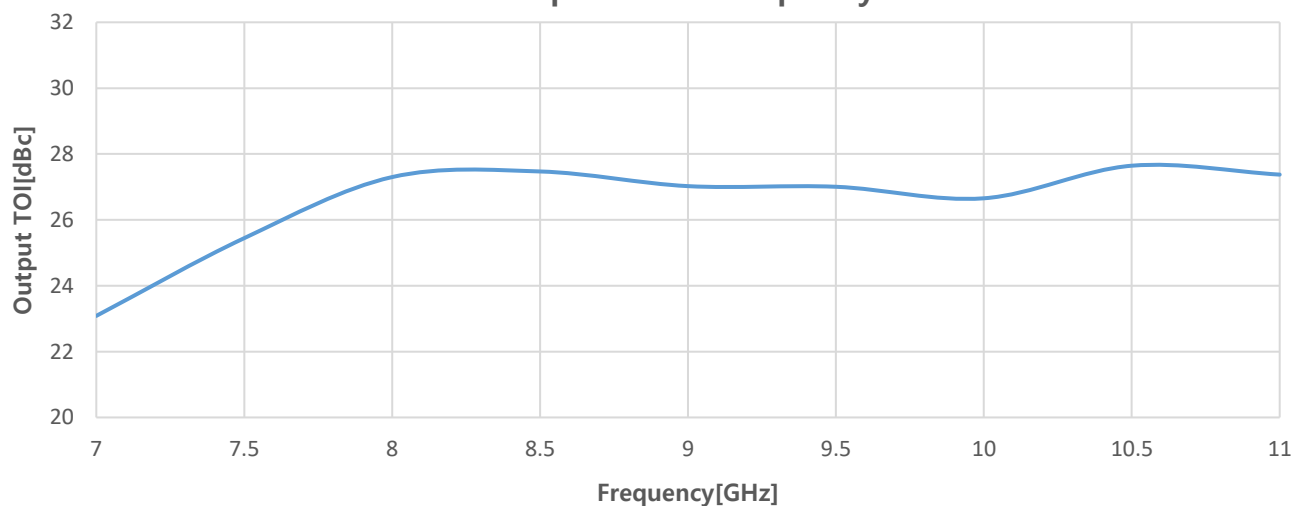
Drain Voltage=2V, IDQ=42mA, Tone Spacing= 10MHz, Pout/tone=0dBm

CW-Mode

IM3 vs Frequency



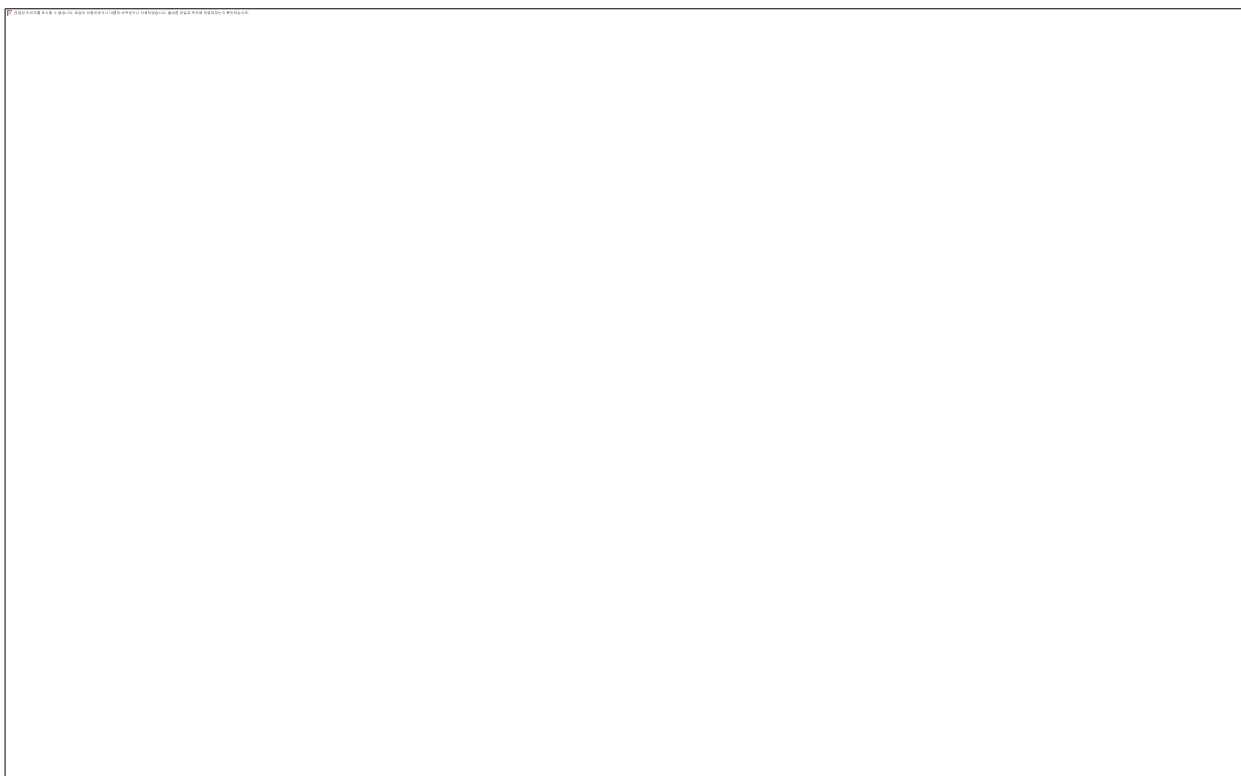
Output TOI vs Frequency





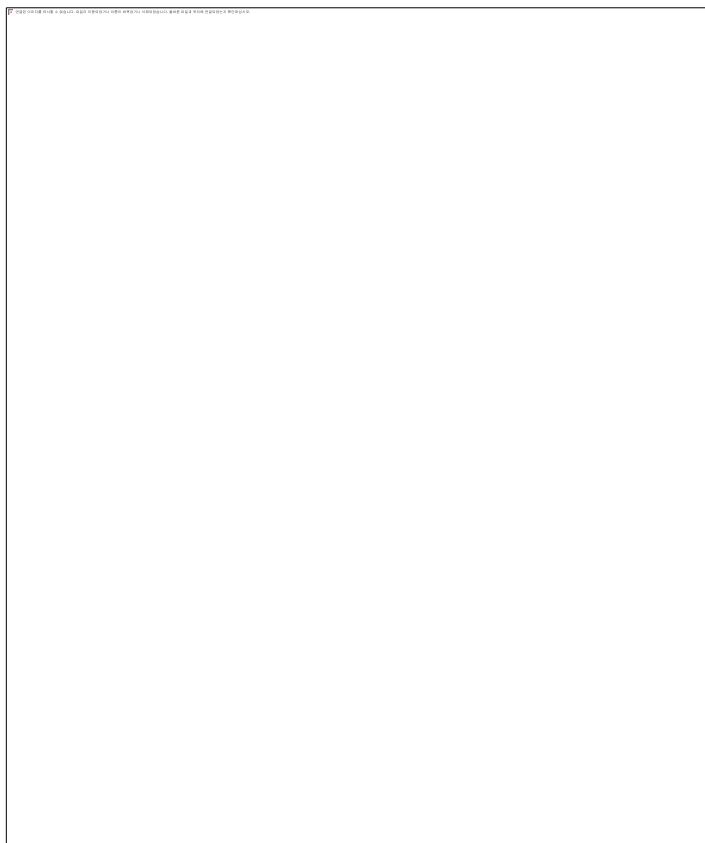
Product Dimension

- Product Type: Bare Die, leadless
- Unit: mm





Evaluation Board

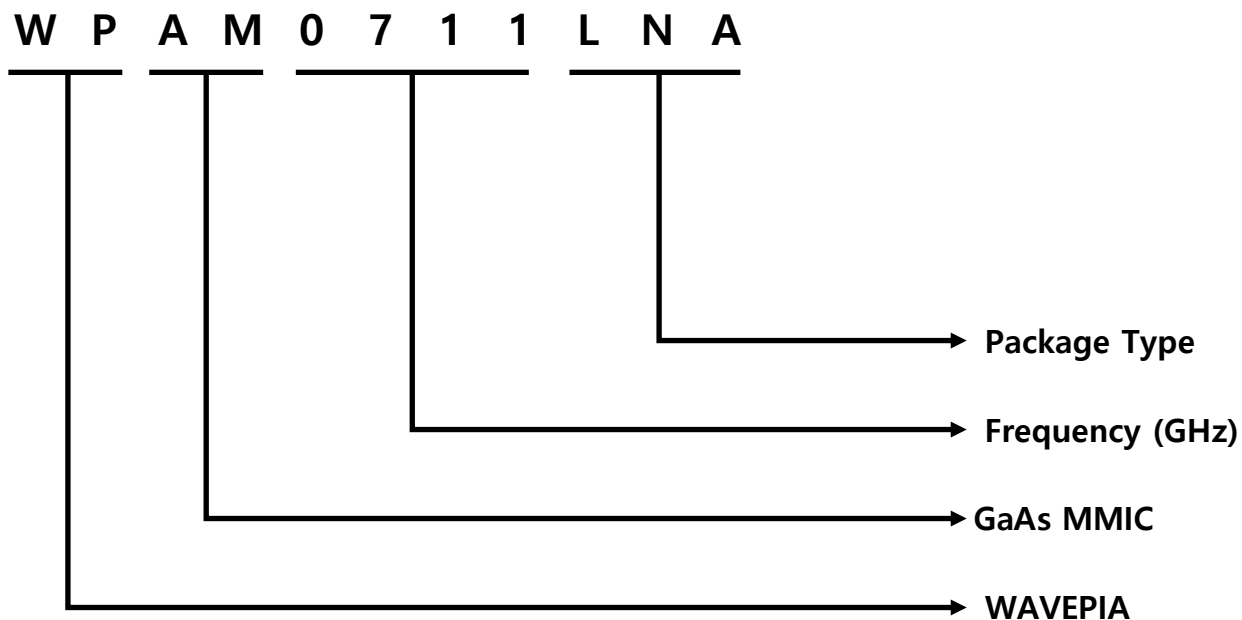


Evaluation Board Circuit Bill of Materials

Reference	Part Number	Value	Description	Package	Manufacturer	EA
C2, C8	TAJA106K016RN	10uF/16V	Tantal Capacitor	3216	KYOCERA	2
C5, C11	GCM188R71C104JA37J	100nF	Ceramic Capacitor	1608	MURATA	2
J1, J2	22-05-7045	-	Power 4 Pin Connector	-	Molex	2
-	PCB	-	RO4003C 1/2oz 8mil	-	WAVEPIA	1
Q1	WPAM0711LNA	-	GaAs MMIC	-	WAVEPIA	1



Part Number System



Parameter	Value	Units
Lower Frequency	7	GHz
Upper Frequency	11	GHz
Output Power	-	W
Transistor Type	GaAs MMIC	-
Package	Bare Die	-



Handling Precautions

Parameter	Classification	Standard
ESD - Human Body Model (HBM)	Class 1A	ANSI/ESDA/JEDEC JS-001-2017
ESD - Charge Device Model (CDM)	Class C2	ANSI/ESDA/JEDEC JS-002-2018
MSL - Moisture Sensitivity Level	N/A	



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Sensitive Device

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

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