

SANCOM

SA-PAN053059-P53**5.3-5.9 GHz High Power GaN-HEMT**

Features

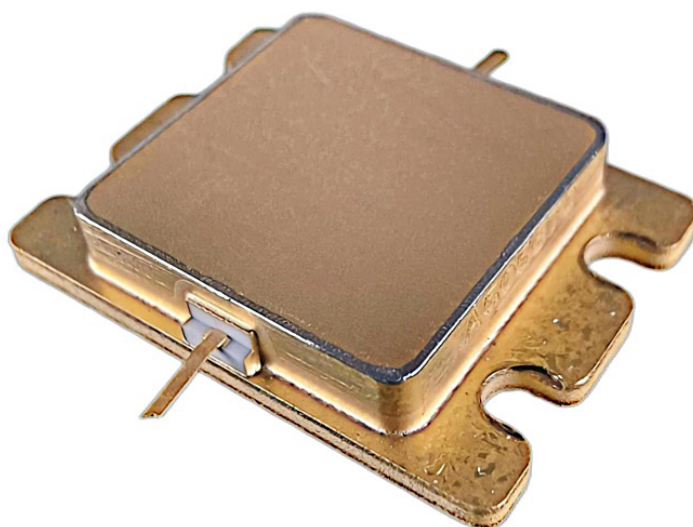
Frequency Range: 5.3-5.9 GHz

$P_{\text{sat}} \geq 53 \text{ dBm}$

Power Gain: $\geq 10 \text{ dB}$

Efficiency: $\geq 45\%$

$Z_{\text{in}}/Z_{\text{out}} = 50 \Omega$



Description

Sancom Electric's GaN-HEMT SA-PAN053059-P53 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 28V operation. The SA-PAN053059-P53 typically provides 53 dBm of saturated output power and 10dB of large-signal gain and can be widely used in various RF/microwave systems.

ABSOLUTE MAXIMUM RATINGS

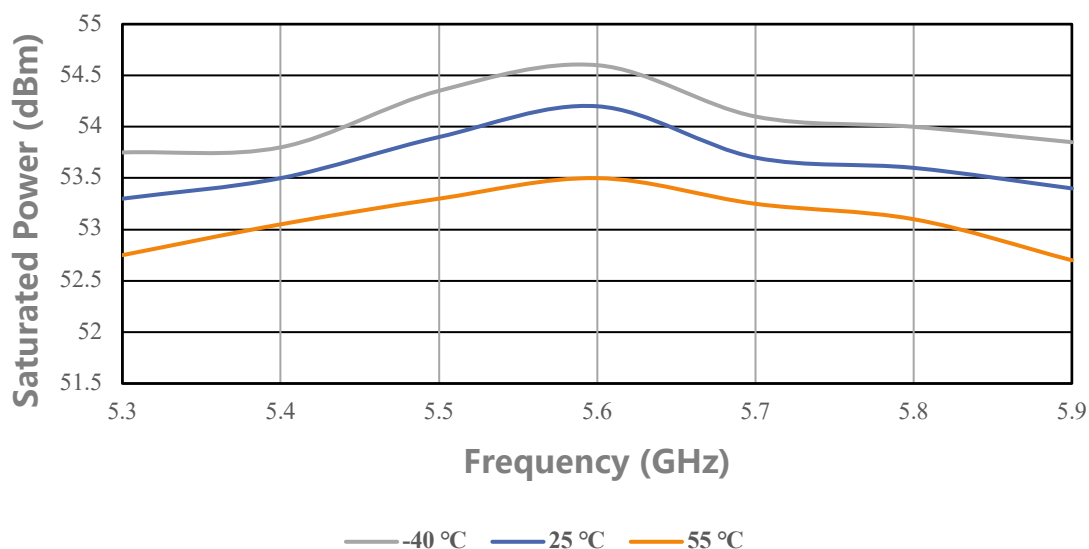
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	TC=25°C	40	V
Gate-Source Voltage	V_{GS}	TC=25°C	-5	V
Storage Temperature	T_{stg}	TC=25°C	-65 to 150	°C
Channel Temperature	T_{ch}	TC=25°C	150	°C

ELECTRICAL SPECIFICATIONS

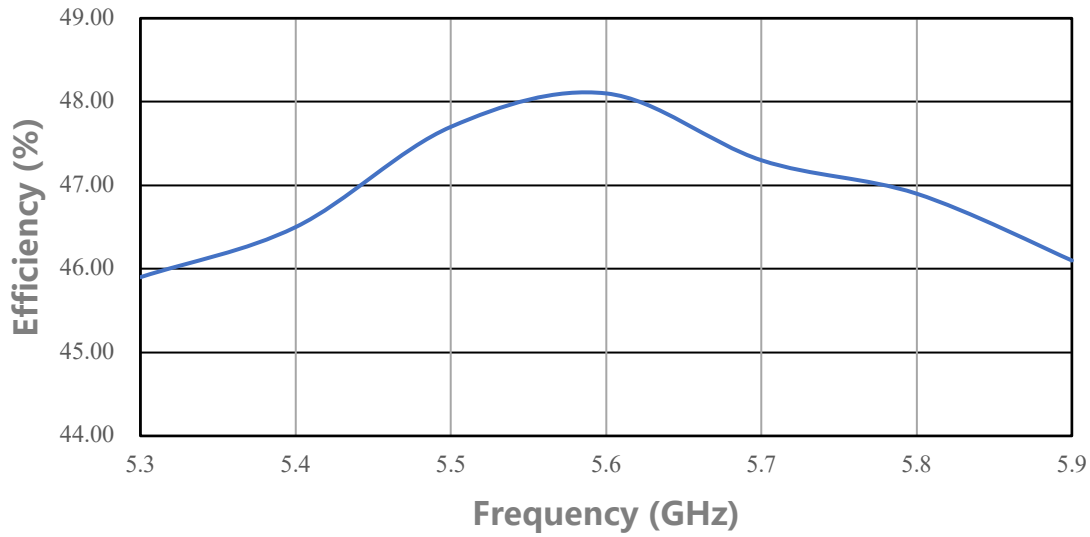
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	V_{DS} : 28 V Pulse T=1ms, Duty=10% P_{in} : 43 dBm Freq: 5.3 ~ 5.9 GHz	-	15.8	-	A
Saturated Power	P_{sat}		53	-	-	dBm
Power Gain	G_p		10	-	-	dB
Efficiency	η		45	-	-	%
Flatness	ΔG		-0.8	-	0.8	dB

Performance Plots

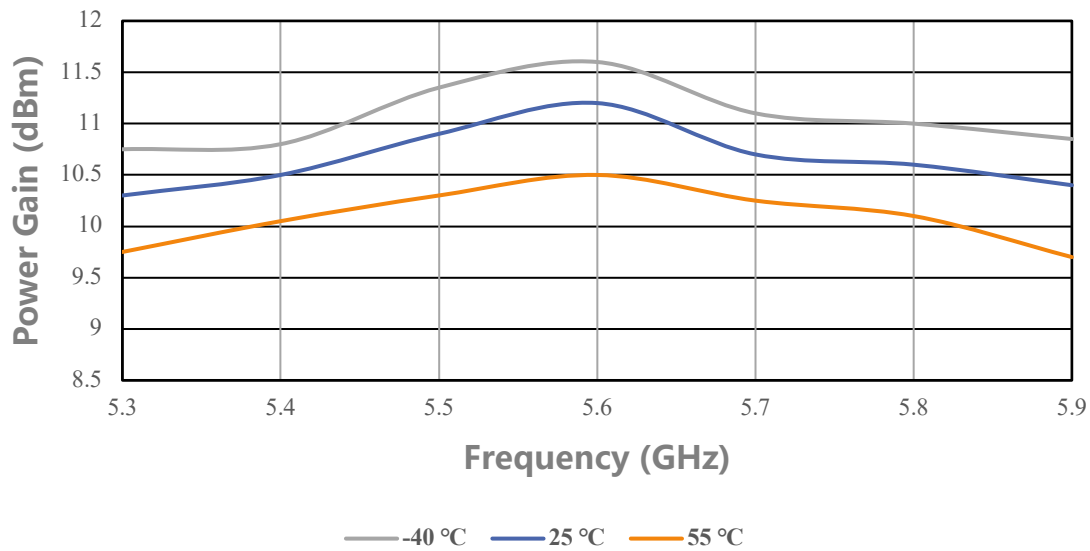
Saturated Power VS Frequency



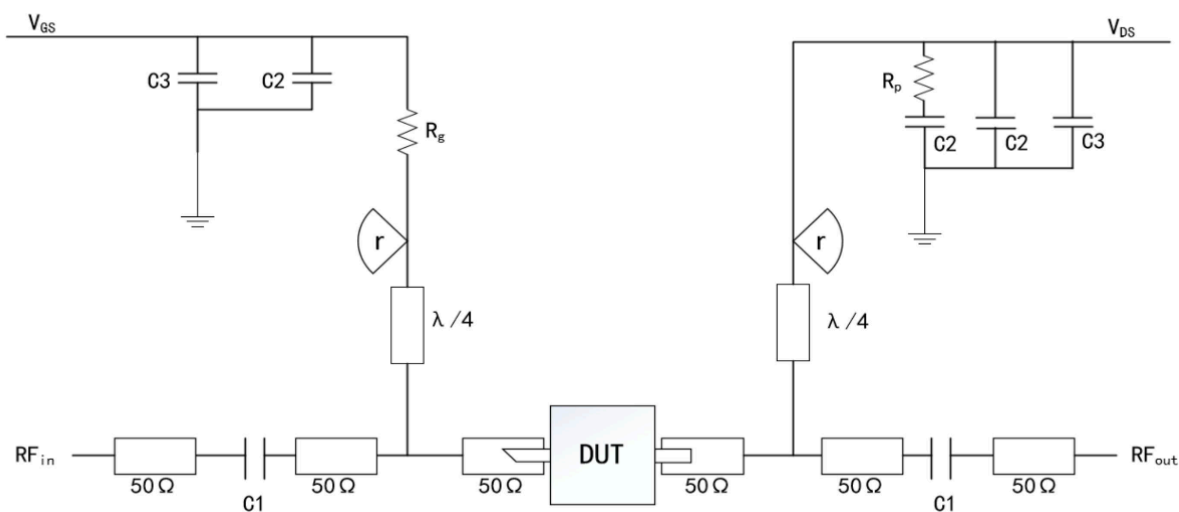
Efficiency VS Frequency



Power Gain VS Frequency



Simplified Block Diagram



DUT information

C1: 4.7 pF

R_p : 51 Ω

C2: 1000 pF

R_g : 15 Ω

C3: 100 μ F

$R \approx 5.8$ mm

ESD Protection

ESD

Class III

2000 V

Outline Drawing



Unit: mm

Attention

- Please keep away from moisture during transportation and storage
- Pay attention to ESD prevention during chip use and assembly. Wear a grounding ESD bracelet.
- When adding electricity, add gate electricity first and then add leakage electricity