

SANCOM

SA-PAN090100-P50**9.0-10.0 GHz High Power GaN-HEMT**

Features

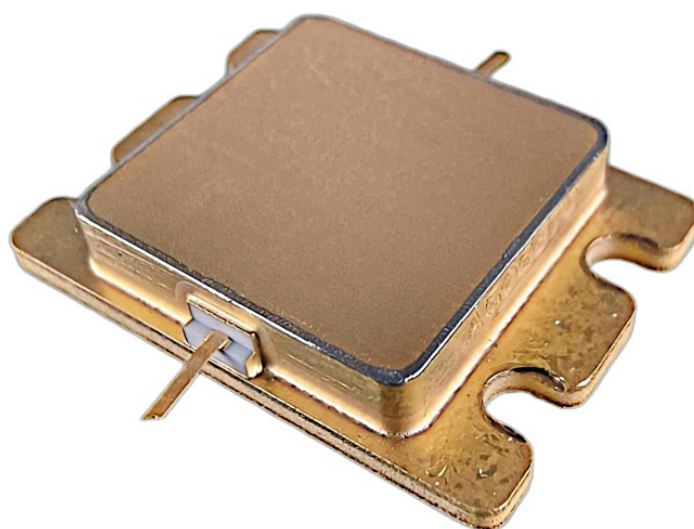
Frequency Range: 9.0-10.0 GHz

$P_{\text{sat}} \geq 50 \text{ dBm}$

Power Gain: $\geq 8 \text{ dB}$

Efficiency: $\geq 35\%$

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



Description

Sancom Electric's GaN-HEMT SA-PAN090100-P50 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 28V operation. The SA-PAN090100-P50 typically provides 50 dBm of saturated output power and 8dB of large-signal gain and can be widely used in various RF/microwave systems.

ABSOLUTE MAXIMUM RATINGS

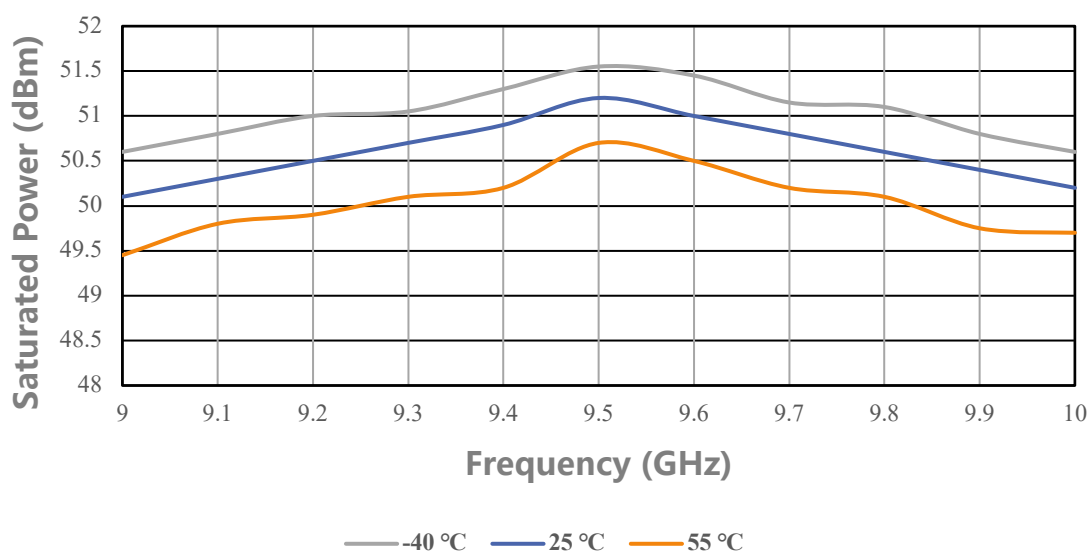
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	TC=25°C	40	V
Gate-Source Voltage	V_{GS}	TC=25°C	-5	V
Storage Temperature	T_{stg}	TC=25°C	-65 to 150	°C
Channel Temperature	T_{ch}	TC=25°C	150	°C

ELECTRICAL SPECIFICATIONS

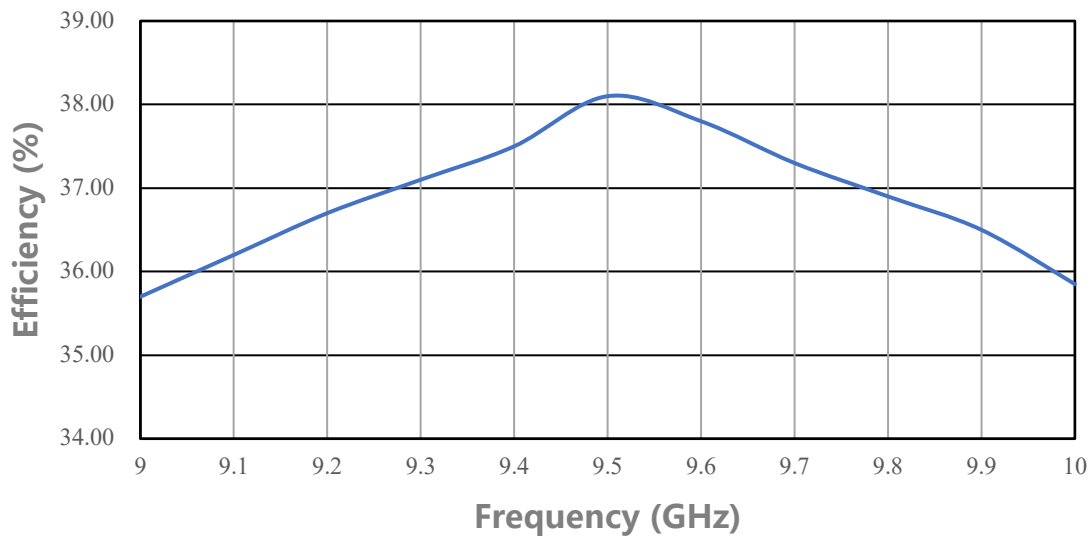
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	V_{DS} : 28 V Pulse $T=1ms$, Duty=10% P_{in} : 42 dBm Freq: 9.0~ 10.0 GHz	-	10.2	-	A
Saturated Power	P_{sat}		50	-	-	dBm
Power Gain	G_p		8	-	-	dB
Efficiency	η		35	-	-	%
Flatness	ΔG		-0.8	-	0.8	dB

Performance Plots

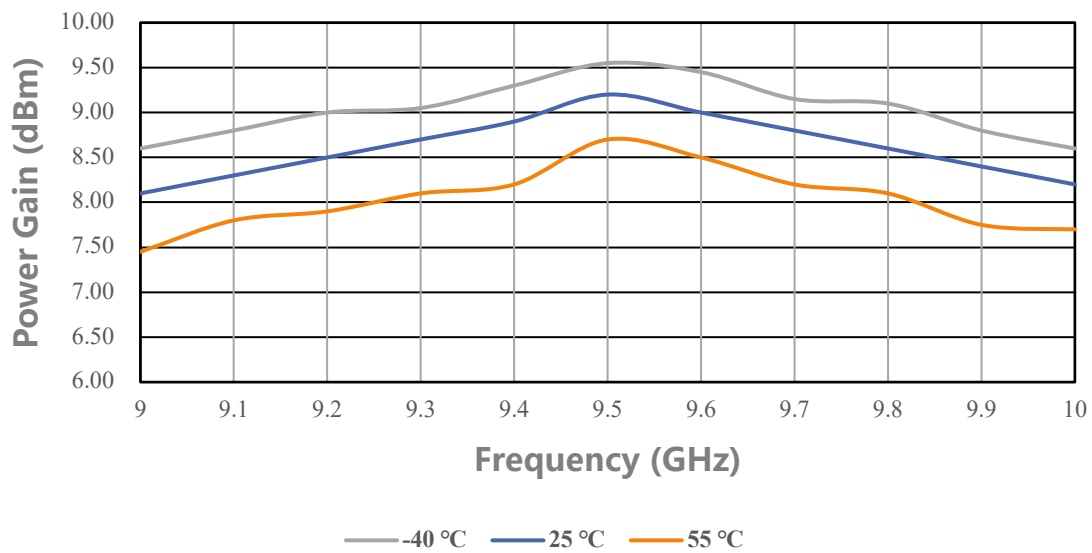
Saturated Power VS Frequency



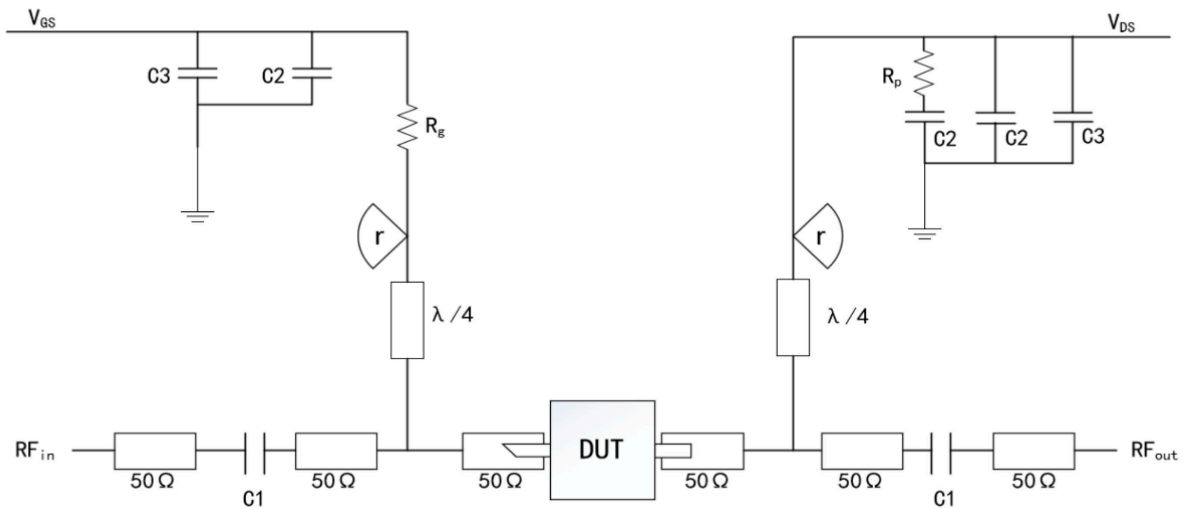
Efficiency VS Frequency



Power Gain VS Frequency



Simplified Block Diagram



DUT information

C1: 1 pF

R_p : 51 Ω

C2: 1000 pF

R_g : 15 Ω

C3: 100 μ F

$R \approx 3.5$ mm

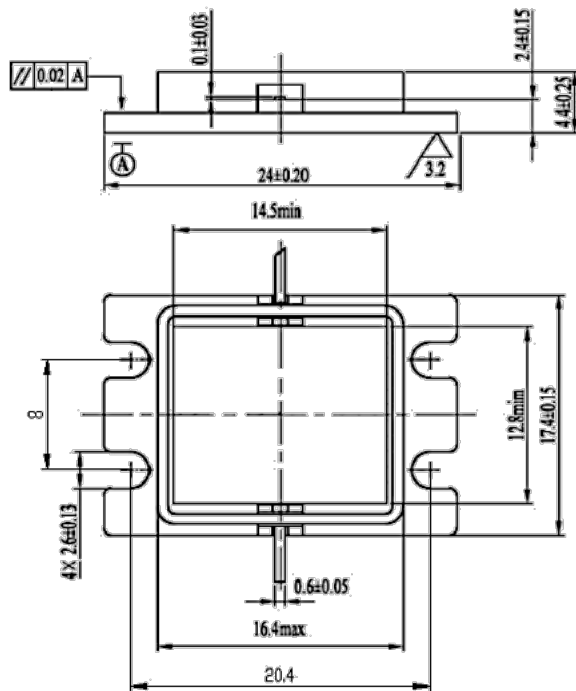
ESD Protection

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