

SANCOM

SA-PAN019021-P53**1.9-2.1 GHz High Power GaN-HEMT**

Features

Frequency Range: 1.9-2.1 GHz

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

Power Gain: ≥ 12 dB

Efficiency: $\geq 50\%$ (Type)

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



Description

Sancom Electric's GaN-HEMT SA-PAN019021-P53 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 32V operation. The SA-PAN019021-P53 typically provides 53 dBm of saturated output power and 12 dB of large-signal gain and can be widely used in various RF/microwave systems.

ABSOLUTE MAXIMUM RATINGS

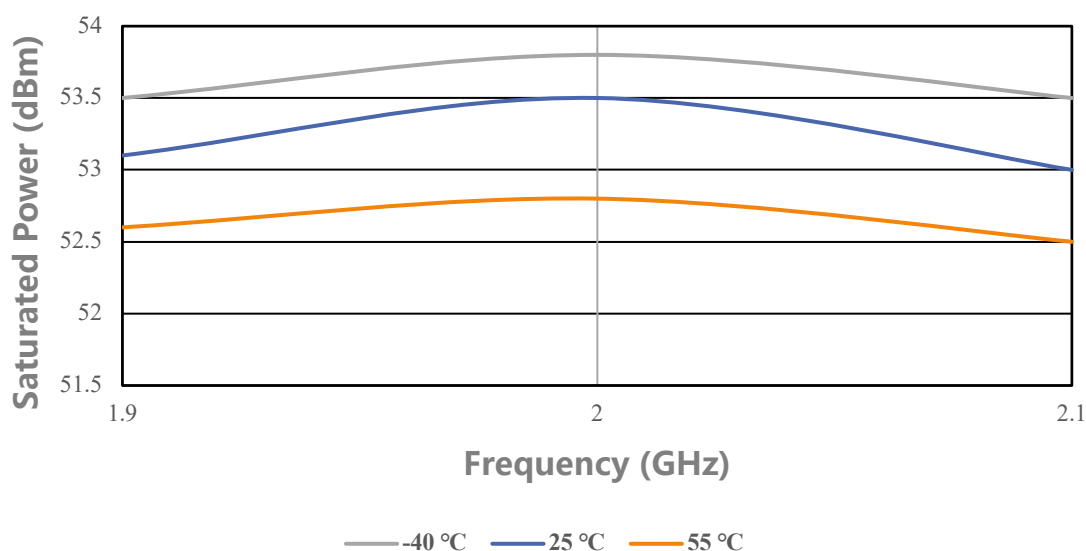
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	TC=25°C	40	V
Gate-Source Voltage	V_{GS}	TC=25°C	-5	V
Storage Temperature	T_{stg}	TC=25°C	-65 to 150	°C
Channel Temperature	T_{ch}	TC=25°C	150	°C

ELECTRICAL SPECIFICATIONS

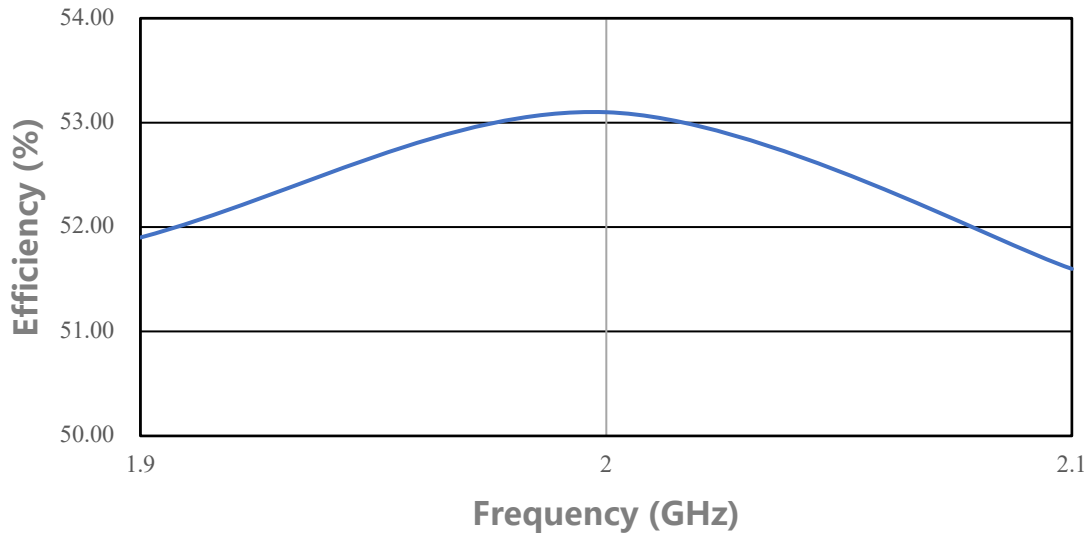
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	V_{DS} : 32V Pulse $T = 1ms$, Duty= 10% P_{in} : 41 dBm Freq: 1.9 ~ 2.1 GHz	-	12.5	-	A
Saturated Power	P_{sat}		53	-	-	dBm
Power Gain	G_p		12	-	-	dB
Efficiency	η		-	50	-	%
Flatness	ΔG		-0.8	-	0.8	dB

Performance Plots

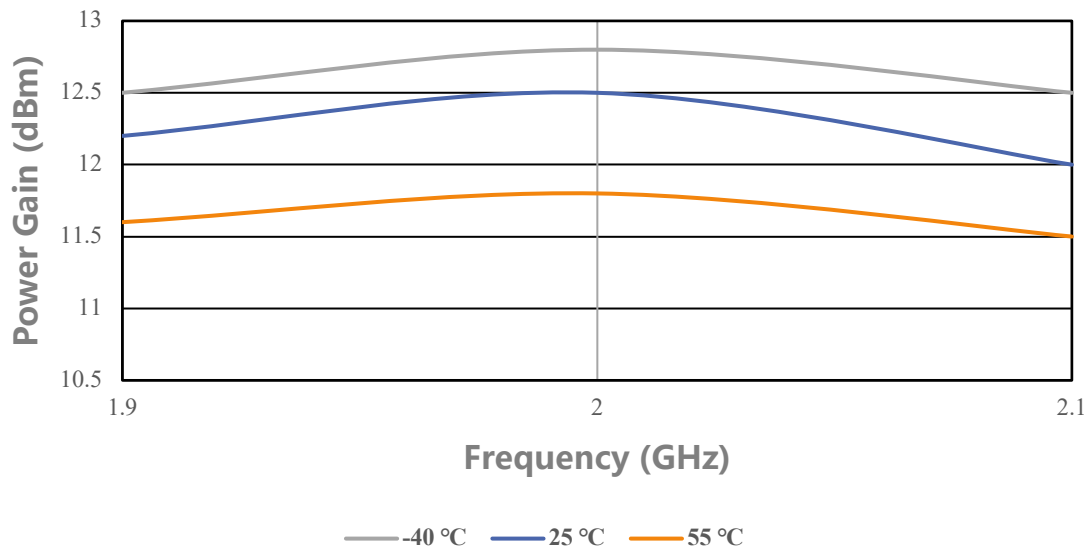
Saturated Power VS Frequency



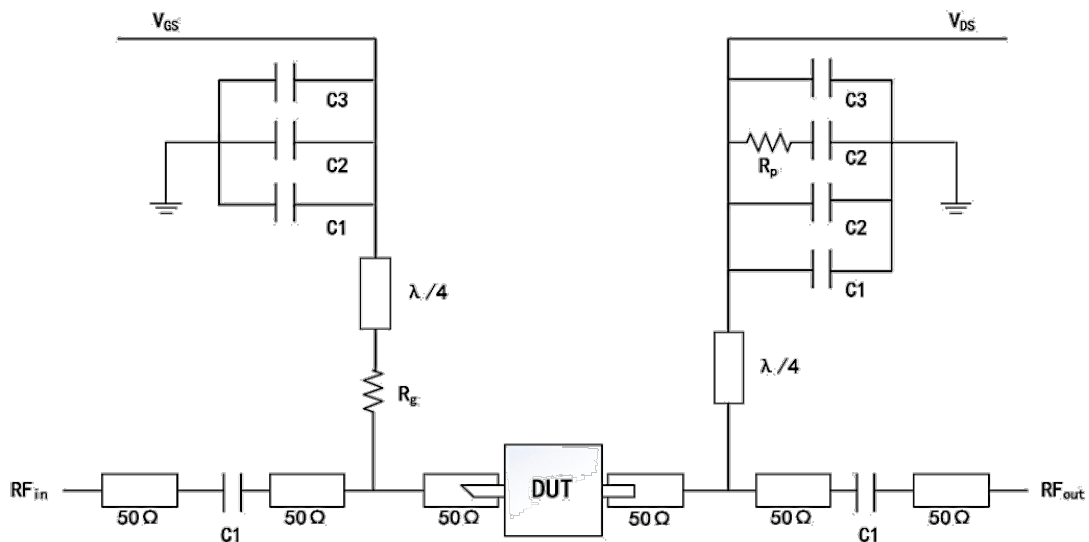
Efficiency VS Frequency



Power Gain VS Frequency



Simplified Block Diagram

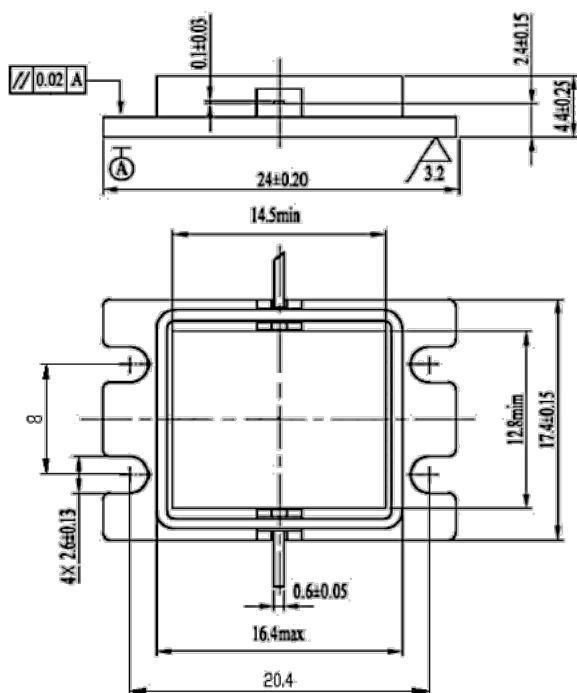


DUT information	
C1: 8 pF	R _p : 51 Ω
C2: 1000 pF	R _g : 15 Ω
C3: 100 μF	

ESD Protection

ESD	Class III	2000 V
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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

