

SANCOM

SA-PAN019021-P42**1.9-2.1 GHz High Power GaN-HEMT**

Features

Frequency Range: 1.9-2.1 GHz

$P_{\text{sat}} \geq 42$ dBm

Power Gain: ≥ 14 dB

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

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



Description

Sancom Electric's GaN-HEMT SA-PAN019021-P42 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 28V operation. The SA-PAN019021-P42 typically provides 42 dBm of saturated output power and 14 dB of large-signal gain and can be widely used in various RF/microwave systems.

ABSOLUTE MAXIMUM RATINGS

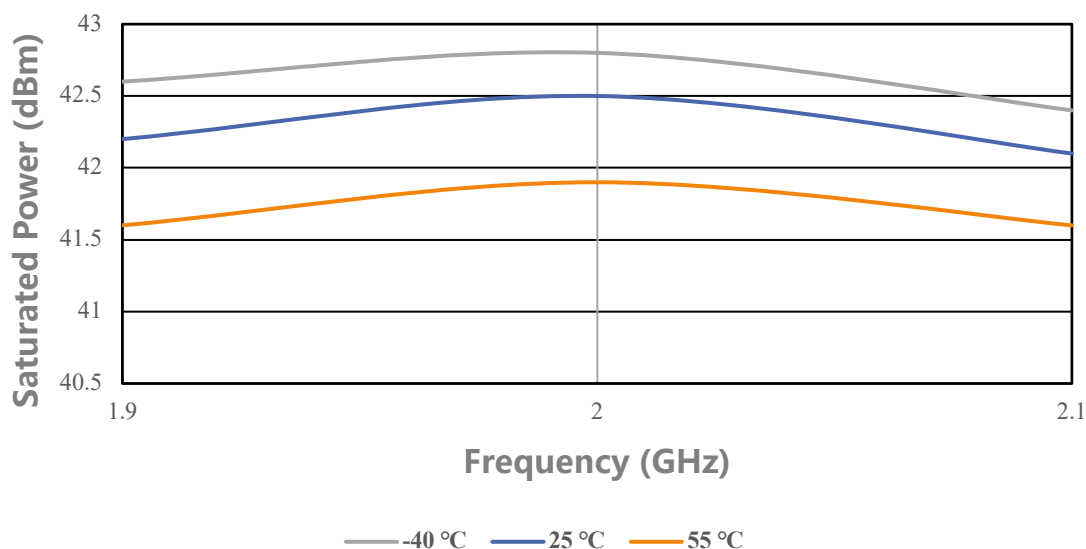
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	$TC=25^{\circ}C$	40	V
Gate-Source Voltage	V_{GS}	$TC=25^{\circ}C$	-5	V
Storage Temperature	T_{stg}	$TC=25^{\circ}C$	-65 to 150	$^{\circ}C$
Channel Temperature	T_{ch}	$TC=25^{\circ}C$	150	$^{\circ}C$

ELECTRICAL SPECIFICATIONS

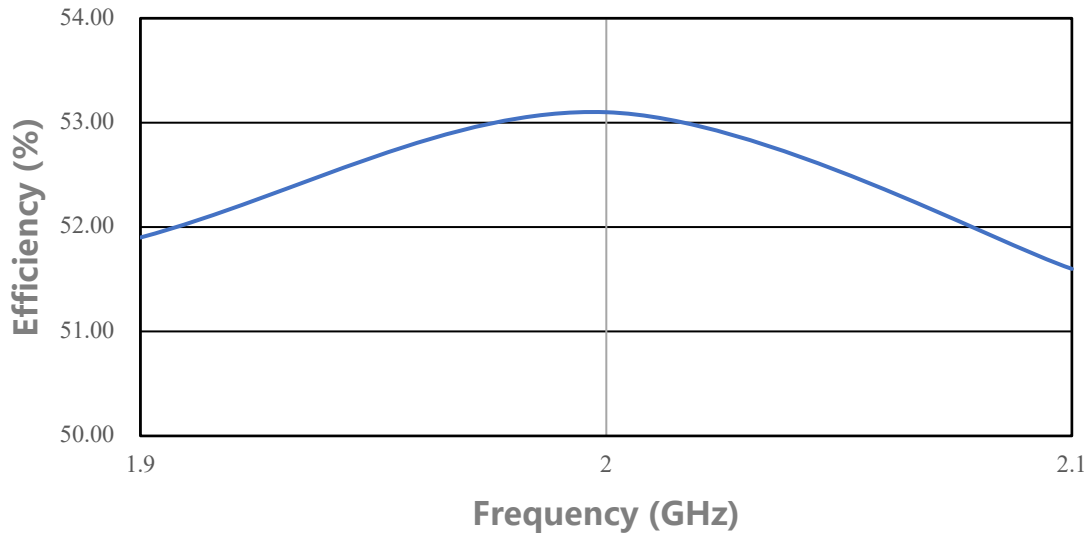
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	$V_{DS}: 28V$ CW (Continuous Wave) $P_{in}: 28dBm$ Freq: 1.9 ~ 2.1 GHz	-	1.1	-	A
Saturated Power	P_{sat}		42	-	-	dBm
Power Gain	G_p		14	-	-	dB
Efficiency	η		50	-	-	%
Flatness	ΔG		-0.8	-	0.8	dB

Performance Plots

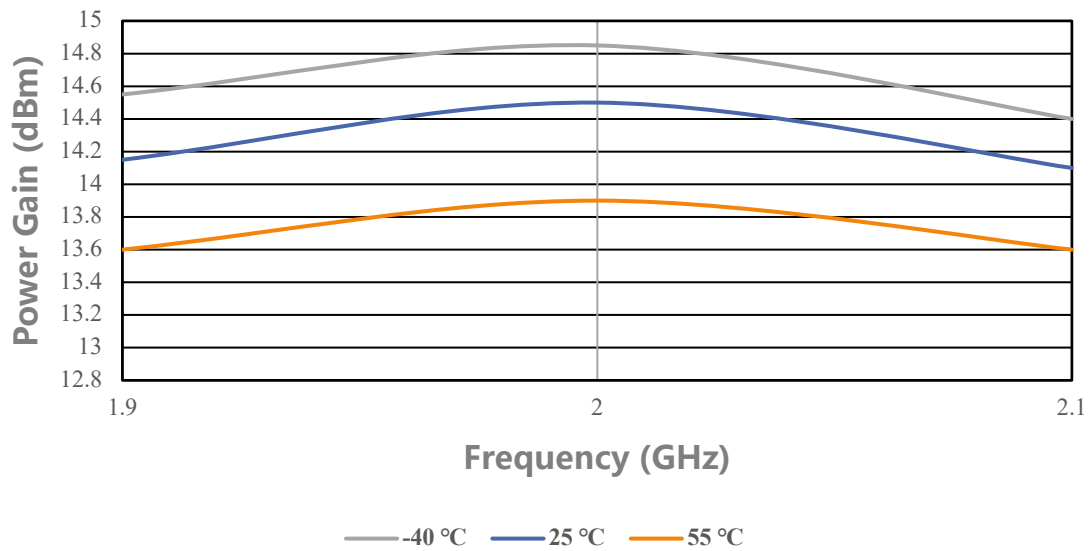
Saturated Power VS Frequency



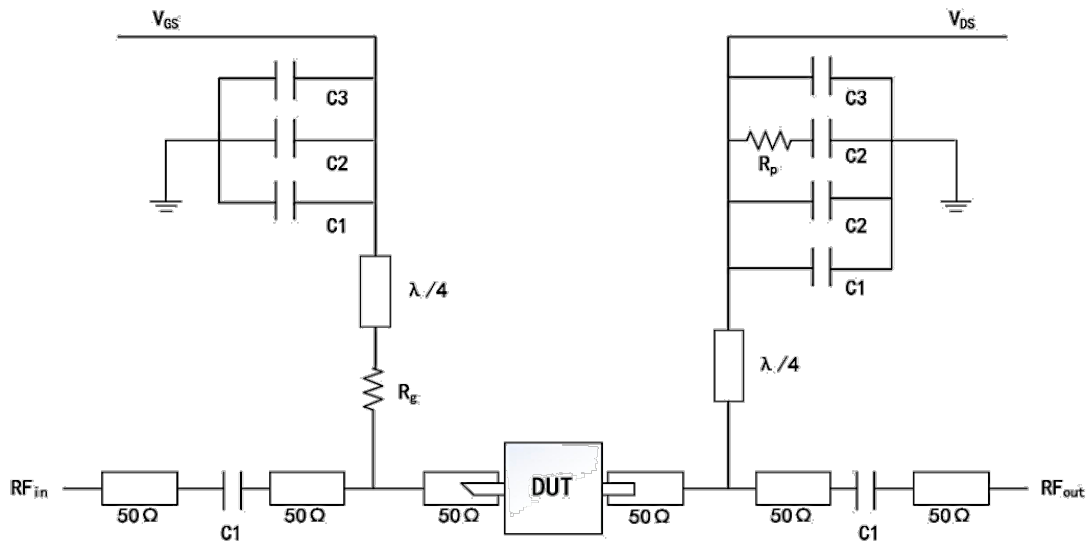
Efficiency VS Frequency



Power Gain VS Frequency



Simplified Block Diagram

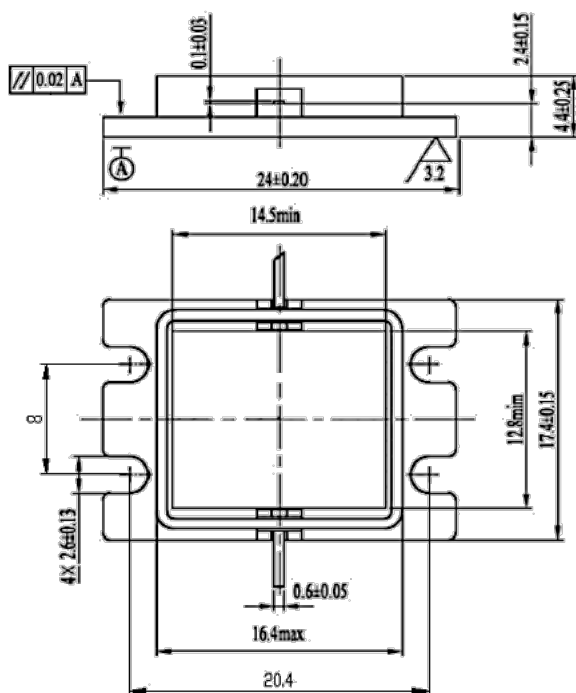


DUT information	
C1: 8 pF	Rp: 51 Ω
C2: 1000 pF	Rg: 15 Ω
C3: 100 μ F	

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