SANCOM

SA-PAN050053-P51

5.0-5.3 GHz High Power GaN-HEMT

Features

Frequency Range: 5.0-5.3 GHz

P_{sat}: ≥ 51 dBm

Power Gain: ≥ 10 dB

Efficiency: ≥ 45%

Z_{in}/ Z_{out} = 50 Ω

Description

Sancom Electric's GaN-HEMT SA-PAN050053-P51 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 32V operation. The SA-PAN0050053-P51 typically provides 51 dBm of saturated output power and 10dB of large-signal gain and can be widely used in various RF/microwave systems.

Copyright © 2024 Beijing Sancom Co., Ltd. All rights reserved.

ABSOLUTE MAXIMUM RATINGS

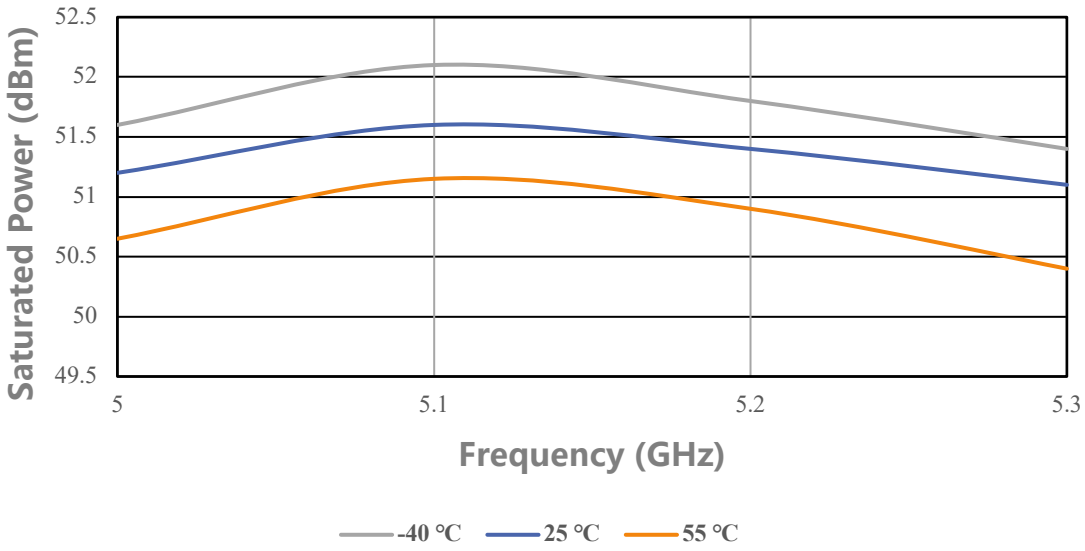
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	TC=25℃	40	V
Gate-Source Voltage	V_{GS}	TC=25℃	-5	V
Storage Temperature	T_{stg}	TC=25℃	-65 to 150	℃
Channel Temperature	T_{ch}	TC=25℃	150	℃

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	V_{DS}: 32 V CW (Continuous Wave) P_{in}: 41 dBm Freq: 5.0 ~ 5.3 GHz	-	8.7	-	A
Saturated Power	P_{sat}		51	-	-	dBm
Power Gain	G_p		10	-	-	dB
Efficiency	η		45	-	-	%
Flatness	ΔG		-0.8	-	0.8	dB

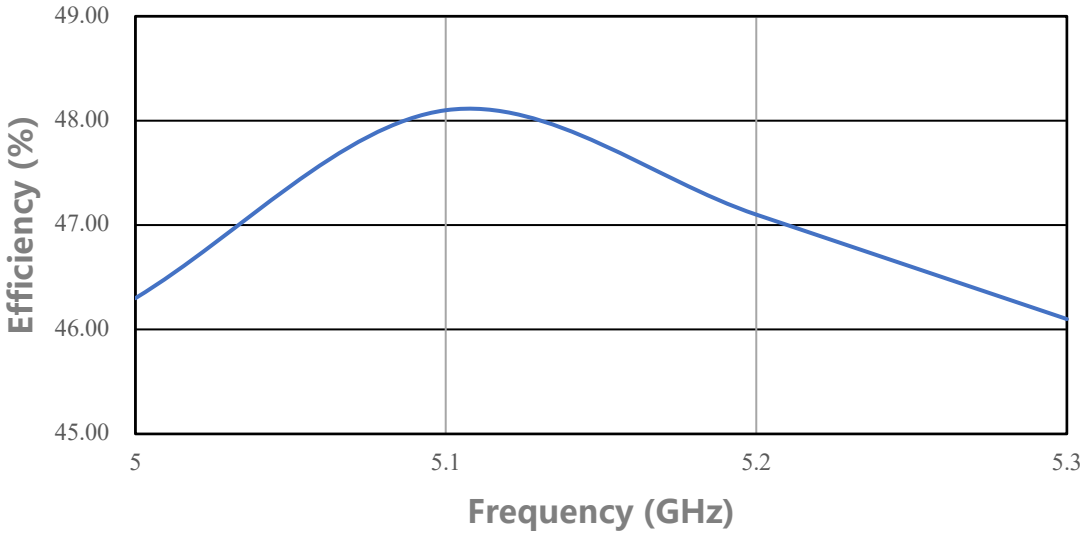
Performance Plots

Saturated Power VS Frequency

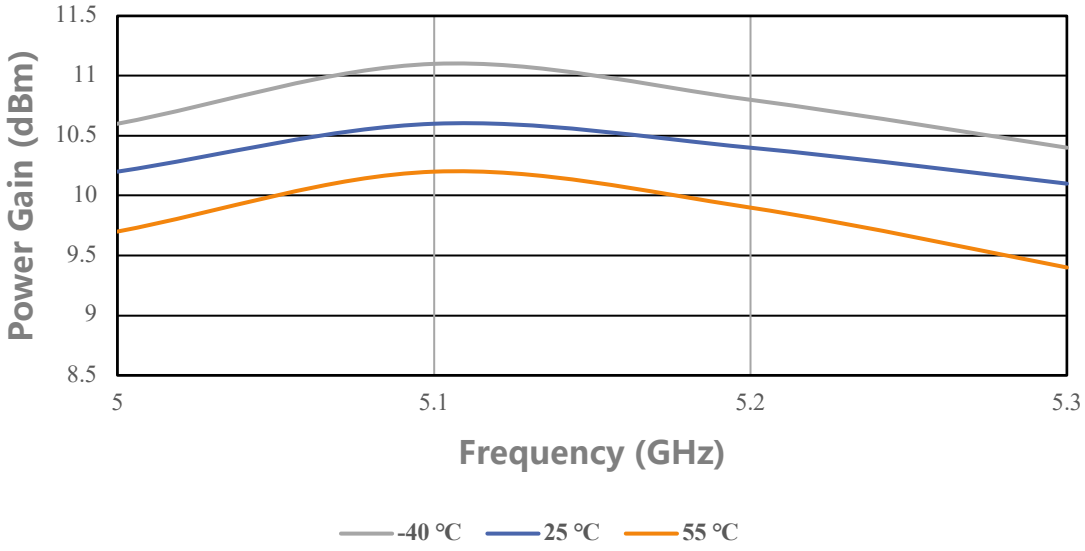


Copyright © 2024 Beijing Sancom Co., Ltd. All rights reserved.

Efficiency VS Frequency

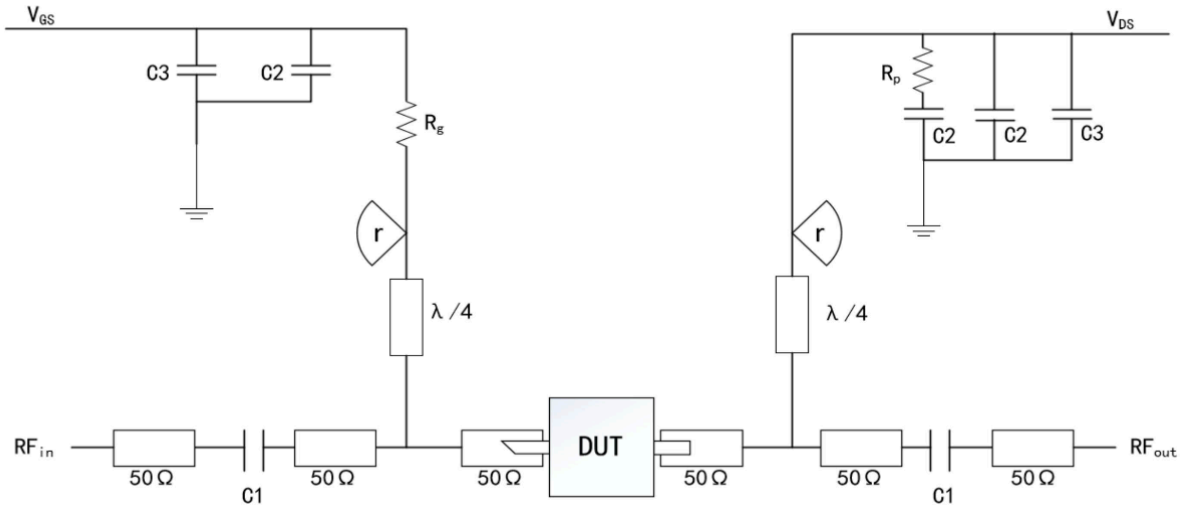


Power Gain VS Frequency



Copyright © 2024 Beijing Sancom Co., Ltd. All rights reserved.

Simplified Block Diagram



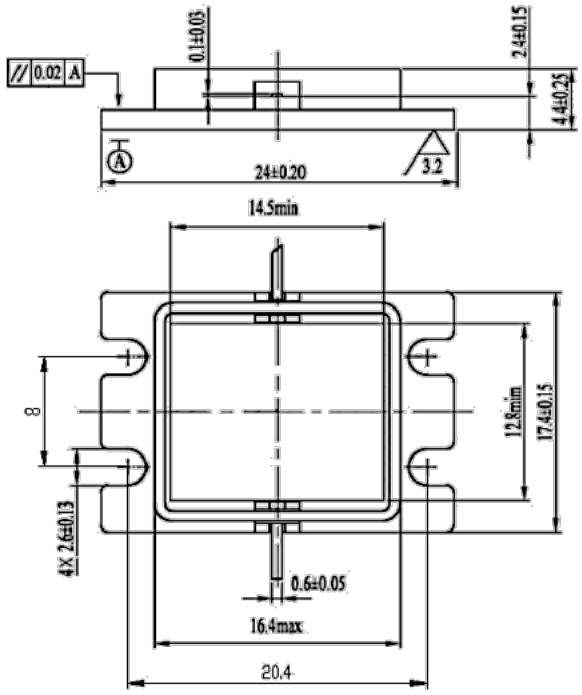
DUT information	
C1: 4.7 pF	Rp: 51 Ω
C2: 1000 pF	Rg: 15 Ω
C3: 100 μF	R≈5.8 mm

ESD Protection

ESD	Class Ⅲ	2000 V

Copyright © 2024 Beijing Sancom Co., Ltd. All rights reserved.

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

Copyright © 2024 Beijing Sancom Co., Ltd. All rights reserved.