

SANCOM

SA-PAN012014-P53**1.2-1.4 GHz High Power GaN-HEMT**

Features

Frequency Range: 1.2-1.4 GHz

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

Power Gain: $\geq 13\text{dB}$

Efficiency: $\geq 50\%$

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



Description

Sancom Electric's GaN-HEMT SA-PAN012014-P53 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 28V operation. The SA-PAN012014-P53 typically provides 53 dBm of saturated output power and 13 dB of large-signal gain and can be widely used in various RF/microwave systems.

ABSOLUTE MAXIMUM RATINGS

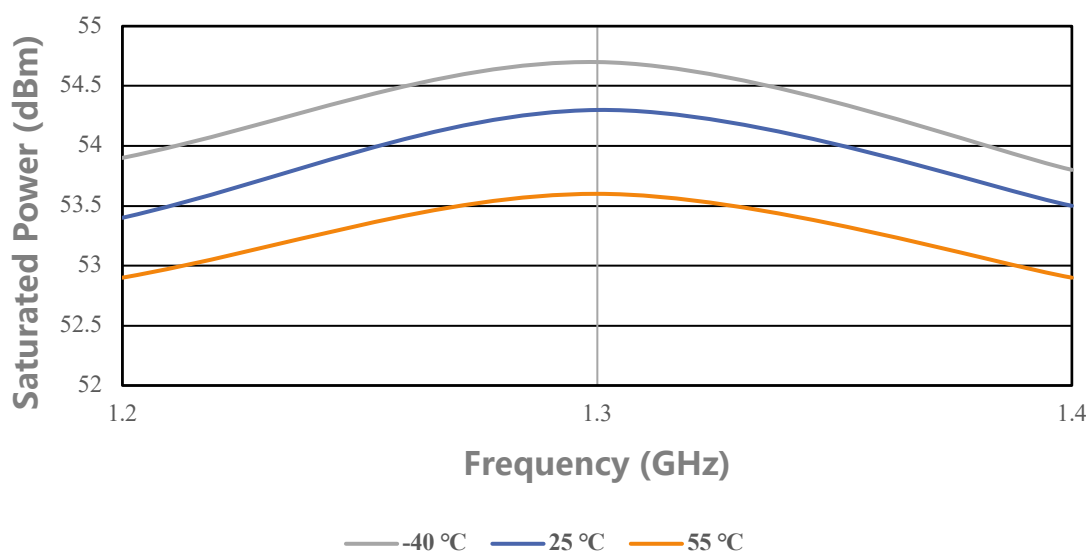
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}	$TC=25^{\circ}C$	40	V
Gate-Source Voltage	V_{GS}	$TC=25^{\circ}C$	-5	V
Storage Temperature	T_{stg}	$TC=25^{\circ}C$	-65 to 150	$^{\circ}C$
Channel Temperature	T_{ch}	$TC=25^{\circ}C$	150	$^{\circ}C$

ELECTRICAL SPECIFICATIONS

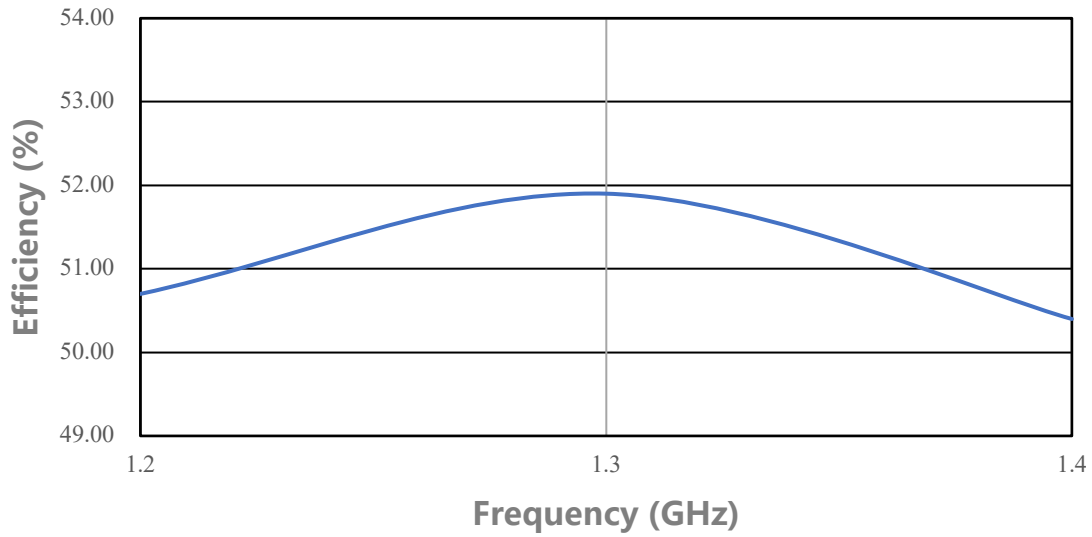
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	I_{DS}	$V_{DS}: 28V$ Pulse $T= 1ms, Duty= 10\%$ $P_{in}: 40dBm$ Freq: 1.2 ~ 1.4 GHz	-	14.3	-	A
Saturated Power	P_{sat}		53	-	-	dBm
Power Gain	G_p		13	-	-	dB
Efficiency	η		50	-	-	%
Flatness	ΔG		-0.8	-	0.8	dB

Performance Plots

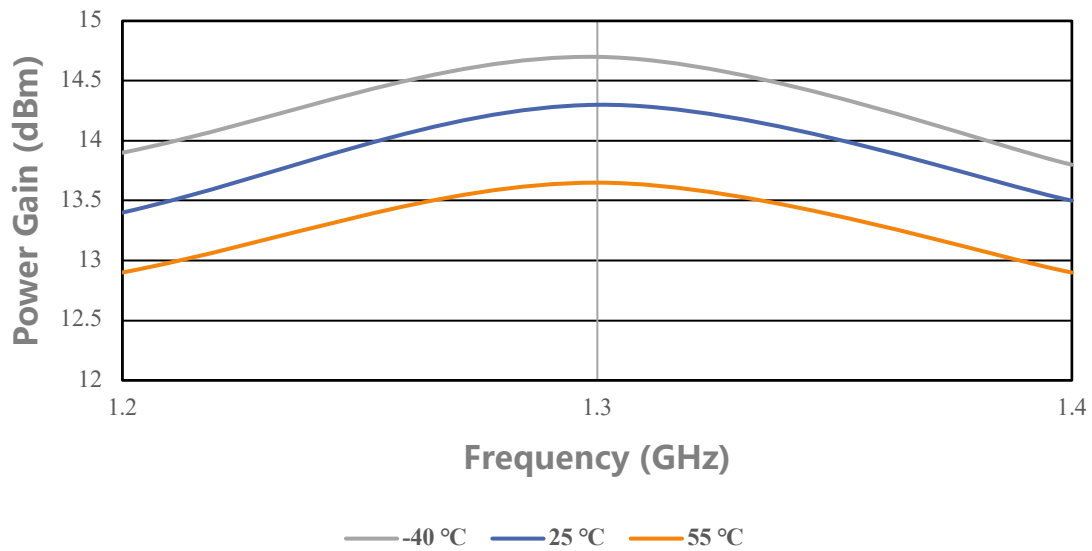
Saturated Power VS Frequency



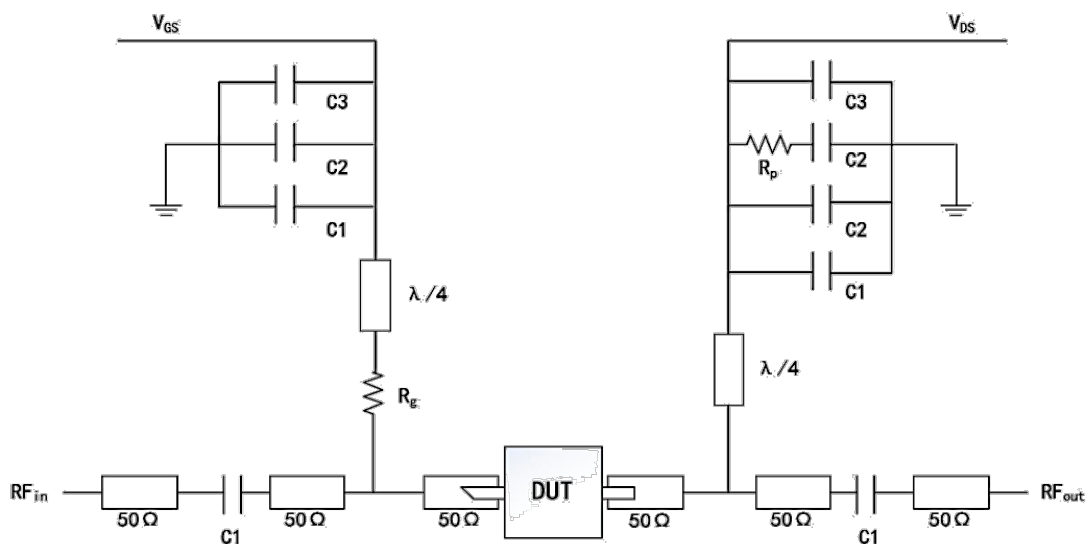
Efficiency VS Frequency



Power Gain VS Frequency



Simplified Block Diagram

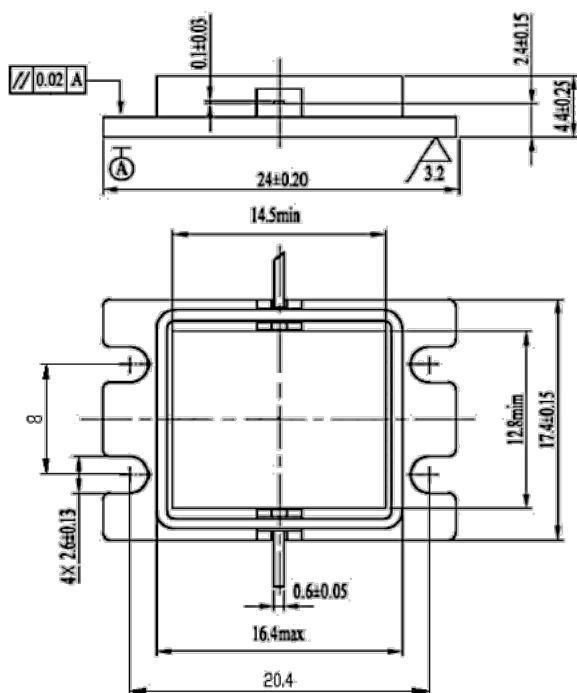


DUT information	
C1: 20 pF	Rp: 51 Ω
C2: 1000 pF	Rg: 15 Ω
C3: 100 μF	

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