

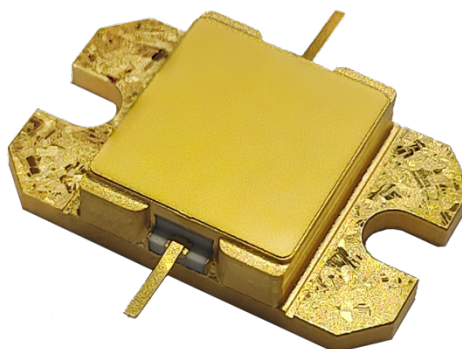
# SANCOM

**SA-PA077085-P36-1**

7.7-8.5 GHz High Power GaAs-HEMT

## Features

Frequency Range: 7.7-8.5 GHz

 $P_{1dB} : \geq 36 \text{ dBm}$ Power Gain:  $\geq 8 \text{ dB}$ Efficiency:  $\geq 40\%$  $Z_{in} / Z_{out} = 50 \Omega$ 

## Description

Sancom Electric's GaAs-HEMT SA-PA077085-P36-1 offers high power, high efficiency, ease of matching and greater consistency for high power applications with 10V operation. The SA-PA077085-P36-1 typically provides 36 dBm of 1dB output power and 8 dB of large-signal gain and can be widely used in various RF/microwave systems.

### ABSOLUTE MAXIMUM RATINGS

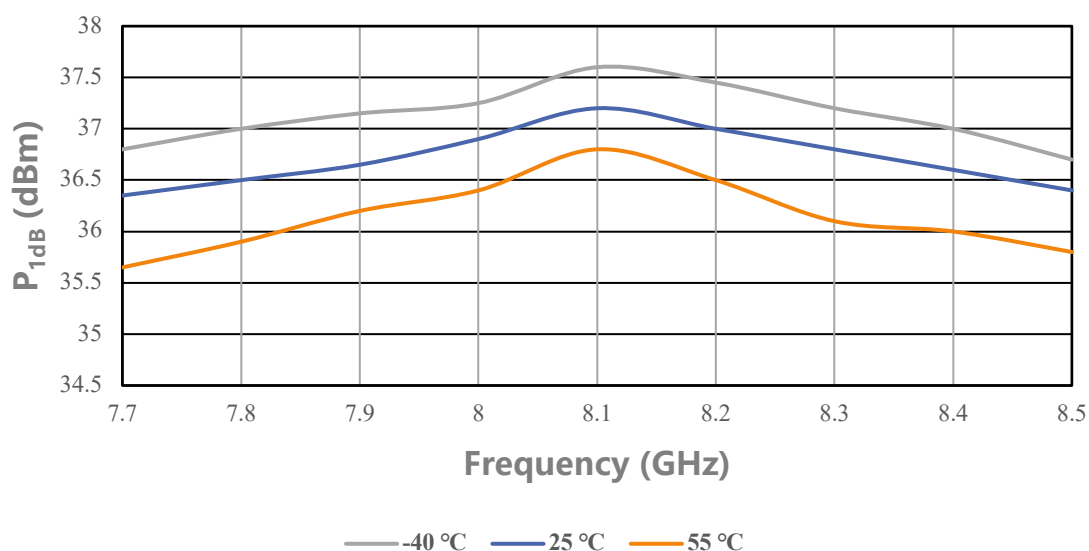
Parameter	Symbol	Condition	Rating	Unit
Drain-Source Voltage	$V_{DS}$	TC=25°C	11	V
Gate-Source Voltage	$V_{GS}$	TC=25°C	-5	V
Storage Temperature	$T_{stg}$	TC=25°C	-65 to 150	°C
Channel Temperature	$T_{ch}$	TC=25°C	150	°C

### ELECTRICAL SPECIFICATIONS

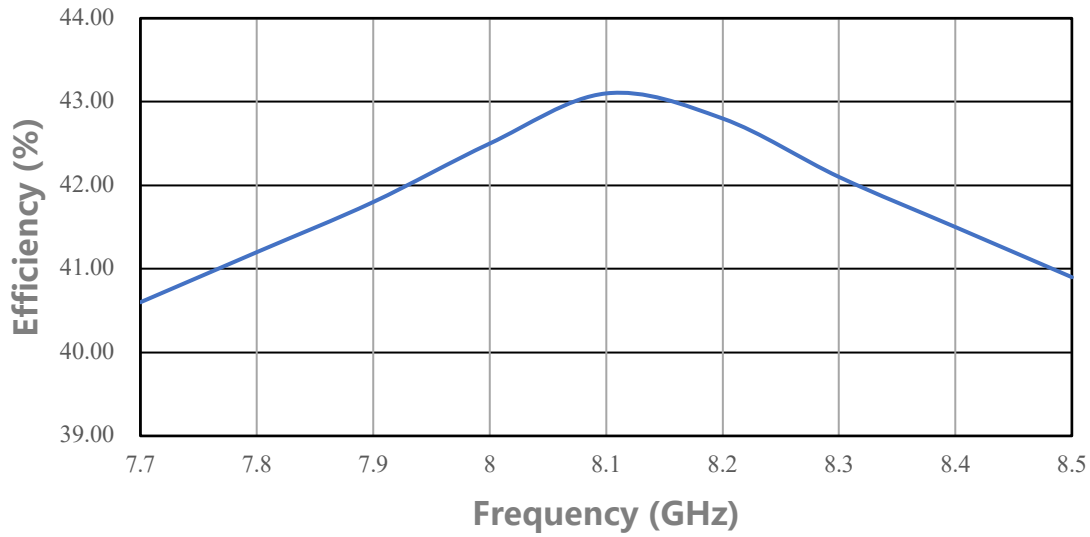
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source Current	$I_{DS}$	$V_{DS}$ : 10 V CW (Continuous Wave) $P_{in}$ : 28 dBm Freq: 7.7 ~ 8.5 GHz	-	1	-	A
1dB Output	$P_{1dB}$		36	-	-	dBm
Power Gain	$G_p$		8	-	-	dB
Efficiency	$\eta$		40	-	-	%
Flatness	$\Delta G$		-0.8	-	0.8	dB

## Performance Plots

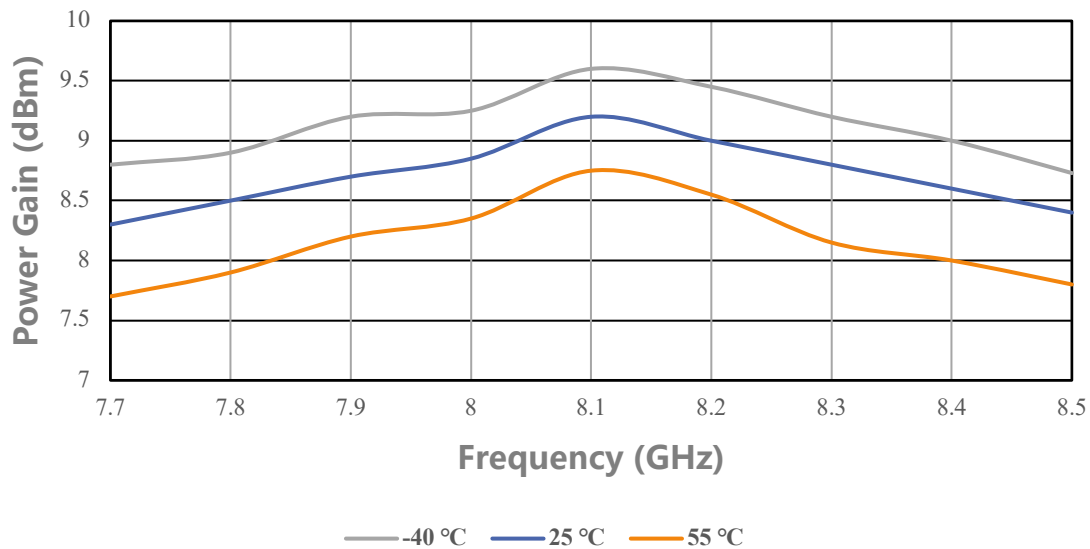
$P_{1dB}$  VS Frequency



### Efficiency VS Frequency



### Power Gain VS Frequency



## Simplified Block Diagram



DUT information	
C1: 1 pF	R <sub>p</sub> : 51 Ω
C2: 1000 pF	R <sub>g</sub> : 15 Ω
C3: 100 μF	R ≈ 3.5 mm

## 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