



2.45GHz, 50V, 250W, GaN RF Power Pallet

Description

The GPAV25250 is a 250-watt Power Amplifier GaN Pallet, with advanced assembly and cooling, fully matched to 50 Ω, easy to use, within operation band from 2.4-2.5GHz.

There is no guarantee of performance when this part is used in applications designed outside of these frequencies.

Optional size: 50mm*90mm

Input / Output connector: SMA/N Type

Further customization for discussion

Typical CW Performance: $V_{DD} = 48$ Volts, $V_{gs} = -3.3V$ $I_{dq} = 0mA$

Frequency	Pout (W)	G_P (dB)	Eff(%)
2450 MHz	260	14	71

Typical CW Performance: $V_{DD} = 48$ Volts, $V_{gs} = -3.3V$ $I_{dq} = 0mA$ pulse width 20us, duty cycle 10%

Frequency	Pout (W)	G_P (dB)	Eff(%)
2400 MHz	321	15.5	73
2450MHz	296	15.5	74
2500MHz	265	15.5	73

Applications and Features

- 2.45GHz RF Energy application: RF heating, cooking, medical
- Excellent thermal Stability and Excellent Ruggedness
- Compliant to Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC

Important Note: Proper Biasing Sequence for GaN HEMT Transistors

■ Turning the device ON

- 1) Set VGS to the pinch-off (V_P) voltage, typically -5 V
- 2) Turn on VDS to nominal supply voltage (50 V)
- 3) Increase VGS until IDS current is attained
- 4) Apply RF input power to desired level

■ Turning the device OFF

- 1) Turn RF power off
- 2) Reduce VGS down to V_P , typically -5 V
- 3) Reduce VDS down to 0 V
- 4) Turn off VGS

Table 1. Maximum Ratings

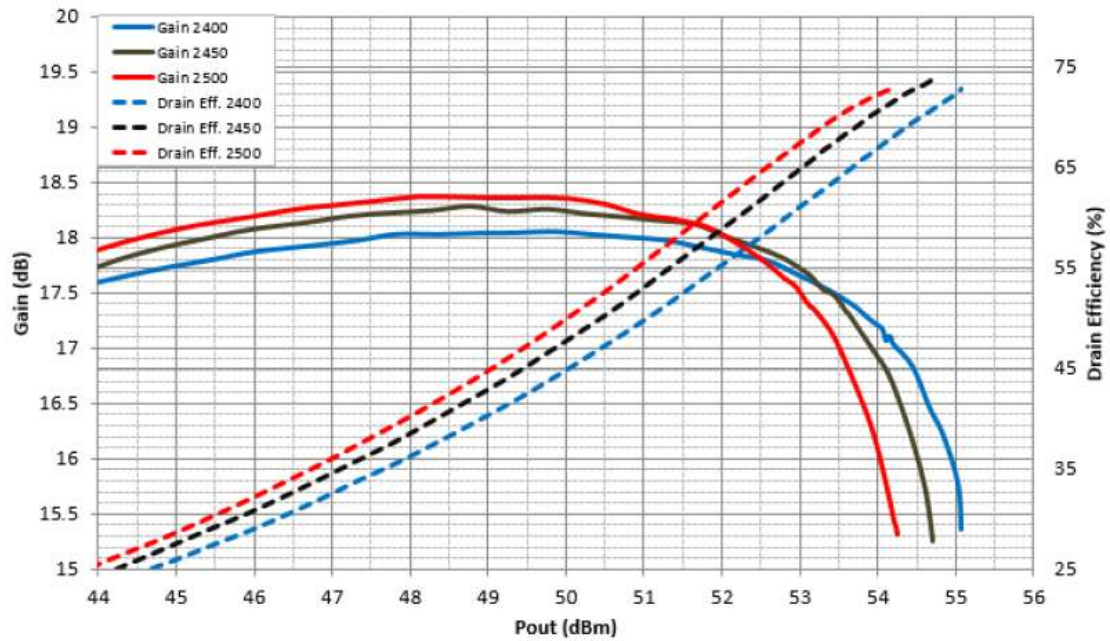
Rating	Symbol	Value	Unit
Drain--Source Voltage	V_{DSS}	+125	Vdc



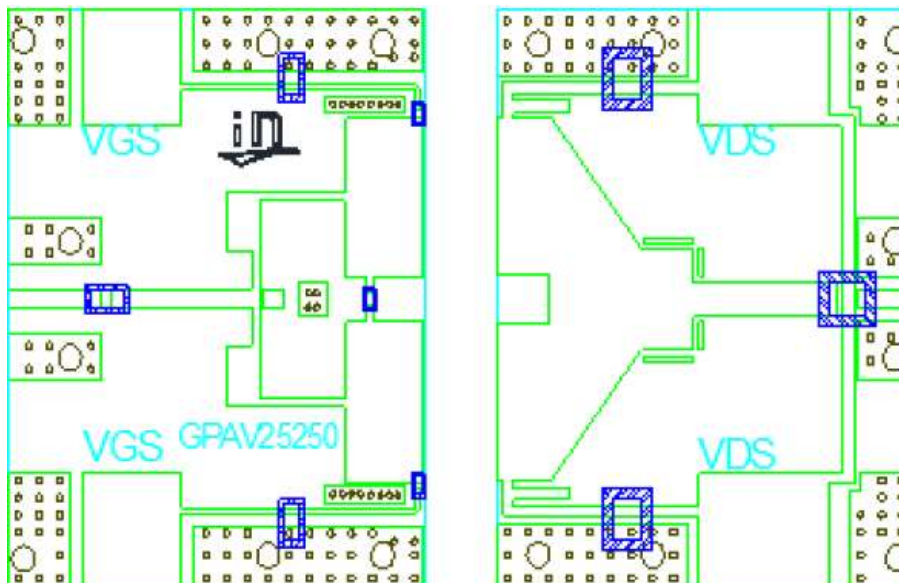
Gate--Source Voltage	V_{gs}	-8 to +0.5	Vdc
Operating Voltage	V_{DD}	0 to 55	Vdc
Maximum Forward Gate Current @ $T_c = 25^\circ\text{C}$	I_{gmax}	27	mA
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$
Case Operating Temperature	T_c	+150	$^\circ\text{C}$
Operating Junction Temperature	T_J	+225	$^\circ\text{C}$

TYPICAL Pulsed CW CHARACTERISTICS

$V_{DD}=50\text{V}$, $I_{dq}=0\text{mA}$ pulse width 20us, duty cycle 10%



Layout





Revision history

Table 5. Document revision history

Date	Revision	Datasheet Status
2017/03/28	Rev 1.0	Preliminary Datasheet

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