GTVA126001EC
advance specification

green Product

Thermally-Enhanced High Power RF GaN HEMT
600 W, 50 V, 1200 – 1400 MHz

Description

The GTVA126001EC is a 600-watt GaN high electron mobility transistor (HEMT) for use in the 1200 to 1400 MHz frequecy band. It features input matching, high efficiency, and a thermally-enhanced channel-mount package with bolt-down flange.

Advance Specification Data Sheets describe products that are being considered by Infineon for development and market introduction. The target performance shown in Advance Specifications is not final and should not be used for any design activity. Please contact Infineon about the future availability of these products.

Features

- GaN HEMT technology
- Broadband internal input matching
- Typical pulsed CW performance (class AB), 1200 – 1400 MHz, 50 V, pulse width = 300 µs, duty cycle = 10%
  - Output power P_{3dB} = 600 W
  - Drain efficiency = 65%
  - Linear Gain = 18 dB
- Pb-free and RoHS compliant

GTVA126001EC
Package H-36248-2

advance specification

Target RF Characteristics

Pulsed CW Specifications (tested in Infineon test fixture)
V_{DD} = 50 V, I_{DQ} = 20 mA, $P_{OUT(P3dB)}$ = 600 W; f = 1200 MHz to 1400 MHz, pulse width = 300 µs, duty cycle = 10%

Characteristic	Symbol	Min	Typ	Max	Unit
Linear Gain	G_{ps}	—	18	—	dB
Drain Efficiency	η_D	—	65	—	%

All published data at T_{CASE} = 25°C unless otherwise indicated

ESD: Electrostatic discharge sensitive device—observe handling precautions!

DC Characteristics

Characteristic	Conditions	Symbol	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	V_{GS} = –8 V, I_D = TBD mA	$V_{(BR)DSS}$	150	—	—	V
Drain-source Leakage Current	V_{GS} = –8 V, V_{DS} = 50 V	I_{DSS}	—	—	??	mA
Gate Threshold Voltage	V_{DS} = 10 V, I_D = 100 mA	$V_{GS(th)}$	–5	–3.2	–2.6	V
Gate Quiescent Voltage	V_{DS} = 50 V, I_D = TBD mA	$V_{GS(Q)}$	—	TBD	—	V

Maximum Ratings

Parameter	Symbol	Value	Unit
Drain-source Voltage	V_{DSS}	125	V
Gate-source Voltage	V_{GS}	–10 to +2	V
Operating Voltage	V_{DD}	0 to +50	V
Gate Current	I_G	TBD	mA
Drain Current	I_D	TBD	A
Junction Temperature	T_J	225	°C
Storage Temperature Range	T_{STG}	–65 to +150	°C

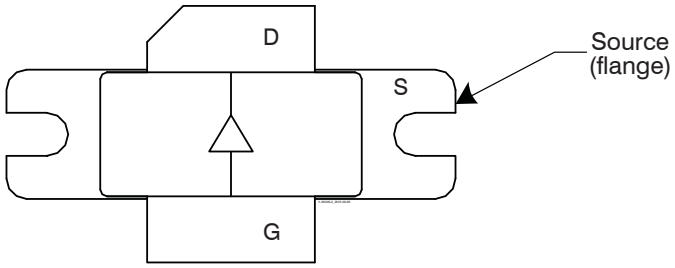
Thermal Characteristics

Characteristic	Conditions	Symbol	Value	Unit
Thermal Resistance	T_{CASE} = 70°C	$R_{\theta JC}$	TBD	°C/W

Ordering Information

Type and Version	Order Code	Package and Description	Shipping
GTVA126001EC V1 R0	TBD	H-36248-2, single-ended, bolt-down flange	Tape & Reel, 50 pcs
GTVA126001EC V1 R2	TBD	H-36248-2, single-ended, bolt-down flange	Tape & Reel, 250 pcs

Pinout Diagram (top view)



Pin	Description
D	Drain
G	Gate
S	Source (flange)

See next page for package dimensions

Package Outline Specifications

Package H-36248-2

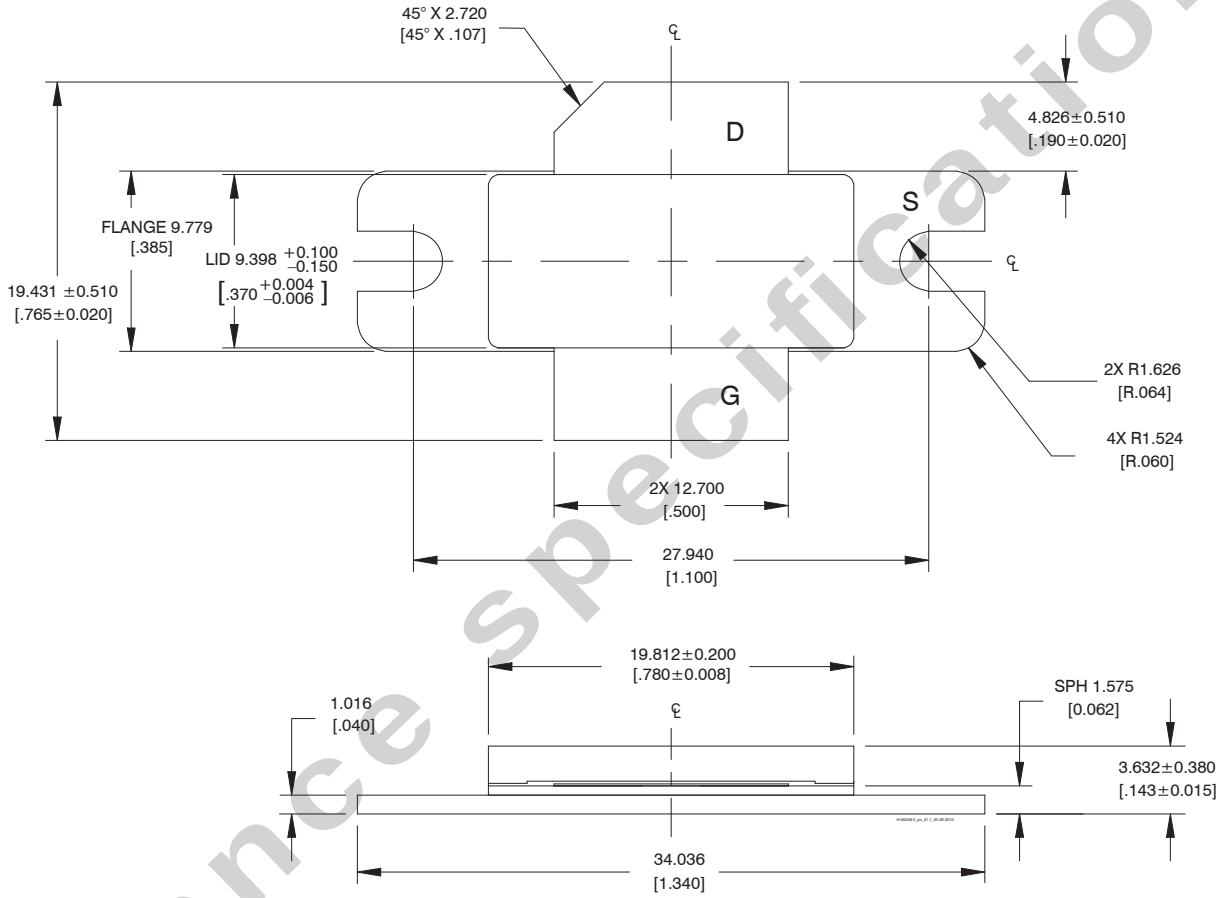


Diagram Notes—unless otherwise specified:

1. Interpret dimensions and tolerances per ASME Y14.5M-1994
2. Primary dimensions are mm; alternate dimensions are inches
3. All tolerances ± 0.127 [0.005]
4. Pins: D – drain, G – gate, S – source
5. Lead thickness: 0.10 +0.051/–0.025 mm [0.004 +0.002/–0.001 inch]
6. Gold plating thickness: 1.14 ± 0.38 micron [45 ± 15 microinch]

Find the latest and most complete information about products and packaging at the Infineon Internet page
http://www.infineon.com/rfpower

Revision History

Revision	Date	Data Sheet	Page	Subjects (major changes at each revision)
01	2016-09-27	Advance	all	Proposed specification for new product development

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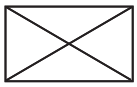

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