PTVA043502EC
PTVA043502FC

Thermally-Enhanced High Power RF LDMOS FETs
260 W, 50 V, 470 – 860 MHz

Description

The PTVA043502EC and PTVA043502FC are LDMOS FETs designed for use in power amplifier applications in the 470 to 860 MHz frequency band. Features include high gain and thermally-enhanced package with bolt-down and earless flanges. Manufactured with Infineon's advanced LDMOS process, these devices provide excellent thermal performance and superior reliability.

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

- Input matched
- Capable of handling 10:1 VSWR @50 V, 70 W (DVB-T OFDM 8 MHz) output power
- Integrated ESD protection
- Low thermal resistance
- Pb-free and RoHS compliant


PTVA043502EC
Package H-36248-4


PTVA043502FC
Package H-37248-4

Target RF Characteristics

DVB-T (8K OFMD, 64QAM) Characteristics (tested in Infineon wide lead test fixture)
V_{DD} = 50 V, I_{DQ} = 850 mA, f = 470–860 MHz, input PAR = 9.5 dB (unclipped), output PAR = 10.3 dB @ 0.01% CCDF probability

Characteristic	Symbol	Min	Typ	Max	Unit
Average Output Power	P_{OUT}	—	70	—	W
Gain	G_{ps}	—	17.5	—	dB
Drain Efficiency	η_D	—	25	—	%
Adjacent Channel Power Ratio	ACPR	—	–30	—	dBc

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

ESD: Electrostatic discharge sensitive device—observe handling precautions!

DC Characteristics (each side)

Characteristic	Conditions	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{GS} = 0 V, I_{DS} = 10 mA	$V_{(BR)DSS}$	115	—	—	V
Drain Leakage Current	V_{DS} = 28 V, V_{GS} = 0 V	I_{DSS}	—	—	1	µA
	V_{DS} = 63 V, V_{GS} = 0 V	I_{DSS}	—	—	10	µA
On-State Resistance	V_{GS} = 10 V, V_{DS} = 0.1 V	$R_{DS(on)}$	—	0.20	—	Ω
Operating Gate Voltage	V_{DS} = 50 V, I_{DQ} = 850 mA	V_{GS}	—	3.25	—	V
Gate Leakage Current	V_{GS} = 10 V, V_{DS} = 0 V	I_{GSS}	—	—	1	µA

Maximum Ratings

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	105	V
Gate-Source Voltage	V_{GS}	–6 to +12	V
Junction Temperature	T_J	200	°C
Storage Temperature Range	T_{STG}	–65 to +150	°C
Thermal Resistance	$R_{\theta JC}$	TBD	°C/W

Ordering Information

Type and Version	Order Code	Package Description	Shipping
PTVA043502EC V1	TBD	H-36248-4, bolt-down	Tray
PTVA043502EC V1 R250	TBD	H-36248-4, bolt-down	Tape & Reel, 250 pcs
PTVA043502FC V1	TBD	H-37248-4, earless flange	Tray
PTVA043502FC V1 R250	TBD	H-37248-4, earless flange	Tape & Reel, 250 pcs

Package Outline Specifications

Package H-36248-4

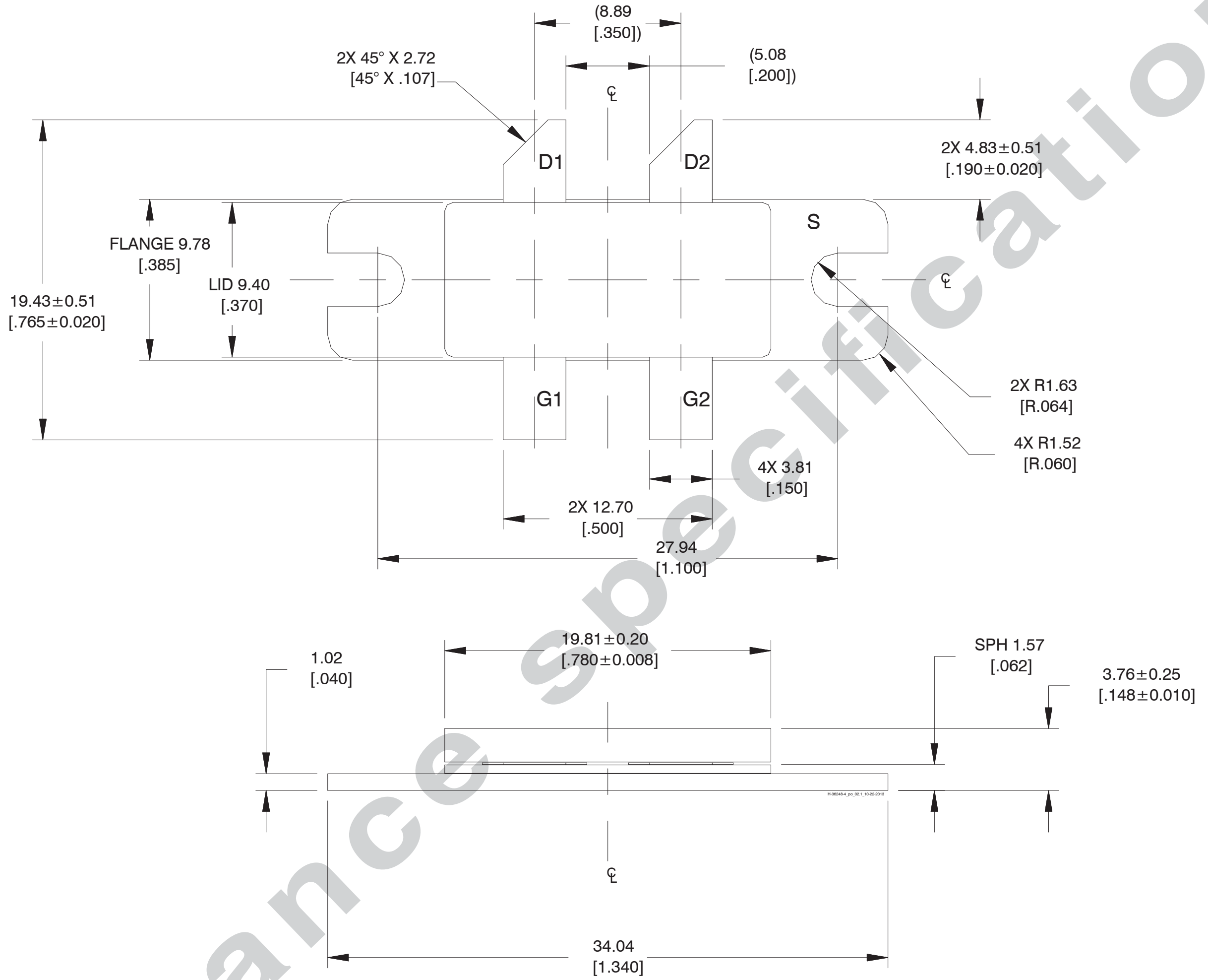

Diagram Notes—unless otherwise specified:

1. Interpret dimensions and tolerances per ASME Y14.5M-1994.
2. Primary dimensions are mm. Alternate dimensions are inches.
3. All tolerances ± 0.127 [.005] unless specified otherwise.
4. Pins: D1, D2 – drains; G1, G2 – gates; S – source.
5. Lead thickness: 0.10 + 0.076/–0.025 mm [0.004+0.003/–0.001 inch].
6. Gold plating thickness: 1.14 ± 0.38 micron [45 ± 15 microinch].

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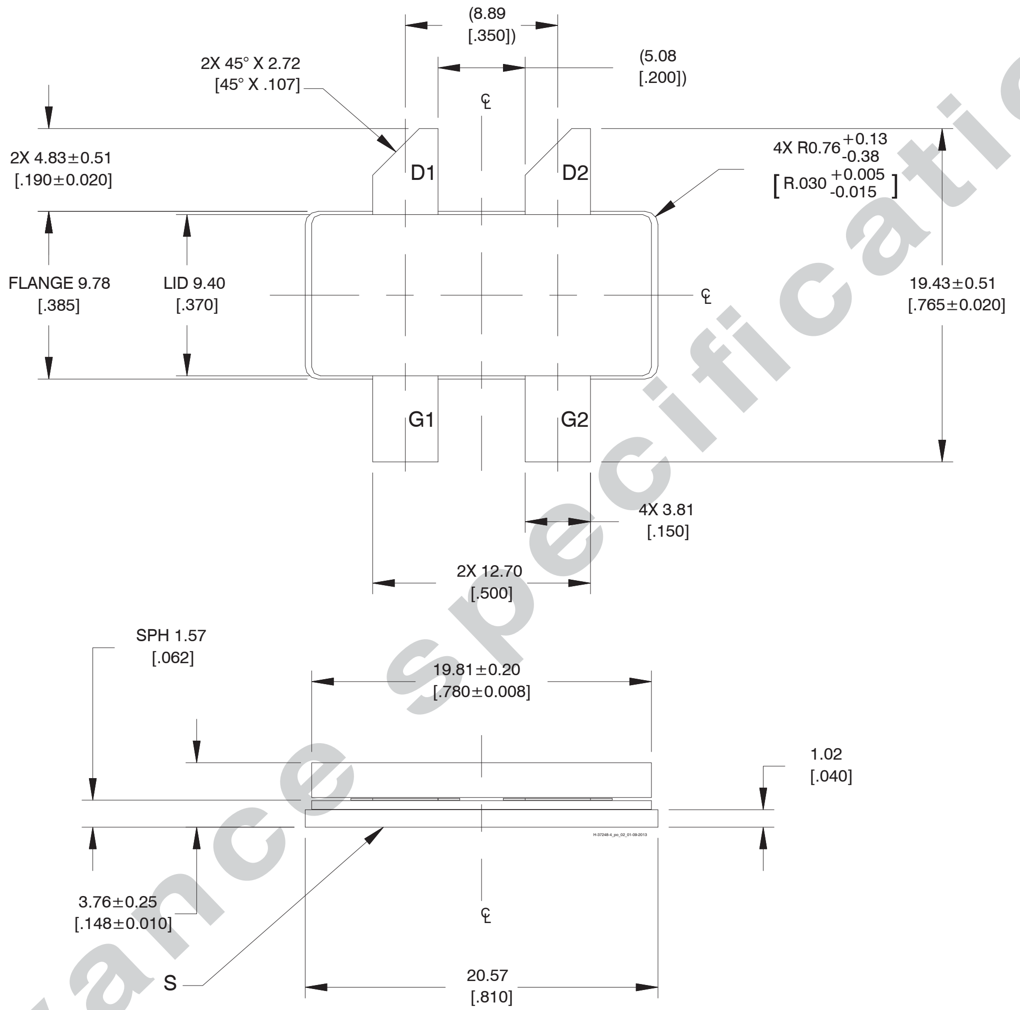

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Find the latest and most complete information about products and packaging at the Infineon Internet page
http://www.infineon.com/rfpower

Revision History

Revision	Date	Data Sheet Type	Page	Subjects (major changes since last revision)
01	2014-05-12	Advance	All	Data Sheet reflects advance specification for product development

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Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (**www.infineon.com/rfpower**).

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Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

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