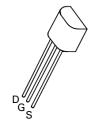


### P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

## **Features and Benefits**

- $V_{DS} = 45V$
- $R_{DS(ON)} = 14\Omega$
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q101, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative.
- https://www.diodes.com/quality/product-definitions/



E-Line **TO92 Compatible** 

#### REFER TO ZVP2106A FOR GRAPHS

### Absolute Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	Vps	-45	V
Continuous Drain Current at T <sub>A</sub> = +25°C	lo	-230	mA
Pulsed Drain Current	Ідм	-3	A
Gate Source Voltage	Vgs	± 20	V
Power Dissipation at T <sub>A</sub> = +25°C	Ртот	700	mW
Operating and Storage Temperature Range	$T_{J},T_{STG}$	-55 to +150	°C

# Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition	
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	-45	1	_	>	$I_D = -100 \mu A, V_{GS} = 0 V$	
Gate-Source Threshold Voltage	V <sub>GS(TH)</sub>	-1	-	-3.5	<b>V</b>	$I_D = -1 \text{mA}, V_{DS} = V_{GS}$	
Gate-Body Leakage	IGSS	_	_	-20	nA	$V_{GS} = -15V$ , $V_{DS} = 0V$	
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	_	1	-500	nA	$V_{GS} = 0V, V_{DS} = -25V$	
Static Drain-Source On-State Resistance (Note 1)	R <sub>DS(ON)</sub>	_	_	14	Ω	$V_{GS} = -10V, I_D = -200mA$	
Forward Transconductance (Note 1) (Note 2)	9fs	_	150	_	ms	$V_{DS} = -10V, I_{D} = -200mA$	
Input Capacitance (Note 2)	C <sub>iss</sub>	_	60	_	pF	$V_{GS} = 0V, V_{DS} = -10V,$ f = 1.0MHz	
Turn-On Time (Note 2) (Note 3)	t <sub>(ON)</sub>	_	_	20	ns	V 25V I 500mA	
Turn-Off Time (Note 2) (Note 3)	t <sub>(OFF)</sub>	_	_	20	ns	$V_{DD} \approx -25V$ , $I_D = -500$ mA	

- 1. Measured under pulsed conditions. Pulse Width = 300μs. Duty cycle ≤2%.
- 2. Sample test.
- 3. Switching times measured with a  $50\Omega$  source impedance and <5ns rise time on a pulse generator.

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  - 2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.
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