

# SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

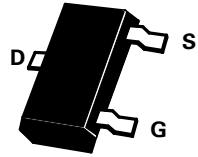
## ZVP3310F

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### FEATURES

- \* 100 Volt  $V_{DS}$
- \*  $R_{DS(on)}=20\Omega$

COMPLEMENTARY TYPE - ZVN3310F  
PARTMARKING DETAIL - MR



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	$V_{DS}$	-100	V
Continuous Drain Current at $T_{amb}=25^{\circ}\text{C}$	$I_D$	75	mA
Pulsed Drain Current	$I_{DM}$	-1.2	A
Gate Source Voltage	$V_{GS}$	$\pm 20$	V
Power Dissipation at $T_{amb}=25^{\circ}\text{C}$	$P_{tot}$	330	mW
Operating and Storage Temperature Range	$T_j:T_{stg}$	-55 to +150	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	$BV_{DSS}$	-100		V	$I_D=-1\text{mA}$ , $V_{GS}=0\text{V}$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1.5	-3.5	V	$I_D=-1\text{mA}$ , $V_{DS}=V_{GS}$
Gate-Body Leakage	$I_{GSS}$		-20	nA	$V_{GS}=\pm 20\text{V}$ , $V_{DS}=0\text{V}$
Zero Gate Voltage Drain Current	$I_{DSS}$		-1 -50	$\mu\text{A}$ $\mu\text{A}$	$V_{DS}=-100\text{V}$ , $V_{GS}=0$ $V_{DS}=-80\text{V}$ , $V_{GS}=0\text{V}$ , $T=125^{\circ}\text{C}(2)$
On-State Drain Current(1)	$I_{D(on)}$	-300		mA	$V_{DS}=-25\text{V}$ , $V_{GS}=-10\text{V}$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		20	$\Omega$	$V_{GS}=-10\text{V}$ , $I_D=-150\text{mA}$
Forward Transconductance (1)(2)	$g_{fs}$	50		mS	$V_{DS}=-25\text{V}$ , $I_D=-150\text{mA}$
Input Capacitance (2)	$C_{iss}$		50	pF	$V_{DS}=-25\text{V}$ , $V_{GS}=0\text{V}$ , $f=1\text{MHz}$
Common Source Output Capacitance (2)	$C_{oss}$		15	pF	
Reverse Transfer Capacitance (2)	$C_{rss}$		5	pF	
Turn-On Delay Time (2)(3)	$t_{d(on)}$		8	ns	$V_{DD}=-25\text{V}$ , $I_D=-150\text{mA}$
Rise Time (2)(3)	$t_r$		8	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$		8	ns	
Fall Time (2)(3)	$t_f$		8	ns	

(1) Measured under pulsed conditions. Width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$  (2) Sample test.

(3) Switching times measured with 50 $\Omega$  source impedance and <5ns rise time on a pulse generator

## TYPICAL CHARACTERISTICS

