

# SOT23 N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

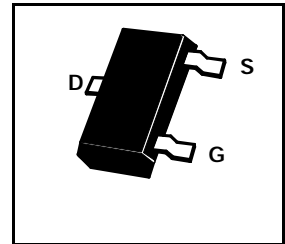
## VN10LF

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### FEATURES

- \* 60 Volt  $V_{DS}$
- \*  $R_{DS(on)}=5\Omega$

PARTMARKING DETAIL – MY



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	$V_{DS}$	60	V
Continuous Drain Current at $T_{amb} = 25^{\circ}C$	$I_D$	150	mA
Pulsed Drain Current	$I_{DM}$	3	A
Gate Source Voltage	$V_{GS}$	$\pm 20$	V
Power Dissipation at $T_{amb} = 25^{\circ}C$	$P_{tot}$	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	$BV_{DSS}$	60			V	$I_D=100\mu A, V_{GS}=0V$
Gate-Source Breakdown Voltage	$V_{GS(th)}$	0.8		2.5	V	$I_D=1mA, V_{DS}=V_{GS}$
Gate Body Leakage	$I_{GSS}$			100	nA	$V_{GS}=\pm 20V, V_{DS}=0V$
Zero Gate Voltage Drain Current (1)	$I_{DSS}$			10	$\mu A$	$V_{DS}=60V, V_{GS}=0V$
On State Drain Current(1)	$I_{D(on)}$	750			mA	$V_{DS}=15V, V_{GS}=10V$
Static Drain Source On State Resistance (1)	$R_{DS(on)}$			5.0 7.5	$\Omega$	$V_{GS}=10V, I_D=500mA$ $V_{GS}=5V, I_D=200mA$
Forward Transconductance (1)(2)	$g_{fs}$	100			mS	$V_{DS}=15V, I_D=500mA$
Input Capacitance (2)	$C_{iss}$			60	pF	$V_{DS}=25V, V_{GS}=0V$ $f=1MHz$
Common Source Output Capacitance (2)	$C_{oss}$			25	pF	
Reverse Transfer Capacitance (2)	$C_{rss}$			5	pF	
Turn-On Time (2)(3)	$t_{(on)}$		3	10	ns	$V_{DD}\approx 15V, I_D=600mA$
Turn-Off Time (2)(3)	$t_{(off)}$		4	10	ns	

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

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

Spice parameter data is available upon request for this device

For typical characteristics graphs see ZVN3306F datasheet.