

SOT23 N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

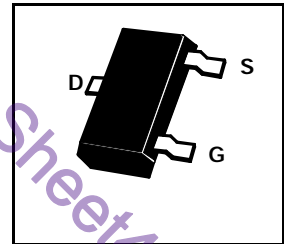
VN10LF

ISSUE 2 – JANUARY 1996

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}	± 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	μA	$V_{DS}=60V, V_{GS}=0V$
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	Ω	$V_{GS}=10V, I_D=500mA$ $V_{GS}=5V, I_D=200mA$
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 μs . Duty cycle $\leq 2\%$ (2) Sample test.

(3) Switching times measured with 50 Ω 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.