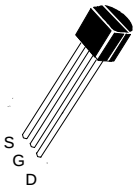


N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ISSUE 2 – FEB 94

VN2222LL



TO92

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}	1	A
Gate Source Voltage	V_{GS}	± 40	V
Power Dissipation at $T_{amb} = 25^{\circ}C$	P_{tot}	400	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.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	BV_{DSS}	60		V	$I_D = 100\mu A, V_{GS} = 0V$
Gate-Source Breakdown Voltage	$V_{GS(th)}$	0.6	2.5	V	$I_D = 1mA, V_{DS} = V_{GS}$
Gate Body Leakage	I_{GSS}		100	nA	$V_{GS} = \pm 30V, V_{DS} = 0V$
Zero Gate Voltage Drain Current (1)	I_{DSS}		10 500	μA μA	$V_{DS} = 48V, V_{GS} = 0V$ $V_{DS} = 48V, V_{GS} = 0V, T = 125^{\circ}C$
On State Drain Current(1)	$I_{D(on)}$	750		mA	$V_{DS} = 10V, V_{GS} = 10V$
Static Drain Source On State Voltage (1)	$V_{DS(on)}$		3.75 1.50	V V	$V_{GS} = 10V, I_D = 500mA$ $V_{GS} = 5V, I_D = 200mA$
Static Drain Source On State Resistance (1)	$R_{DS(on)}$		7.5	Ω	$V_{GS} = 10V, I_D = 500mA$
Forward Transconductance (1)(2)	g_{fs}	100		mS	$V_{DS} = 10V, I_D = 500mA$
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)	$t_{(on)}$		10	ns	$V_{DD} = 15V, I_D = 600mA$
Turn-Off Time (2)(3)	$t_{(off)}$		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