

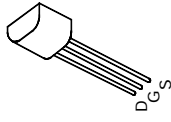
N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ZVNL110A

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FEATURES

- * 100 Volt V_{DS}
- * $R_{DS(on)} = 3\Omega$
- * Low threshold voltage



E-Line
TO92 Compatible

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	320	mA
Pulsed Drain Current	I_{DM}	6	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at $T_{amb}=25^{\circ}\text{C}$	P_{tot}	700	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	$V_{GS(th)}$	0.75	1.5	V	$I_D = 1\text{mA}, V_{DS} = V_{GS}$
Gate-Body Leakage	I_{GSS}		100	nA	$V_{GS} = \pm 20\text{V}, V_{DS} = 0\text{V}$
Zero Gate Voltage Drain Current	I_{DSS}		10 500	μA μA	$V_{DS} = 100\text{V}, V_{GS} = 0$ $V_{DS} = 80\text{V}, V_{GS} = 0\text{V}, T = 125^{\circ}\text{C}$ (2)
On-State Drain Current(1)	$I_{D(on)}$	750		mA	$V_{DS} = 25\text{V}, V_{GS} = 5\text{V}$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		4.5 3.0	Ω Ω	$V_{GS} = 5\text{V}, I_D = 250\text{mA}$ $V_{GS} = 10\text{V}, I_D = 500\text{mA}$
Forward Transconductance (1)(2)	g_{fs}		225	mS	$V_{DS} = 25\text{V}, I_D = 500\text{mA}$
Input Capacitance (2)	C_{iss}		75	pF	
Common Source Output Capacitance (2)	C_{oss}		25	pF	$V_{DS} = 25\text{V}, V_{GS} = 0\text{V}, f = 1\text{MHz}$
Reverse Transfer Capacitance (2)	C_{rss}		8	pF	
Turn-On Delay Time (2)(3)	$t_{d(on)}$		7	ns	
Rise Time (2)(3)	t_r		12	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$		15	ns	$V_{DD} = 25\text{V}, V_{GS} = 10\text{V}, I_D = 1\text{A}$
Fall Time (2)(3)	t_f		13	ns	