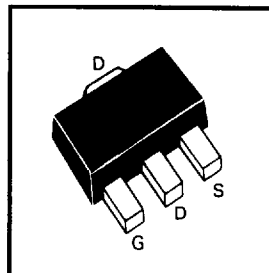


SOT89 N CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ZVN2120Z

* PARTMARKING DETAIL – ZVN2120Z – N10



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DS}	200	V
Continuous Drain Current @ $T_{amb}=25^{\circ}C$	I_D	0.27	A
Pulsed Drain Current	I_{DM}	2	A
Gate-Source Voltage	V_{GS}	± 20	V
Max Power Dissipation @ $T_{amb}=25^{\circ}C$	P_{TOT}	1.5	W
Operating And Storage Temperature Range	$t_j:tstg$	-65 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}	200			V	$I_D=1mA, V_{GS}=0$
Gate-Source Threshold Voltage	$V_{GS(TH)}$	1		3	V	$I_D=1mA, V_{DS}=V_{GS}$
Gate Body Leakage	I_{GSS}			20	nA	$V_{GS}=\pm 20V, V_{DS}=0$
Zero Gate Voltage Drain Current (2)	I_{DSS}			10 100	μA μA	$V_{DS}=\text{max rating}, V_{GS}=0$ $V_{DS}=0.8 \times \text{max. rating}, V_{GS}=0$ ($T=125^{\circ}C$)
On-State Drain Current (3)	$I_{D(ON)}$	500			mA	$V_{DS}=-25V, V_{GS}=10V$
Static Drain-Source On-State Resistance (3)	$R_{DS(ON)}$			10	Ω	$I_D=250mA, V_{GS}=10V$
Forward Transconductance (2)	G_{FS}	100			mS	$V_{DS}=25V, I_D=250mA$
Input Capacitance (2)	C_{ISS}			85	pF	$V_{DS}=25V,$ $V_{GS}=0$ $f=1MHZ$
Common Source Output Capacitance (2)	C_{OSS}			20	pF	
Reverse Transfer Capacitance (2)	C_{RSS}			7	pF	
Turn-On Delay Time (1) (2)	$T_{D(ON)}$			8	ns	$V_{DD}=25V, I_D=250mA$
Rise Times (1) (2)	T_R			8	ns	
Turn-Off Delay Time (1) (2)	$T_{D(OFF)}$			20	ns	
Fall Time (1) (2)	T_F			12	ns	

(1) Switching times measured with 50Ω source impedance and $<5ns$ rise time on a pulse generator.

(2) Sample test.

(3) Measured under pulsed conditions. Pulse width=300 μs . Duty cycles $\leq 2\%$.