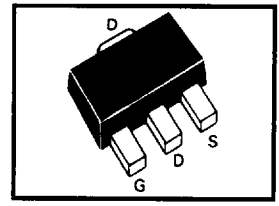
SOT89 N CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ZVN4206Z

PARTMARKING DETAIL – ZVN4206Z – N26

* FOR TYPICAL CHARACTERISTIC GRAPHS SEE ZVN4206G DATASHEET



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DS}	60	V
Continuous Drain Current @ Tamb=25°C	I_D	0.9	A
Pulsed Drain Current	I_{DM}	8	A
Gate-Source Voltage	V_{GS}	± 20	V
Max Power Dissipation @ T_{amb}=25°C	P_{TOT}	1.5	W
Operating And Storage Temperature Range	tj:tstg	-55 TO +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb}=25°C unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	B_{VDSS}	60			V	I_D=1mA, V_{GS}=0
Gate-Source Threshold Voltage	$V_{GS(TH)}$	1.3		3	V	I_D=1mA, V_{DS}=V_{GS}
Gate Body Leakage	I_{GSS}			100	nA	V_{GS}=±20V, V_{DS}=0
Zero Gate Voltage Drain Current (2)	I_{DSS}			10 100	µA µA	V_{DS}=max rating, V_{GS}=0 V_{DS}=0.8xmax.rating, V_{GS}=0 (T=125°C)
On-State Drain Current *	$I_{D(ON)}$	3			mA	V_{DS}=25V, V_{GS}=10V
Static Drain-Source On-State Resistance *	$R_{DS(ON)}$			1 1.5	Ω Ω	I_D=1.5A, V_{GS}=10V I_D=0.5A, V_{GS}=5V
Forward Transconductance (2)	G_{FS}	0.3			S	V_{DS}=25V, I_D=250mA
Input Capacitance (2)	C_{ISS}			100	pF	V_{DS}=25V, V_{GS}=0 f=1MHZ
Common Source Output Capacitance (2)	C_{OSS}			60	pF	
Reverse Transfer Capacitance (2)	C_{RSS}			20	pF	
Turn-On Delay Time (1) (2)	$T_{D(ON)}$			8	ns	V_{DD}=25V, I_D=250mA
Rise Times (1) (2)	T_R			12	ns	
Turn-Off Delay Time (1) (2)	$T_{D(OFF)}$			12	ns	
Fall Time (1) (2)	T_F			15	ns	

DRAIN-SOURCE DIODE CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Forward on voltage *	V_{SD}		0.85		V	V_{GS}=0, I_S=-0.6A
Reverse Recovery Time	T_{RR}		70		ns	V_{GS}=0, I_F=0.6 I_R=0.1A

(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=300µs. Duty cycle≤ 2%.