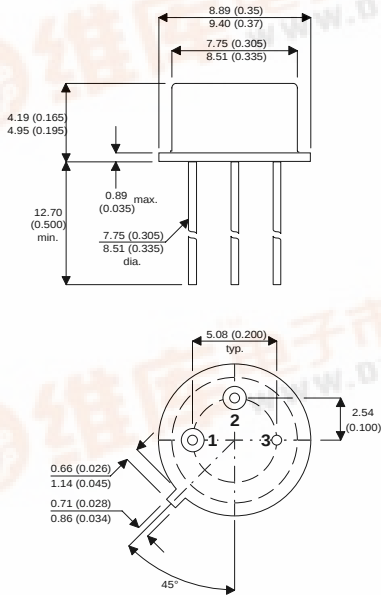


ZVP2106B

MECHANICAL DATA
Dimensions in mm (inches)



TO39

Pin 1 – Source Pin 2 – Gate Pin 3 – Drain

P CHANNEL ENHANCEMENT
MODE DMOS FET

BV_{DSS}	- 60V
$I_{D(cont)}$	0.76A
$R_{DS(on)}$	0.5 Ω

FEATURES

- FAST SWITCHING SPEEDS
- NO SECONDARY BREAKDOWN
- EXCELLENT TEMPERATURE STABILITY
- HIGH INPUT IMPEDANCE
- LOW CURRENT DRIVE
- EASE OF PARALLELING

ABSOLUTE MAXIMUM RATINGS($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{GS}	Gate – Source Voltage	± 20
V_{DS}	Drain – Source Voltage	-60V
I_D	Continuous Drain Current ($V_{GS} = 10V$, $T_{case} = 25^{\circ}C$)	0.28A
I_D	Continuous Drain Current ($V_{GS} = 10V$, $T_{case} = 100^{\circ}C$)	-0.76A
I_{DM}	Pulsed Drain Current	-4A
P_D	Power Dissipation @ $T_A = 25^{\circ}C$	0.7W
P_D	Power Dissipation @ $T_C = 25^{\circ}C$	5W
T_{stg}	Operating and Storage Temperature Range	-55 to 150 $^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain – Source Breakdown Voltage	$V_{GS} = 0$ $I_D = -1\text{mA}$	- 60			V
$R_{DS(on)}$ Static Drain – Source On-State Resistance ¹	$V_{GS} = -10\text{V}$ $I_D = 500\text{mA}$			5	Ω
$V_{GS(th)}$ Gate Threshold Voltage	$V_{DS} = V_{GS}$ $I_D = -1\text{mA}$	- 1.5		- 3.5	V
g_{fs} Forward Transconductance ^{1,2}	$V_{DS} = -18\text{V}$ $I_D = 500\text{mA}$	150			mS
I_{DSS} Zero Gate Voltage Drain Current	$V_{GS} = 0$ $V_{DS} = 0.8V_{DSS}$			- 0.5	μA
	$T = 125^{\circ}\text{C}$			- 100	
$I_{D(on)}$ On-state drain current ¹	$V_{DS} = -18\text{V}$ $V_{GS} = -10\text{V}$	- 1			A
C_{iss} Input Capacitance ²	$V_{GS} = 0$ $V_{DS} = -18\text{V}$ $f = 1\text{MHz}$			100	pF
C_{oss} Output Capacitance ²				60	
C_{rss} Reverse Transfer Capacitance ²				20	
$t_{d(on)}$ Turn-On Delay Time ^{2,3}	$V_{DD} = -18\text{V}$ $I_D = -500\text{mA}$			7	ns
t_r Rise Time ^{2,3}				15	
$t_{d(off)}$ Turn-Off Delay Time ^{2,3}				12	
t_f Fall Time ^{2,3}				15	

Notes

- 1) Pulse Test: Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 2\%$
- 2) Sample
- 3) Switching times measured with 50Ω source impedance and $< 5\text{ns}$ rise time on a pulse generator.