



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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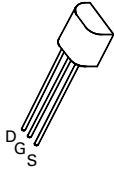
P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ZVP3306A

ISSUE 2 – MARCH 94

FEATURES

- * 60 Volt V_{DS}
- * $R_{DS(on)}=14\Omega$



E-Line
TO92 Compatible

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	-160	mA
Pulsed Drain Current	I_{DM}	-1.6	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	625	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).

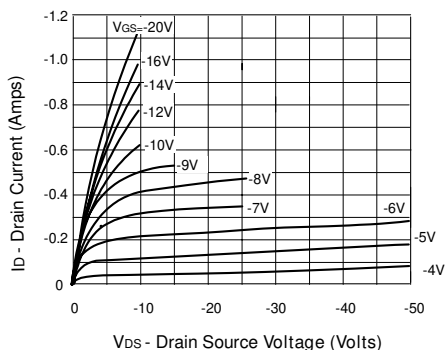
PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	BV_{DSS}	-60		V	$I_D=-1mA, V_{GS}=0V$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1.5	-3.5	V	$I_D=-1mA, V_{DS}=V_{GS}$
Gate-Body Leakage	I_{GSS}		20	nA	$V_{GS}=\pm 20V, V_{DS}=0V$
Zero Gate Voltage Drain Current	I_{DSS}		-0.5 -50	μA μA	$V_{DS}=-60V, V_{GS}=0$ $V_{DS}=-48V, V_{GS}=0V, T=125^{\circ}C(2)$
On-State Drain Current(1)	$I_{D(on)}$	-400		mA	$V_{DS}=-18V, V_{GS}=-10V$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		14	Ω	$V_{GS}=-10V, I_D=-200mA$
Forward Transconductance (1)(2)	g_{fs}	60		mS	$V_{DS}=-18V, I_D=-200mA$
Input Capacitance (2)	C_{iss}		50	pF	$V_{DS}=-18V, V_{GS}=0V, f=1MHz$
Common Source Output Capacitance (2)	C_{oss}		25	pF	
Reverse Transfer Capacitance (2)	C_{rss}		8	pF	
Turn-On Delay Time (2)(3)	$t_{d(on)}$		8	ns	$V_{DD}=-18V, I_D=-200mA$
Rise Time (2)(3)	t_r		8	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$		8	ns	
Fall Time (2)(3)	t_f		8	ns	

(1) Measured under pulsed conditions. Width=300 μs . Duty cycle $\leq 2\%$

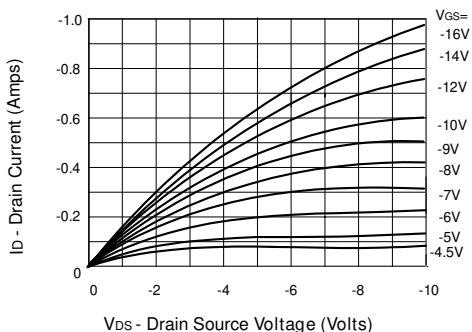
(2) Sample test.

ZVP3306A

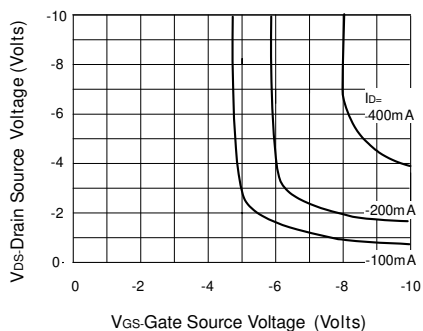
TYPICAL CHARACTERISTICS



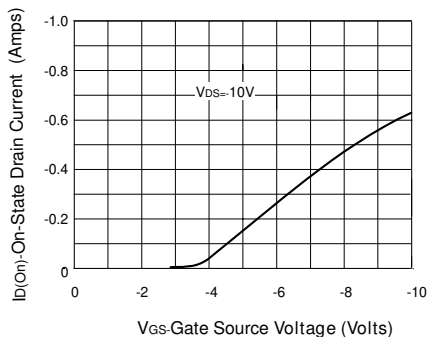
Output Characteristics



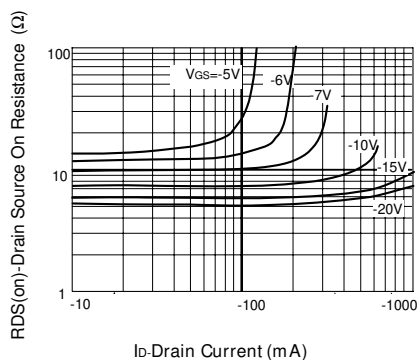
Saturation Characteristics



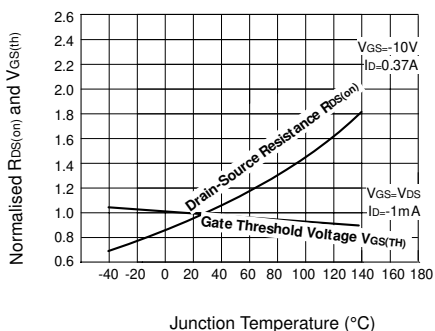
Voltage Saturation Characteristics



Transfer Characteristics

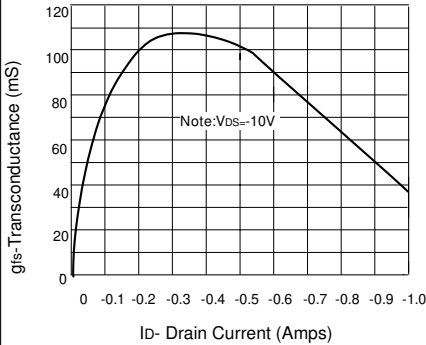


On-resistance vs Drain Current

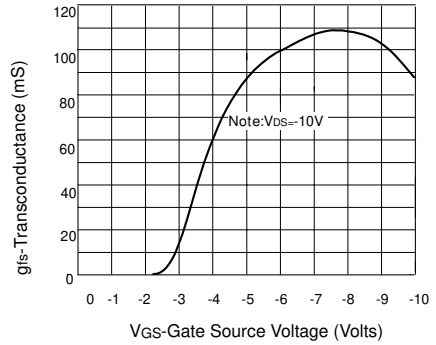


Normalised $R_{DS(on)}$ and $V_{GS(th)}$ vs Temperature

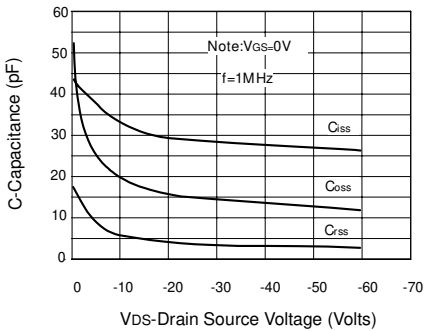
TYPICAL CHARACTERISTICS



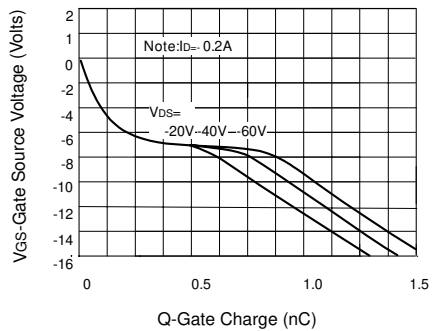
Transconductance v drain current



Transconductance v gate-source voltage



Capacitance v drain-source voltage



Gate charge v gate-source voltage