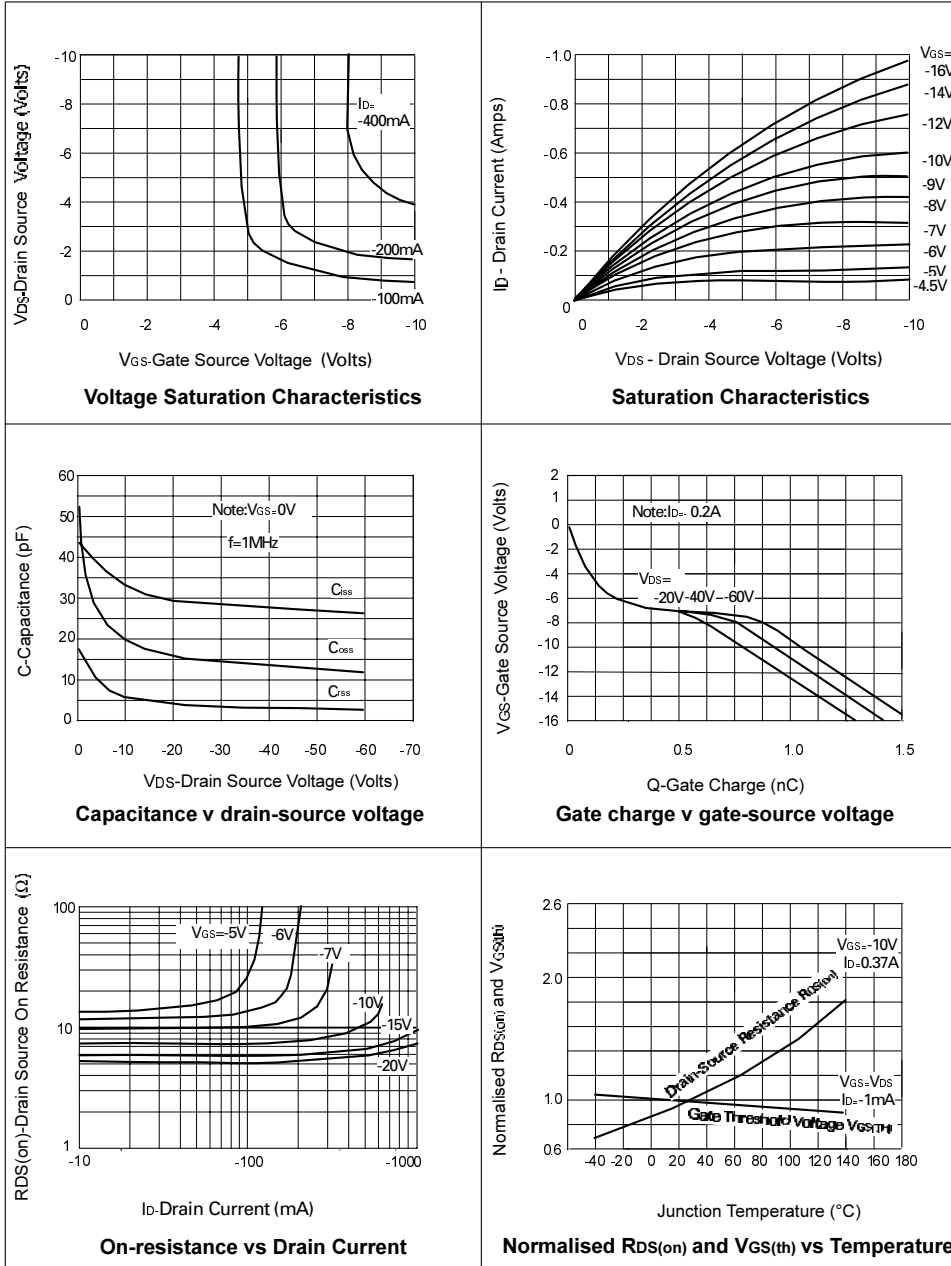


# ZVP3306F

## TYPICAL CHARACTERISTICS



# SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

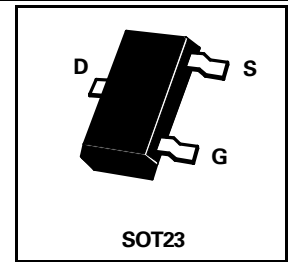
# ZVP3306F

ISSUE 3 - JANUARY 1996

### FEATURES

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

PARTMARKING DETAIL - ML  
COMPLEMENTARY TYPE - ZVN3306F



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	$V_{DS}$	-60	V
Continuous Drain Current at $T_{amb}=25^\circ\text{C}$	$I_D$	-90	mA
Pulsed Drain Current	$I_{DM}$	-1.6	A
Gate Source Voltage	$V_{GS}$	$\pm 20$	V
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	330	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).

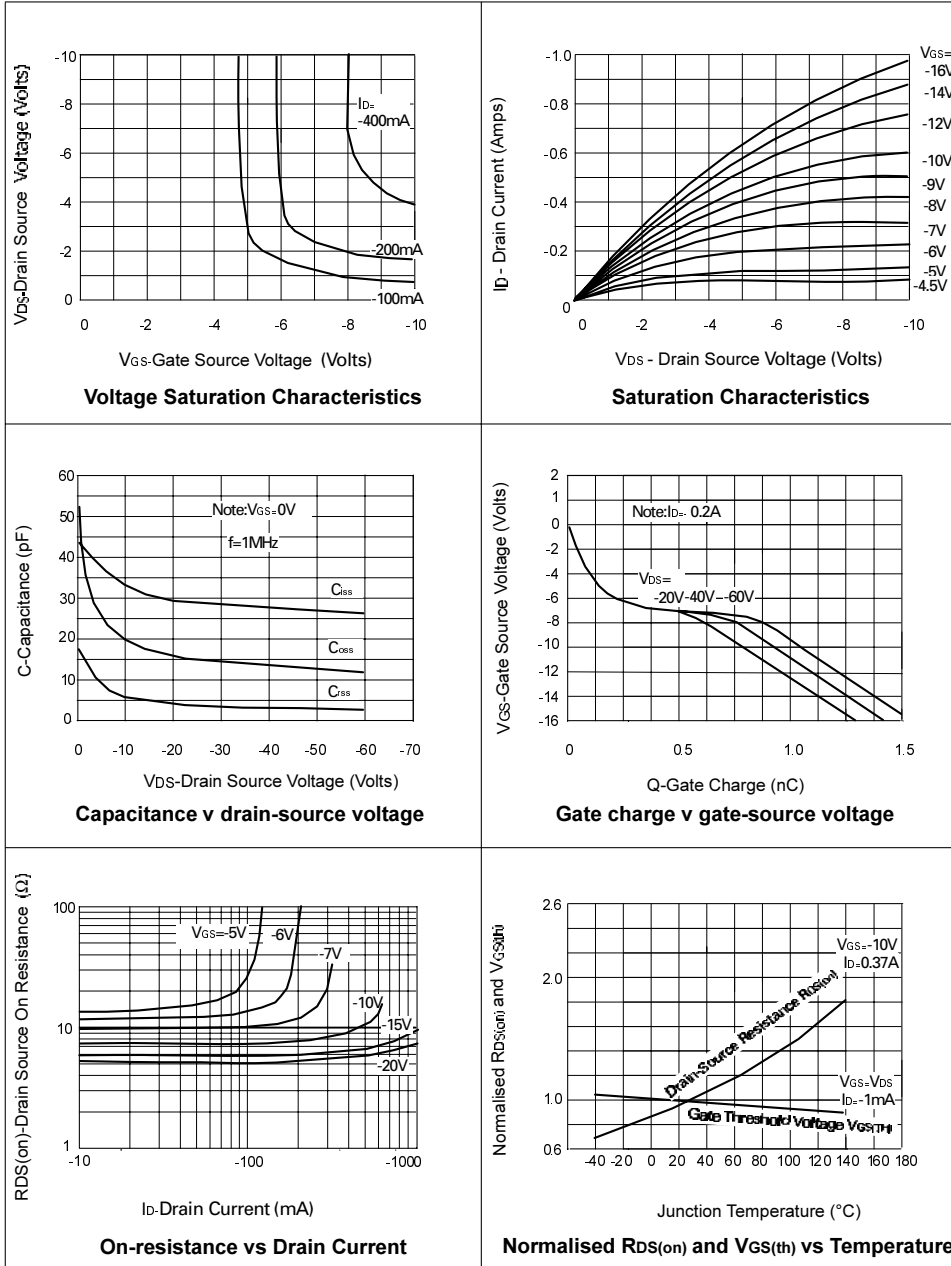
PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	$BV_{DSS}$	-60		V	$I_D = -1\text{mA}$ , $V_{GS} = 0\text{V}$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1.5	-3.5	V	$I_D = -1\text{mA}$ , $V_{DS} = V_{GS}$
Gate-Body Leakage	$I_{GSS}$		20	nA	$V_{GS} = \pm 20\text{V}$ , $V_{DS}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

(3) Switching times measured with 50 $\Omega$  source impedance and <5ns rise time on a pulse generator  
Spice parameter data is available upon request for this device

# ZVP3306F

## TYPICAL CHARACTERISTICS



# SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

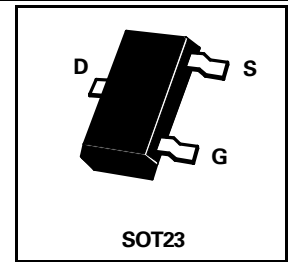
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ISSUE 3 - JANUARY 1996

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