

# SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

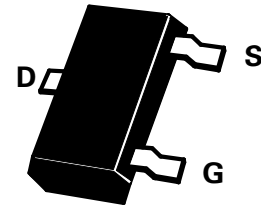
## ZVP1320F

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### FEATURES

\*  $V_{DS} - 200V$

PARTMARKING DETAIL - MT



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	$V_{DS}$	-200	V
Continuous Drain Current at $T_{amb}=25^{\circ}C$	$I_D$	-35	mA
Pulsed Drain Current	$I_{DM}$	-400	mA
Gate Source Voltage	$V_{GS}$	$\pm 20$	V
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	330	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).

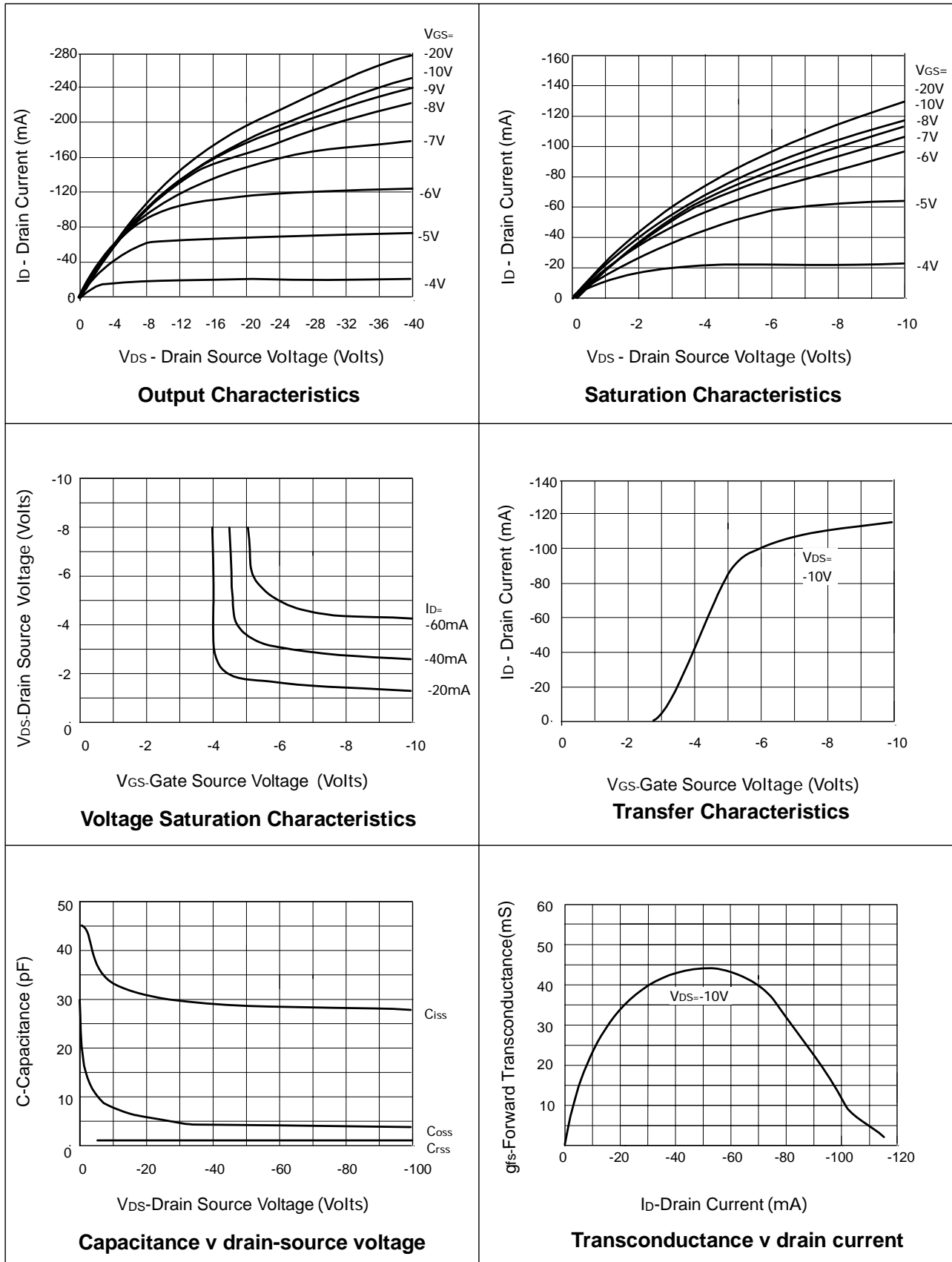
PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	$BV_{DSS}$	-200		V	$I_D = -1mA, V_{GS} = 0V$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1.5	-3.5	V	$I_D = -1mA, V_{DS} = V_{GS}$
Gate-Body Leakage	$I_{GSS}$		20	nA	$V_{GS} = \pm 20V, V_{DS} = 0V$
Zero Gate Voltage Drain Current	$I_{DSS}$		-10 -50	$\mu A$ $\mu A$	$V_{DS} = -200V, V_{GS} = 0V$ $V_{DS} = -160V, V_{GS} = 0V,$ $T = 125^{\circ}C(2)$
On-State Drain Current(1)	$I_{D(on)}$	-100		mA	$V_{DS} = -25V, V_{GS} = -10V$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		80	$\Omega$	$V_{GS} = -10V, I_D = -50mA$
Forward Transconductance (1)(2)	$g_{fs}$	25		mS	$V_{DS} = -25V, I_D = -50mA$
Input Capacitance (2)	$C_{iss}$		50	pF	$V_{DS} = -25V, V_{GS} = 0V, f = 1MHz$
Common Source Output Capacitance (2)	$C_{oss}$		15	pF	
Reverse Transfer Capacitance (2)	$C_{rss}$		5	pF	
Turn-On Delay Time (2)(3)	$t_{d(on)}$		8	ns	$V_{DD} \approx -25V, I_D = -50mA$
Rise Time (2)(3)	$t_r$		8	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$		8	ns	
Fall Time (2)(3)	$t_f$		16	ns	

(1) Measured under pulsed conditions. Width=300 $\mu s$ . Duty cycle  $\leq 2\%$  (2) Sample test.

(3) Switching times measured with 50 $\Omega$  source impedance and <5ns rise time on a pulse generator

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## TYPICAL CHARACTERISTICS



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