



# THE DATASHEET OF ZVNL120ASTOA

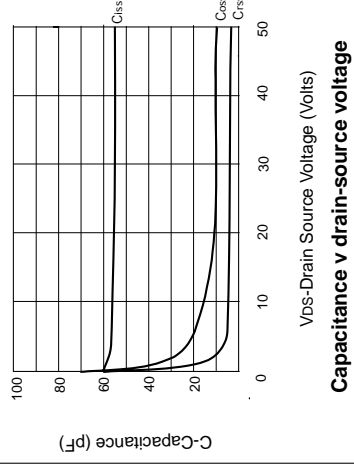
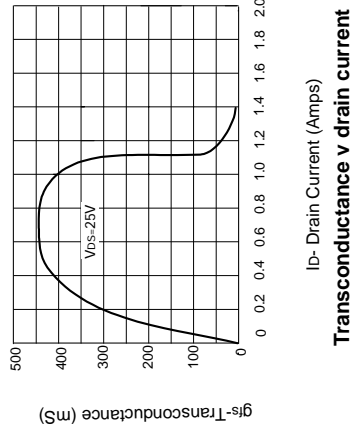
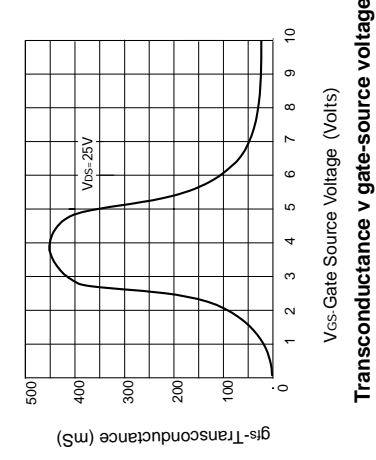
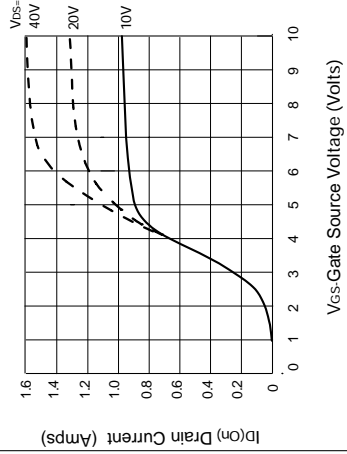
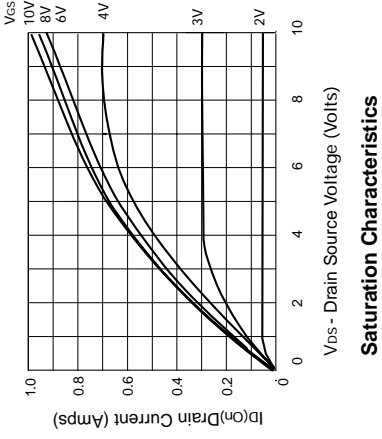
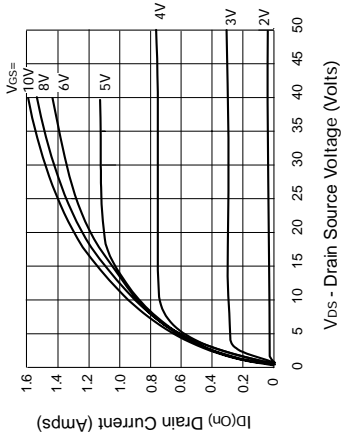


# ZVNL120A

## N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ISSUE 2 - MARCH 94

### TYPICAL CHARACTERISTICS



### APPLICATIONS

- \* Telephone handsets

### ABSOLUTE MAXIMUM RATINGS

PARAMETER
Drain-Source Voltage
Continuous Drain Current at $T_{amb}=25^{\circ}C$
Pulsed Drain Current
Gate Source Voltage
Power Dissipation at $T_{amb}=25^{\circ}C$
Operating and Storage Temperature Range

### ELECTRICAL CHARACTERISTICS

PARAMETER	SYMB
Drain-Source Breakdown Voltage	$BV_{DSS}$
Gate-Source Threshold Voltage	$V_{GS(th)}$
Gate-Body Leakage	$I_{GSS}$
Zero Gate Voltage Drain Current	$I_{DSS}$
On-State Drain Current (1)	$I_{D(on)}$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$
Forward Transconductance (1)(2)	$g_{fs}$
Input Capacitance (2)	$C_{iss}$
Common Source Output Capacitance (2)	$C_{oss}$
Reverse Transfer Capacitance (2)	$C_{rss}$
Turn-On Delay Time (2)(3)	$t_{d(on)}$
Rise Time (2)(3)	$t_r$
Turn-Off Delay Time (2)(3)	$t_{d(off)}$
Fall Time (2)(3)	$t_f$

(1) Measured under pulsed conditions.  $W_{eff} = 100\mu m$ .

(3) Switching times measured with  $50\Omega$  so

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## N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

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### FEATURES

- \* 200 Volt  $V_{DS}$
- \*  $R_{DS(on)} = 10\Omega$
- \* Low threshold

### APPLICATIONS

- \* Telephone handsets

### ABSOLUTE MAXIMUM RATINGS

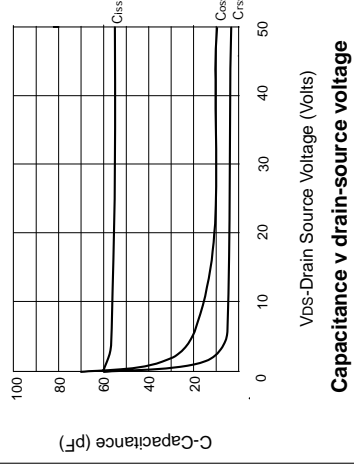
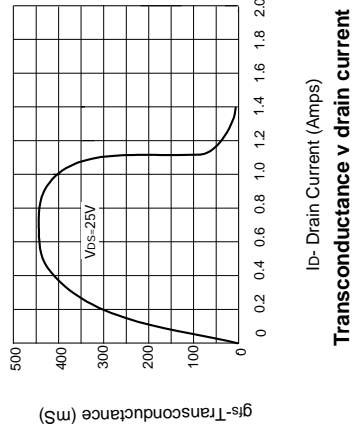
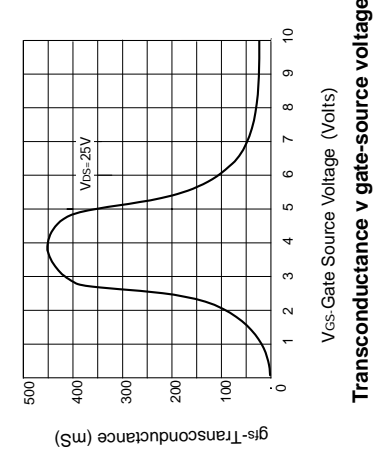
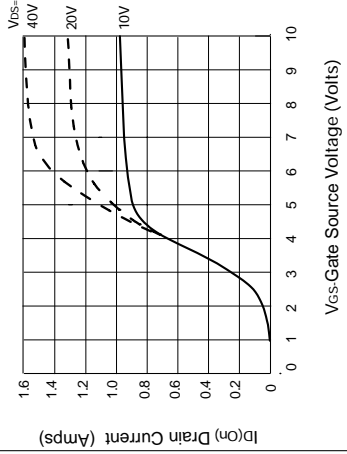
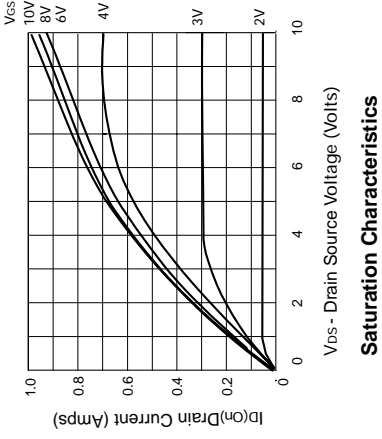
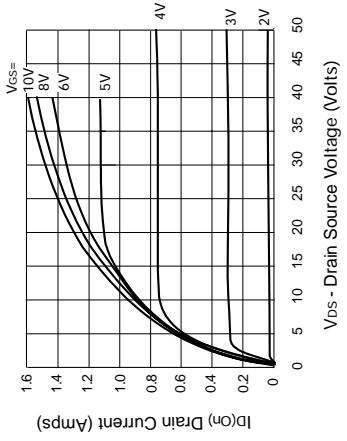
PARAMETER
Drain-Source Voltage
Continuous Drain Current at $T_{amb} = 25^\circ C$
Pulsed Drain Current
Gate Source Voltage
Power Dissipation at $T_{amb} = 25^\circ C$
Operating and Storage Temperature Range

### ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL
Drain-Source Breakdown Voltage	$BV_{DSS}$
Gate-Source Threshold Voltage	$V_{GS(th)}$
Gate-Body Leakage	$I_{GSS}$
Zero Gate Voltage Drain Current	$I_{DSS}$
On-State Drain Current (1)	$I_{D(on)}$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$
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Input Capacitance (2)	$C_{iss}$
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Turn-On Delay Time (2)(3)	$t_{d(on)}$
Rise Time (2)(3)	$t_r$
Turn-Off Delay Time (2)(3)	$t_{d(off)}$
Fall Time (2)(3)	$t_f$

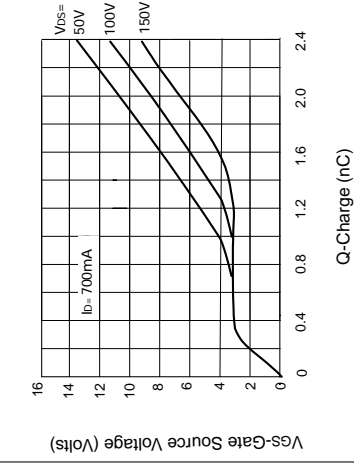
- (1) Measured under pulsed conditions.  $W_{eff} = 100\mu m$
- (2) Measured at  $V_{GS} = 10V$
- (3) Switching times measured with  $50\Omega$  source

### TYPICAL CHARACTERISTICS

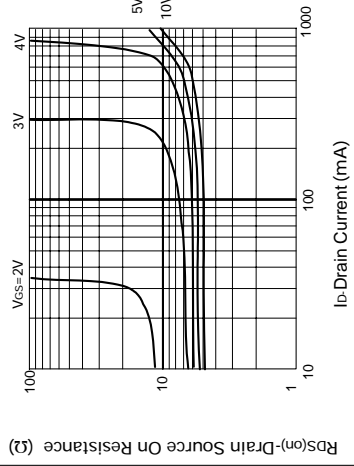


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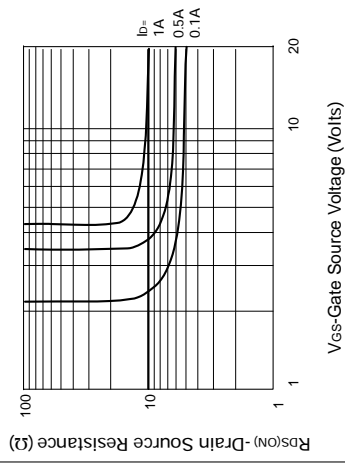
## TYPICAL CHARACTERISTICS



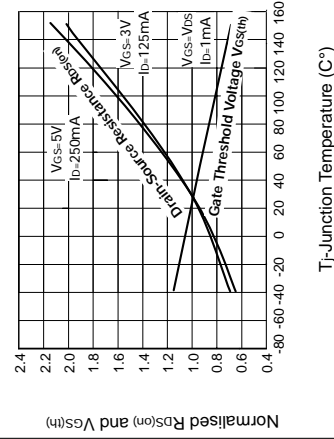
**Gate charge v gate-source voltage**



**On-resistance v drain current**



**On-resistance vs gate-source voltage**



**Normalised R<sub>DS(on)</sub> and V<sub>GS(th)</sub> vs Temperature**

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ZVNL120ASTOA on WIN SOURCE](#)
- ⊖ [Diodes Incorporated Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
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- ✓ Excess Inventory Management