



**THE DATASHEET OF
ZVN0124A**



ZVN0124A

N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ISSUE 1 – MARCH 94

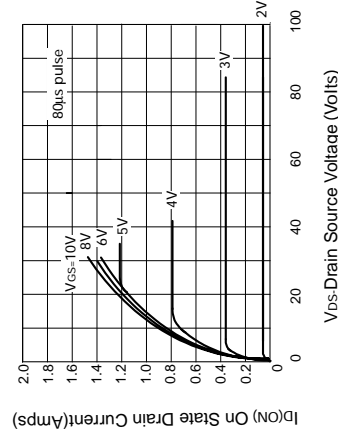
FEATURES

- * 240 Volt V_{DS}
- * $R_{DS(on)} = 16\Omega$

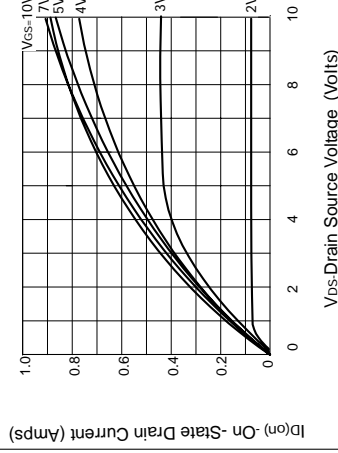
APPLICATIONS

- * Telephone handsets

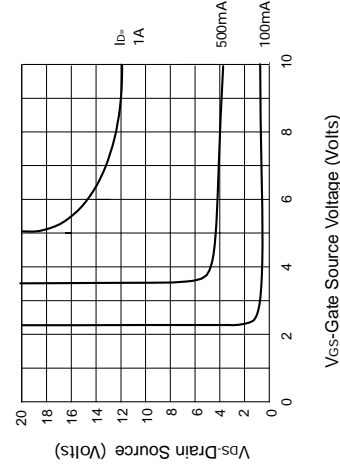
TYPICAL CHARACTERISTICS



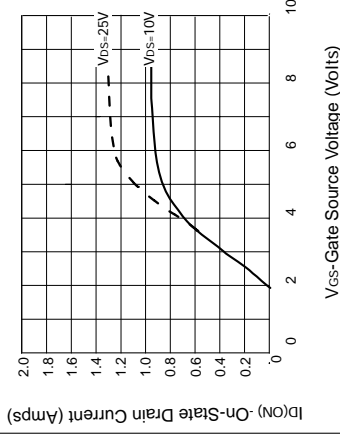
Output Characteristics



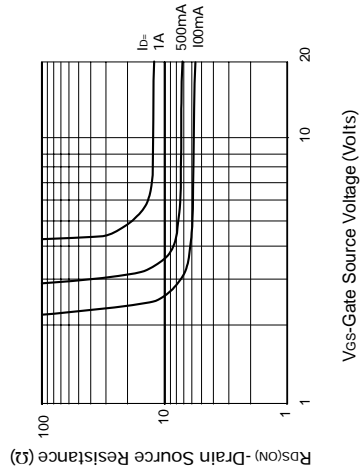
Saturation Characteristics



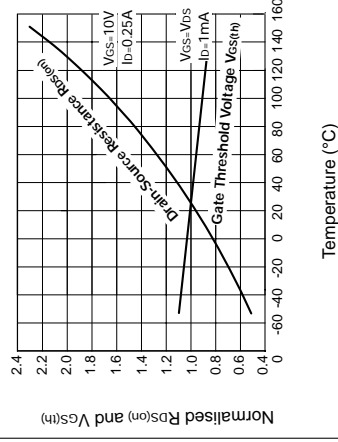
Voltage Saturation Characteristics



Transfer Characteristics



On-resistance vs gate-source voltage



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

3-351

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL
Drain-Source Voltage	BV_{DSS}
Continuous Drain Current at $T_{amb}=25^{\circ}C$	$I_{D(on)}$
Pulsed Drain Current	I_{DSS}
Gate Source Voltage	$V_{GS(th)}$
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{DSS}
Operating and Storage Temperature Range	$R_{DS(on)}$

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL
Drain-Source Breakdown Voltage	BV_{DSS}
Gate-Source Threshold Voltage	$V_{GS(th)}$
Gate-Body Leakage Current	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_{riss}
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. With $V_{GS} = 10V$, $V_{DS} = 25V$, $I_D = 100mA$, $t_r = 100ns$, $t_f = 100ns$, $t_{d(on)} = 100ns$, $t_{d(off)} = 100ns$.
 (2) Sample test.

ZVN0124A

N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ISSUE 1 – MARCH 94

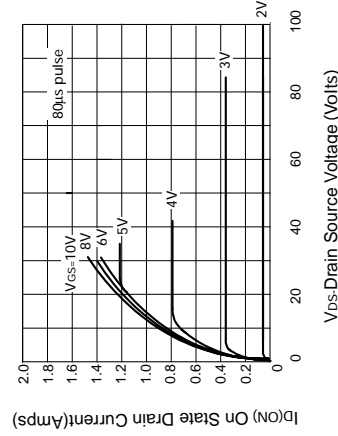
FEATURES

- * 240 Volt V_{DS}
- * $R_{DS(on)} = 16\Omega$

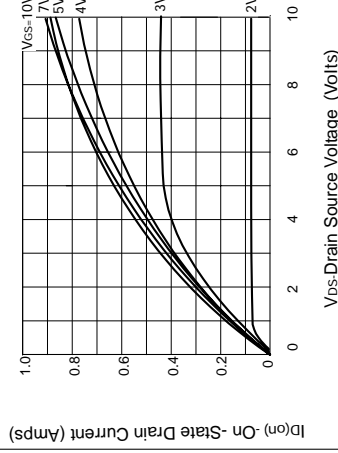
APPLICATIONS

- * Telephone handsets

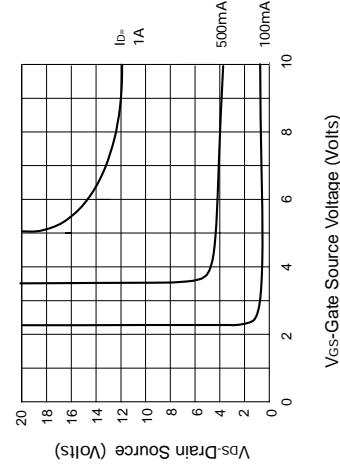
TYPICAL CHARACTERISTICS



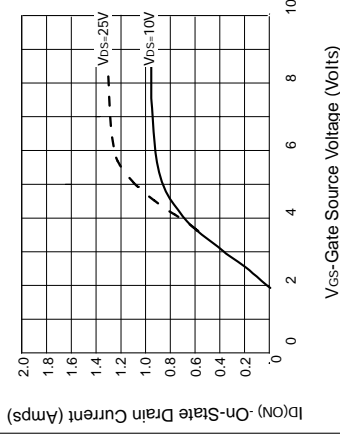
Output Characteristics



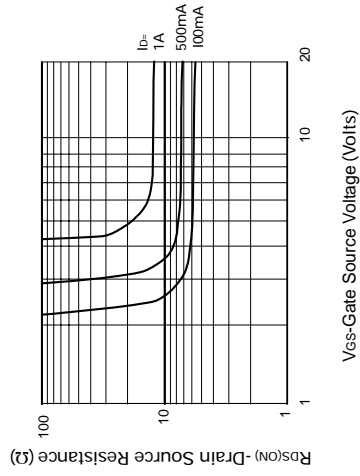
Saturation Characteristics



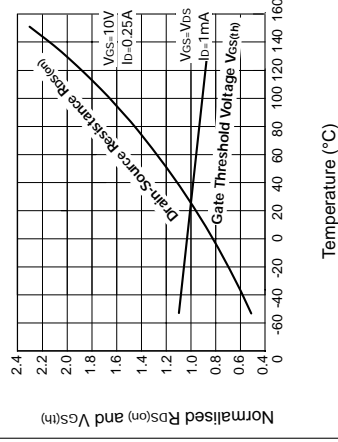
Voltage Saturation Characteristics



Transfer Characteristics



On-resistance vs gate-source voltage



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

3-351

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL
Drain-Source Voltage	V_{DS}
Continuous Drain Current at $T_{amb}=25^{\circ}C$	$I_{D(on)}$
Pulsed Drain Current	$I_{D(pulse)}$
Gate Source Voltage	V_{GS}
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}
Operating and Storage Temperature Range	T_{stg}

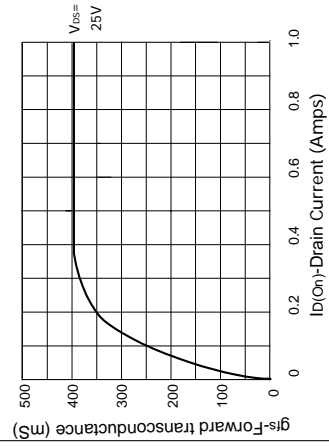
ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL
Drain-Source Breakdown Voltage	BV_{DSS}
Gate-Source Threshold Voltage	$V_{GS(th)}$
Gate-Body Leakage Current	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_{riss}
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

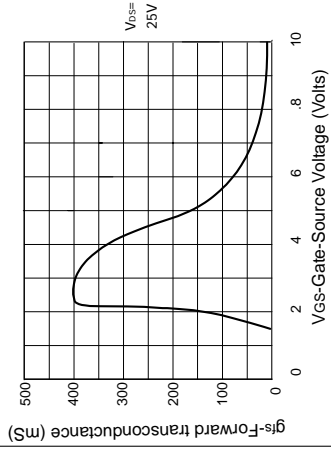
(1) Measured under pulsed conditions. With $V_{GS} = 10V$, $V_{DS} = 25V$, $I_{D(on)} = 100mA$, $t_{pulse} = 100\mu s$, $t_{off} = 100\mu s$, $f = 10kHz$.
 (2) Sample test.

ZVN0124A

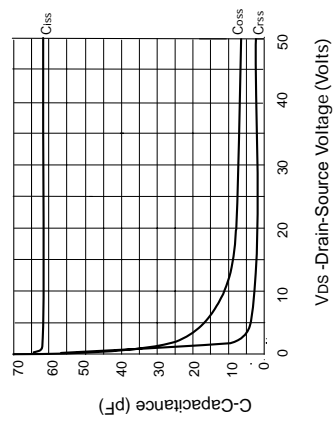
TYPICAL CHARACTERISTICS



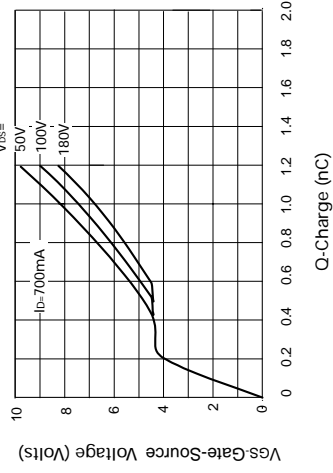
Transconductance v drain current



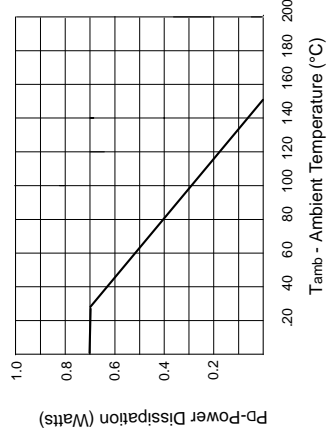
Transconductance v gate-source voltage



Capacitance v drain-source voltage



Gate charge v gate-source voltage



Power v temperature derating curve (ambient)

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ZVN0124A on WIN SOURCE](#)
- ⊖ [Diodes Incorporated Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

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