

# P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

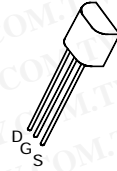
## ZVP2106A

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### FEATURES

- \* 60 Volt  $V_{DS}$
- \*  $R_{DS(on)}=5\Omega$

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)



E-Line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER   | SYMBOL        | VALUE       | UNIT        |
|---|---------------|-------------|-------------|
| Drain-Source Voltage                              | $V_{DS}$      | -60         | V           |
| Continuous Drain Current at $T_{amb}=25^{\circ}C$ | $I_D$         | -280        | mA          |
| Pulsed Drain Current                              | $I_{DM}$      | -4          | A           |
| Gate Source Voltage                               | $V_{GS}$      | $\pm 20$    | V           |
| Power Dissipation at $T_{amb}=25^{\circ}C$        | $P_{tot}$     | 700         | 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<br>-100 | $\mu A$<br>$\mu A$ | $V_{DS}=-60V, V_{GS}=0$<br>$V_{DS}=-48V, V_{GS}=0V, T=125^{\circ}C(2)$ |
| On-State Drain Current(1)                   | $I_{D(on)}$  | -1   |              | A                  | $V_{DS}=-18V, V_{GS}=-10V$   |
| Static Drain-Source On-State Resistance (1) | $R_{DS(on)}$ |      | 5            | $\Omega$           | $V_{GS}=-10V, I_D=-500mA$  |
| Forward Transconductance (1)(2)             | $g_{fs}$     | 150  |              | mS                 | $V_{DS}=-18V, I_D=-500mA$  |
| Input Capacitance (2)                       | $C_{iss}$    |      | 100          | pF                 | $V_{DS}=-18V, V_{GS}=0V, f=1MHz$                                       |
| Common Source Output Capacitance (2)        | $C_{oss}$    |      | 60           | pF                 |  |
| Reverse Transfer Capacitance (2)            | $C_{rss}$    |      | 20           | pF                 |  |
| Turn-On Delay Time (2)(3)                   | $t_{d(on)}$  |      | 7            | ns                 | $V_{DD}\approx -18V, I_D=-500mA$                                       |
| Rise Time (2)(3)                            | $t_r$        |      | 15           | ns                 |  |
| Turn-Off Delay Time (2)(3)                  | $t_{d(off)}$ |      | 12           | ns                 |  |
| Fall Time (2)(3)                            | $t_f$        |      | 15           | ns                 |  |

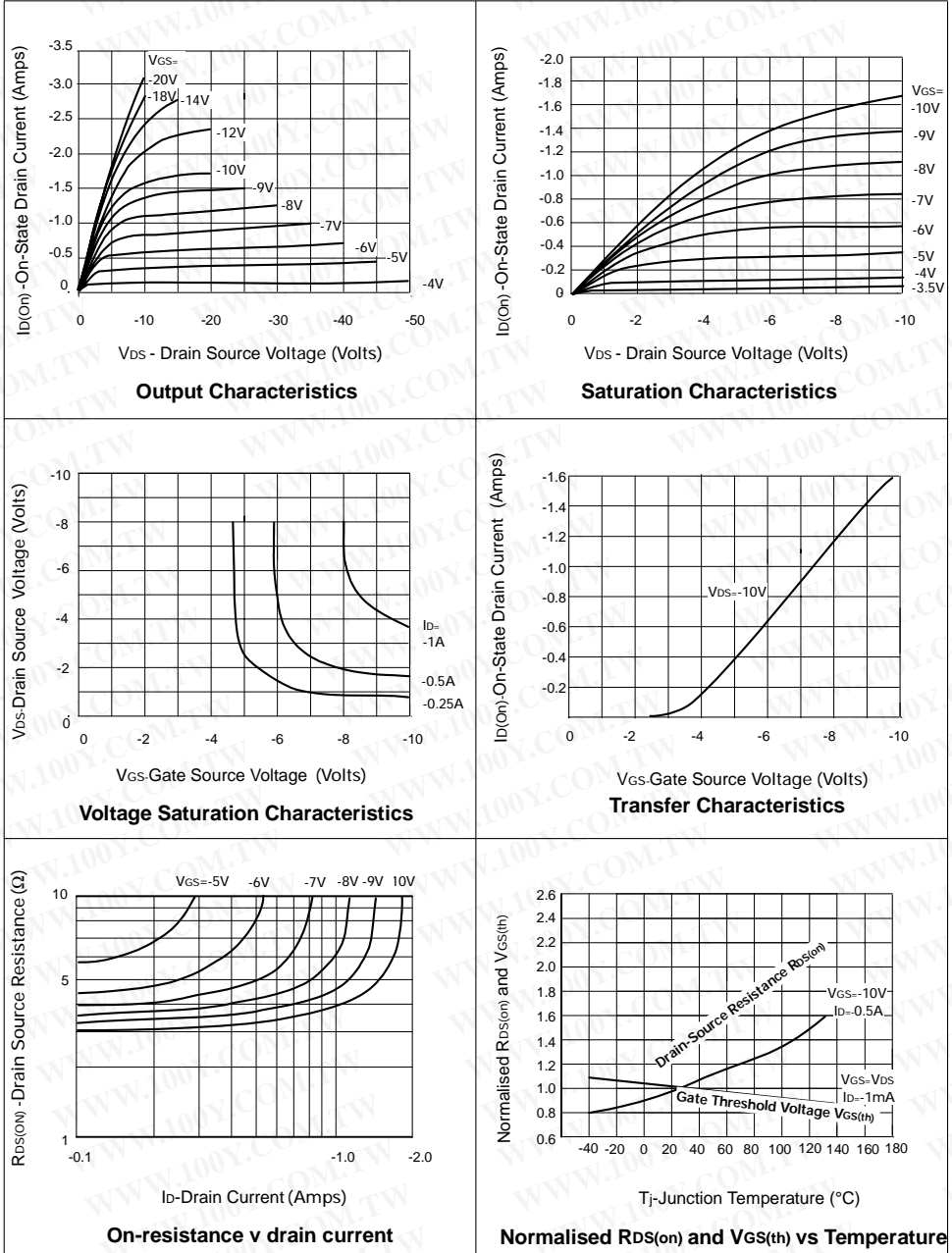
(1) Measured under pulsed conditions. Width=300 $\mu s$ . Duty cycle  $\leq 2\%$

(2) Sample test.

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## TYPICAL CHARACTERISTICS



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