## 

## Features

－Low ON－resistance．
．Low Qg．
，

## Package Dimensions

unit ：mm
2083B


## Package Dimensions

unit：mm
2092B


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## Specifications

Absolute Maximum Ratings at $\mathrm{Ta}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Drain-to-Source Voltage | VDSS |  | 600 | V |
| Gate-to-Source Voltage | $V_{G S S}$ |  | $\pm 30$ | V |
| Drain Current (DC) | ID |  | 1.0 | A |
| Drain Current (Pulse) | IDP | $\mathrm{PW} \leq 10 \mu \mathrm{~s}$, duty cycle $\leq 1 \%$ | 4.0 | A |
| Allowable Power Dissipation | PD |  | 1.0 | W |
|  |  | $\mathrm{Tc}=25^{\circ} \mathrm{C}$ | 20 | W |
| Channel Temperature | Tch |  | 150 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature | Tstg |  | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |

Electrical Characteristics at $\mathrm{Ta}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Conditions | Ratings |  |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | min | typ | max |  |
| Drain-to-Source Breakdown Voltage | V(BR)DSS | $\mathrm{I}=1 \mathrm{~mA}, \mathrm{~V}_{\mathrm{GS}}=0$ | 600 |  |  | V |
| Zero-Gate Voltage Drain Current | IDSS | $\mathrm{V}_{\mathrm{DS}}=600 \mathrm{~V}, \mathrm{~V}_{\mathrm{GS}}=0$ |  |  | 100 | $\mu \mathrm{A}$ |
| Gate-to-Sourse Leakage Current | IGSS | $\mathrm{V}_{\mathrm{GS}}= \pm 30 \mathrm{~V}, \mathrm{~V}_{\mathrm{DS}}=0$ |  |  | $\pm 100$ | nA |
| Cutoff Voltage | $\mathrm{V}_{\mathrm{GS}}$ (off) | $\mathrm{V}_{\mathrm{DS}}=10 \mathrm{~V}, \mathrm{ID}=1 \mathrm{~mA}$ | 2.5 |  | 3.5 | V |
| Forward Transfer Admittance | \| yfs | | $\mathrm{V}_{\mathrm{DS}}=10 \mathrm{~V}, \mathrm{l}$ D $=0.5 \mathrm{~A}$ | 430 | 850 |  | mS |
| Static Drain-to-Source On-State Resistance | RDS(on) | $\mathrm{V}_{\mathrm{DS}}=10 \mathrm{~V}, \mathrm{ID}=0.5 \mathrm{~A}$ |  | 8.5 | 11 | $\Omega$ |
| Input Capacitance | Ciss | $\mathrm{V}_{\mathrm{DS}}=20 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 135 |  | pF |
| Output Capacitance | Coss | $\mathrm{V}_{\mathrm{DS}}=20 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 40 |  | pF |
| Reverse Transfer Capacitance | Crss | $\mathrm{V}_{\mathrm{DS}}=20 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 20 |  | pF |
| Total Gate Charge | Qg | $\mathrm{V}_{\mathrm{DS}}=200 \mathrm{~V}, \mathrm{~V}_{\mathrm{GS}}=10 \mathrm{~V}, \mathrm{ID}=1.0 \mathrm{~A}$ |  | 6 |  | nC |
| Turn-ON Delay Time | $\mathrm{td}_{\mathrm{d}}(\mathrm{on})$ | See specified Test Circuit |  | 8 |  | ns |
| Rise Time | tr | See specified Test Circuit |  | 7 |  | ns |
| Turn-OFF Delay Time | $\mathrm{td}_{\mathrm{d}}$ (off) | See specified Test Circuit |  | 17 |  | ns |
| Fall Time | $\mathrm{tf}^{\text {f }}$ | See specified Test Circuit |  | 30 |  | ns |
| Diode Forward Voltage | $\mathrm{V}_{\text {SD }}$ | $\mathrm{IS}=1.0 \mathrm{~A}, \mathrm{~V}_{\mathrm{GS}}=0$ |  | 0.83 | 1.2 | V |

Marking : K3491

Switching Time Test Circuit

$I_{D}-V_{D S}$




2SK3491



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