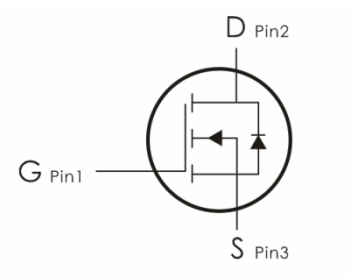
## Description：

This N-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.


## Features：

1) $V_{DS}$=100V,$I_D$=50A,$R_{DS(ON)}$<22mΩ @$V_{GS}$=10V
2) Low gate charge.
3) Green device available.
4) Advanced high cell denity trench technology for ultra $R_{DS(ON)}$.
5) Excellent package for good heat dissipation.

## Absolute Maximum Ratings： ($T_C$=25℃ unless otherwise noted)

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{DS}$ | Drain-Source Voltage | 100 | V |
| $V_{GS}$ | Gate-Source Voltage | ±20 | V |
| $I_D$ | Continuous Drain Current- TC=25℃ | 50 | A |
| | Continuous Drain Current-TC=100℃ | 30 | |
| $I_{DM}$ | Pulsed Drain Current | 200 | |
| $I_{AR}$ | Avalanche Current | 15 | A |
| $E_{AS}$ | Single Pulse Avalanche Energy | 170 | mJ |
| $P_D$ | Power Dissipation | 160 | W |
| $T_J$, $T_{STG}$ | Operating and Storage Junction Temperature Range | -55-+150 | ℃ |

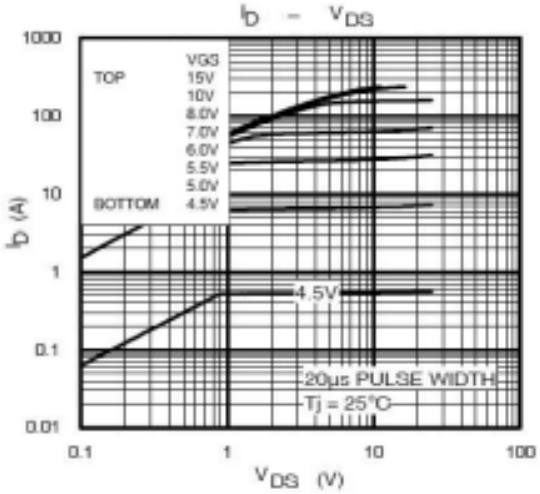
## Thermal Characteristics：

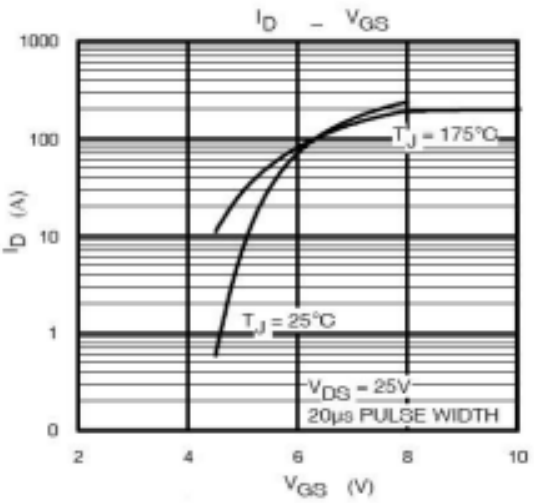
| Symbol | Parameter | Max | Units |
|---|---|---|---|
| $R_{\theta JA}$ | Junction to Ambient | 40 | ℃/W |

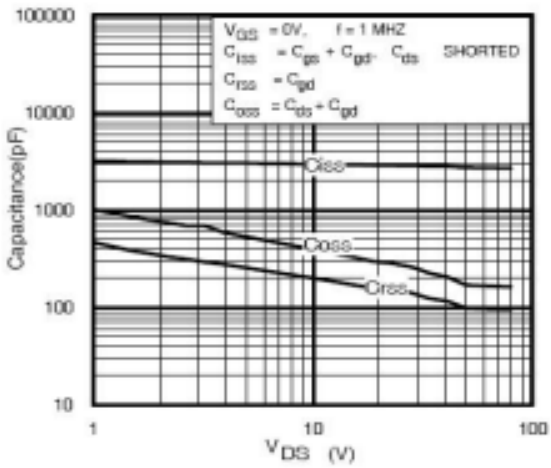
## Electrical Characteristics: ($T_C$=25℃ unless otherwise noted)

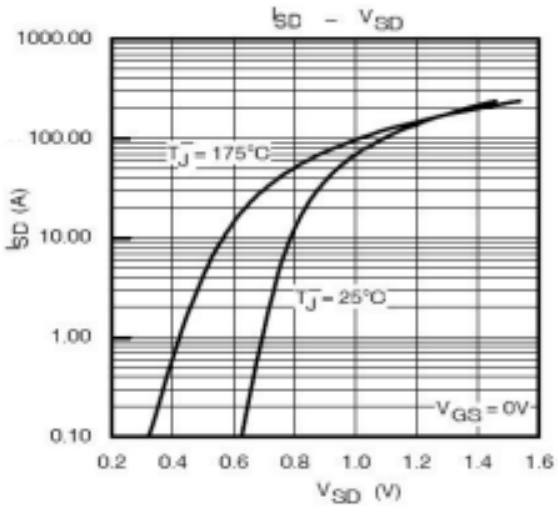
| Symbol | Parameter | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| **Off Characteristics** | | | | | | |
| $BV_{DSS}$ | Drain-Sourtce Breakdown Voltage | $V_{GS}$=0V,$I_D$=250μA | 100 | --- | --- | V |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{GS}$=0V, $V_{DS}$=100V | --- | --- | 10 | μA |
| | | $V_{GS}$=0V, $V_{DS}$=100V,Tj=125℃ | --- | --- | 250 | |
| $I_{GSS}$ | Gate-Source Leakage Current | $V_{GS}$=±20V, $V_{DS}$=0A | --- | --- | ±0.2 | nA |
| **On Characteristics** | | | | | | |
| $V_{GS(th)}$ | GATE-Source Threshold Voltage | $V_{GS}$=$V_{DS}$, $I_D$=250μA | 2 | --- | 4 | V |
| $R_{DS(ON)}$ | Drain-Source On Resistance | $V_{GS}$=10V,$I_D$=1A | --- | 18 | 22 | mΩ |
| $G_{FS}$ | Forward Transconductance | $V_{DS}$=15V, $I_D$=10A, Δ$I_D$=1A | --- | --- | 25 | S |
| $V_{SD}$ | Forward On Voltage | $V_{GS}$=0V $I_S$=35A $T_J$=25℃ | --- | --- | 1.3 | V |
| **Dynamic Characteristics** | | | | | | |
| $C_{iss}$ | Input Capacitance | $V_{DS}$=25V, $V_{GS}$=0V, f=1MHz | --- | 2900 | --- | pF |
| $C_{oss}$ | Output Capacitance | | --- | 290 | --- | |
| $C_{rss}$ | Reverse Transfer Capacitance | | --- | 150 | --- | |
| **Switching Characteristics** | | | | | | |
| $t_{d(on)}$ | Turn-On Delay Time | $V_{DD}$=50V, $I_D$=35A, $R_{GEN}$=6.8Ω .$V_{GS}$=10V | --- | 17 | --- | ns |
| $t_r$ | Rise Time | | --- | 77 | --- | ns |
| $t_{d(off)}$ | Turn-Off Delay Time | | --- | 41 | --- | ns |
| $t_f$ | Fall Time | | --- | 56 | --- | ns |

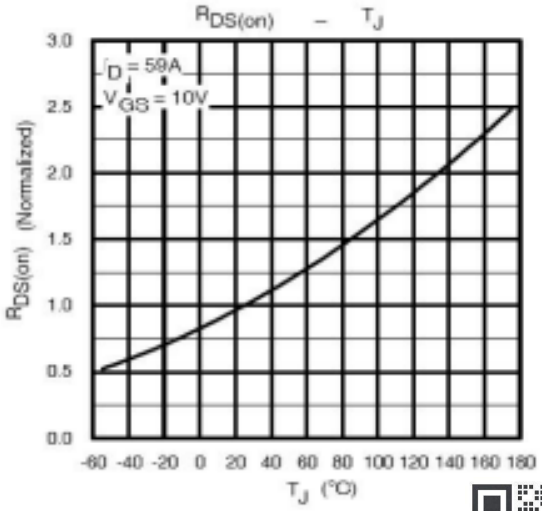
## Typical Characteristics: ($T_C$=25℃ unless otherwise noted)

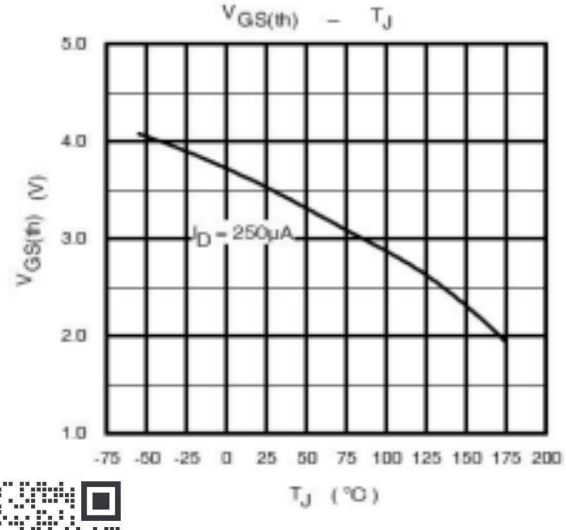
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