



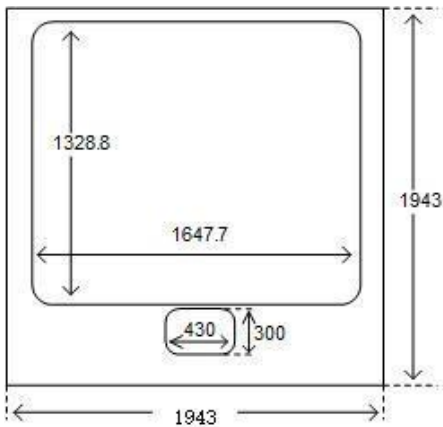
# NDM50S2W

Fast Recovery N-channel MOSFET (Ultra Low Trr)

Rev.1.0

2021/9/27

## Mechanical Data



| Item                 | Information  |                 |
|----------------------|--|-----------------|
| Chip Size            | 1883*1883  | um <sup>2</sup> |
| Gate Pad Size        | 430*300  |                 |
| Source Pad Size      | 1647.7*1328.8  |                 |
| Scribe Line Width    | 60   | um              |
| Wafer Thickness      | 254  |                 |
| Wafer diameter       | 150  | mm              |
| Source Metallization | Al, Si, Cu   |                 |
| Drain Metallization  | Ti, Ni, Ag   |                 |
| Reject Ink Dot Size  | ø 10mil  |                 |
|                      | Store in original container, in dry nitrogen, (6 months at an ambient temperature of 23°C+/-3°C) |                 |

## Electrical characteristics in C/P test @Tj=25°C

| Parameter            | Description                       | Min. | Typ. | Max. | Unit | Test Condition                              |
|----------------------|-----------------------------------|------|------|------|------|---|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage    | 500  | -    | -    | V    | V <sub>GS</sub> =0V, ID=250uA               |
| R <sub>DS(ON)</sub>  | Static Drain-Source On-Resistance | -    | 3.1  | 3.6  | Ω    | V <sub>GS</sub> =10V, ID=1.0A               |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage            | 1.5  | -    | 4    | V    | V <sub>GS</sub> =V <sub>GS</sub> , ID=250uA |
| I <sub>DSS</sub>     | Drain-to-Source Leakage Current   | -    | -    | 0.1  | uA   | V <sub>DS</sub> =500V, V <sub>GS</sub> =0V  |
| I <sub>GSS</sub>     | Gate-Body Leakage Current         | -    | -    | 0.1  | uA   | V <sub>DS</sub> =0V, V <sub>GS</sub> =±30V  |

## Source to drain diode ratings characteristics

| Symbol          | Parameter                  | Test condition  | Min. | Typ. | Max. | Unit |
|-----------------|----------------------------|---|------|------|------|------|
| I <sub>S</sub>  | Continuous source current  | Integral reverse p-n Junction current   | -    | -    | 5.5  | A    |
| I <sub>SM</sub> | Pulsed source current      |   | -    | -    | 22   | A    |
| V <sub>SD</sub> | Diode forward voltage drop | I <sub>S</sub> =1.0A, V <sub>GS</sub> =0V   | -    | 0.9  | 1.2  | V    |
| Trr             | Reverse recovery time      | I <sub>S</sub> =1A, V <sub>DD</sub> =30V<br>V <sub>GS</sub> =0V, dI <sub>F</sub> /dt=50A/us | -    | 60   |      | ns   |

