



**N-Channel Enhancement Mode MOSFET**

**Wafer Specification**

|   |                   |                |
|---|-------------------|----------------|
| <b>40V <math>V_{DS}</math> / <math>\pm 20V</math> <math>V_{GS}</math></b><br><b>N-Channel Enhancement Mode MOSFET</b> | <b>Wafer Name</b> | <b>CC40N46</b> |
|---|-------------------|----------------|

(1) **Key Electrical Characteristics of Die**

| Parameter     | Description                                      | Min.                                 | Typ.          | Max.          | Test Conditions                               |
|---------------|--|--------------------------------------|---------------|---------------|---|
| $V_{(BR)DSS}$ | Drain-to-Source Breakdown Voltage                | 40V                                  | 44V           |               | $V_{GS} = 0V, I_D = 250\mu A$                 |
| $R_{DS(on)}$  | Static Drain-to-Source On-Resistance             |                                      | 3.3m $\Omega$ | 4.3m $\Omega$ | $V_{GS} = 10V, I_D = 10A$                     |
|               |  |                                      | 4.5m $\Omega$ | 6.7m $\Omega$ | $V_{GS} = 4.5V, I_D = 10A$                    |
| $V_{GS(th)}$  | Gate Threshold Voltage                           | 1V                                   | 1.5V          | 3V            | $V_{DS} = V_{GS}, I_D = 250\mu A$             |
| $I_{DSS}$     | Drain-to-Source Leakage Current                  | 0nA                                  |               | 1uA           | $V_{DS} = 32V, V_{GS} = 0V, T_J = 25^\circ C$ |
| $I_{GSS}$     | Gate-to-Source Leakage Current                   | 0nA                                  |               | $\pm 100nA$   | $V_{GS} = \pm 20V$                            |
| $T_J$         | Operating Junction and Storage Temperature Range | -55 $^\circ C$ to 150 $^\circ C$ Max |               |               |   |
| $T_{STG}$     |  |                                      |               |               |   |

(2) **Mechanical Data**

|   |  |
|---|--|
| Nominal Back Metal Composition, Thickness:  | TiNiAg, 1.3 $\mu m$  |
| Nominal Front Metal Composition, Thickness: | AlCu, 4.0 $\mu m$  |
| Dimensions:                                 | 3060 $\mu m$ x 2060 $\mu m$ (Including Scribe Line)                        |
| Gate Pad Size:                              | 280 $\mu m$ x 380 $\mu m$  |
| Wafer Diameter:                             | 200mm  |
| Wafer Thickness:                            | 160 $\mu m$  |
| Minimum Street Width                        | 60 $\mu m$   |
| Reject Ink Dot Size                         | N/A  |
| Recommended Storage Environment:            | Store in original container, in desiccated nitrogen, with no contamination |

(3) **Die Outline**

