

# X0119

## N-Channel Enhancement Mode MOSFET

60V(VDS) /  $\pm 20$ V(VGS) / 190A(ID)

Rev0.1

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# Wafer Specification

## 1. Order Information

| Part No. | Description                                                                              | Gross die / per 8" wafer |
|----------|------------------------------------------------------------------------------------------|--------------------------|
| X0119    | 60V( $V_{DS}$ ) / $\pm 20V(V_{GS})$ / 190A( $I_D$ )<br>N-Channel Enhancement Mode MOSFET | 2,200                    |

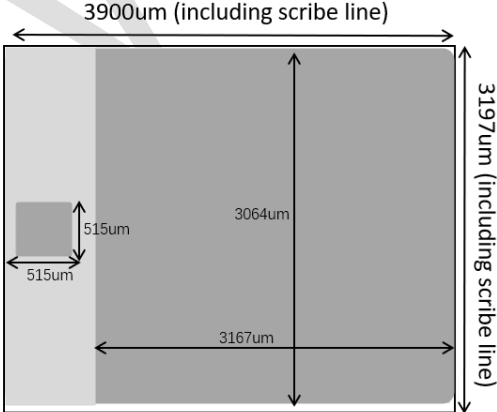
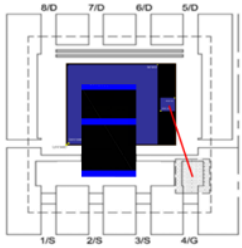
## 2. Mechanical Data

|                                            |                        |
|--------------------------------------------|------------------------|
| Nominal Back Metal Composition, Thickness  | Ti-Ni-Ag(1kÅ-3kÅ-10kÅ) |
| Nominal Front Metal Composition, Thickness | AlCu (4μm)             |
| Wafer Diameter                             | 200mm, with 010 notch  |
| Wafer Thickness                            | 150±10μm               |
| Scribe Line Width                          | 60μm                   |
| Passivation                                | SRO+SiN                |

## 3. Key Electrical Characteristics of Die (at Tj = 25 °C, unless otherwise specified)

| Parameter          | Description                          | Min.               | Typ. | Max. | Unit | Test Conditions                  |
|--------------------|--------------------------------------|--------------------|------|------|------|----------------------------------|
| $V_{(BR)DSS}$      | Drain-to-Source Breakdown Voltage    | 60                 |      |      | V    | $V_{GS}=0V$ , $I_D=250\mu A$     |
| $I_D$ (Device Ref) | Continuous Drain Current             |                    |      | 190  | A    | $T_J=25^\circ C$                 |
| $R_{DS(on)}(CP)$   | Static Drain-to-Source On-Resistance |                    | 3.8  | 5    | mΩ   | $V_{GS}=10V$ , $I_D=1A$          |
|                    |                                      |                    | 4.3  | 5.7  | mΩ   | $V_{GS}=8V$ , $I_D=1A$           |
| $R_{DS(on)}(FT)$   | Static Drain-to-Source On-Resistance |                    | 4    | 5.2  | mΩ   | $V_{GS}=10V$ , $I_D=30A$         |
|                    |                                      |                    | 4.5  | 5.9  | mΩ   | $V_{GS}=8V$ , $I_D=20A$          |
| $V_{GS(th)}$       | Gate Threshold Voltage               | 2                  | 3    | 4    | V    | $V_{DS}=V_{GS}$ , $I_D=250\mu A$ |
| $I_{DSS}$          | Drain-to-Source Leakage Current      |                    |      | 1    | μA   | $V_{DS}=60V$ , $V_{GS}=0V$       |
| $I_{GSS}$          | Gate-to-Source Leakage Current       |                    |      | ±100 | nA   | $V_{GS}=\pm 20V$ , $V_{DS}=0V$   |
| $T_J$ , $T_{STG}$  | Operating and Storage Temperature    | -55°C to 150°C Max |      |      |      |                                  |

## 4. Die Outline

|                                                                                     |                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Die Size: 3900μm × 3197μm (including scribe line)                                                                                                                                                    |
|                                                                                     | Gate: 515μm × 515μm                                                                                                                                                                                  |
|                                                                                     | <p>For PDFN5X6-8L package</p> <p>Suggest Bonding wire:</p> <p>Gate: Cu 1.7miL*1</p> <p>Source: AL 80*6mL*1</p>  |