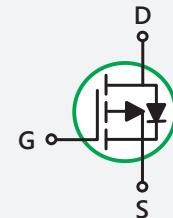


*-100V P Channel Enhancement MOSFET Wafer Datasheet***FEATURES**

- P-Channel,-100V
- $R_{ds(on)} = 645\text{m}\Omega$  (Typ.)@ $V_{GS}=-10\text{V}$
- Exceptional on-resistance and maximum DC current capability  
high density cell design for extremely low RDS(ON)



| Bonding Pad Information        | Chip Information   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
|--------------------------------|--|------------|---------------|----------------|----------|-----------------|--------|--------------------------|----------------|-------------------------|----------|--------------|--|--------------------------------|---------------|-------------------|------|---------------|---------------|-----------|--------|
|                                | <table><tr><td>Wafer Name</td><td>DC6M100P645M7</td></tr><tr><td>Wafer Diameter</td><td>6 inches</td></tr><tr><td>Wafer Thickness</td><td>7 mils</td></tr><tr><td>Front-side Metallization</td><td>Al/Si/Cu (4um)</td></tr><tr><td>Back-side Metallization</td><td>Ti/Ni/Ag</td></tr><tr><td>Bonding Type</td><td>Gate: 1.5mil Cu x 1<br/>Source: 1.5mil Cu x 5</td></tr><tr><td>Die Size (without scribe line)</td><td>800um x 620um</td></tr><tr><td>Scribe Line Width</td><td>60um</td></tr><tr><td>Gate Pad Size</td><td>150um x 150um</td></tr><tr><td>Gross Die</td><td>27K ea</td></tr></table> | Wafer Name | DC6M100P645M7 | Wafer Diameter | 6 inches | Wafer Thickness | 7 mils | Front-side Metallization | Al/Si/Cu (4um) | Back-side Metallization | Ti/Ni/Ag | Bonding Type | Gate: 1.5mil Cu x 1<br>Source: 1.5mil Cu x 5 | Die Size (without scribe line) | 800um x 620um | Scribe Line Width | 60um | Gate Pad Size | 150um x 150um | Gross Die | 27K ea |
| Wafer Name                     | DC6M100P645M7  |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Wafer Diameter                 | 6 inches   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Wafer Thickness                | 7 mils   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Front-side Metallization       | Al/Si/Cu (4um)   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Back-side Metallization        | Ti/Ni/Ag   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Bonding Type                   | Gate: 1.5mil Cu x 1<br>Source: 1.5mil Cu x 5   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Die Size (without scribe line) | 800um x 620um  |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Scribe Line Width              | 60um   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Gate Pad Size                  | 150um x 150um  |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |
| Gross Die                      | 27K ea   |            |               |                |          |                 |        |                          |                |                         |          |              |  |                                |               |                   |      |               |               |           |        |

**ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub>=25°C unless otherwise noted)**

| Parameter  | Symbol         | Limit      | Units |
|--|----------------|------------|-------|
| Drain-Source Voltage                             | $V_{DS}$       | -100       | V     |
| Gate-Source Voltage                              | $V_{GS}$       | $\pm 20$   | V     |
| Operating Junction and Storage Temperature Range | $T_J, T_{STG}$ | -55 to 150 | °C    |

**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise noted)**

| Parameter                        | Symbol       | Test Conditions                           | Min  | Typ  | Max       | Units |
|----------------------------------|--------------|---|------|------|-----------|-------|
| Drain-Source Breakdown Voltage   | $BV_{DSS}$   | $V_{GS}=0\text{V}, I_D=-250\text{uA}$     | -100 |      |           | V     |
| Zero Gate Voltage Drain Current  | $I_{DSS}$    | $V_{DS}=-80\text{V}, V_{GS}=0\text{V}$    |      |      | -1        | uA    |
| Gate-Body Leakage Current        | $I_{GSS}$    | $V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$ |      |      | $\pm 100$ | nA    |
| Gate Threshold Voltage           | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=-250\text{uA}$        | -1.0 | -1.6 | -2.5      | V     |
| Drain-Source On-State Resistance | $R_{DS(on)}$ | $V_{GS}=-10\text{V}, I_D=-1\text{A}$      |      | 645  | 793       | m ohm |
|                                  |              | $V_{GS}=-4.5\text{V}, I_D=-0.5\text{A}$   |      | 720  | 900       | m ohm |

**Notes:**

- 1.Pulse Test:Pulse Width  $\leq 300\text{us}$ , Duty Cycle  $\leq 2\%$ .
- 2.RDS(ON) calculated by SOP-8 Package Type.