



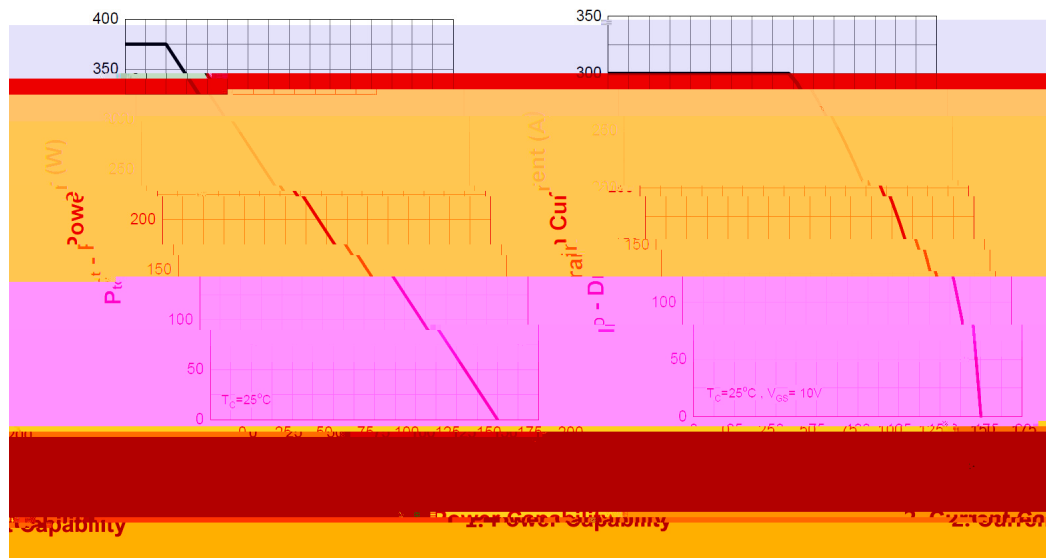
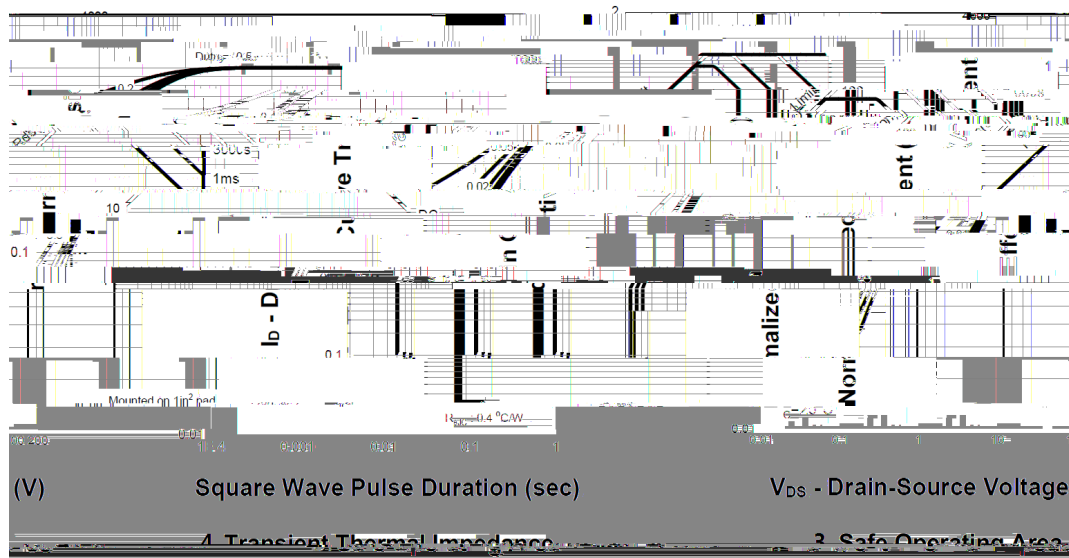
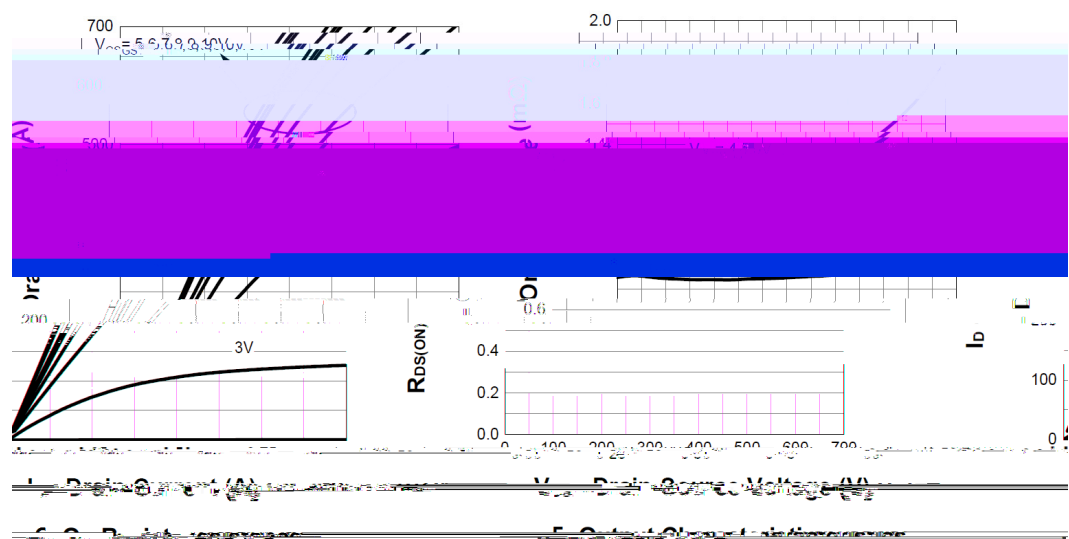


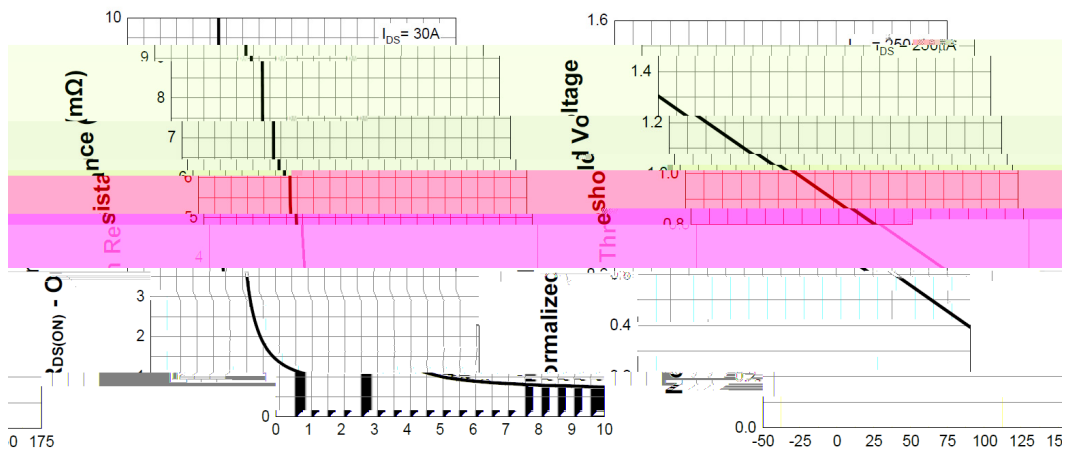
| Parameter                               | Symbol | Rating                                  | Unit          |     |     |
|-----------------------------------------|--------|-----------------------------------------|---------------|-----|-----|
| Drain-Source Voltage                    |        | V <sub>DS</sub>                         | 40            | V   |     |
| Gate-Source Voltage                     |        | V <sub>GS</sub>                         | ±20           | V   |     |
|                                         |        | I <sub>D</sub> (T <sub>c</sub> =25 °C)  | 300 A         |     |     |
|                                         |        | P <sub>D</sub> (T <sub>c</sub> =100 °C) | 30 W          |     |     |
|                                         |        | D <sub>M</sub> (T <sub>c</sub> =25 °C)  | 1200 A        |     |     |
| Power Dissipation                       |        | P <sub>D</sub> (T <sub>c</sub> =25 °C)  | 375 W         |     |     |
| Operating and Storage Temperature Range |        | T <sub>J</sub> , T <sub>stg</sub>       | -55 to 175 °C | Min | Typ |
|                                         |        | (T <sub>c</sub> =25 °C)                 | 300 A         |     |     |
|                                         |        | E <sub>AS</sub>                         | 1512          | mJ  |     |
|                                         |        | θ <sub>JA</sub>                         | 60            |     |     |
| Thermal resistance, junction – case     |        |                                         |               |     |     |

2 pad area, t ≤ 10 sec 2. Pulse width ≤ 300 μs, duty cycle ≤ 2 % 3. limited by bonding wire

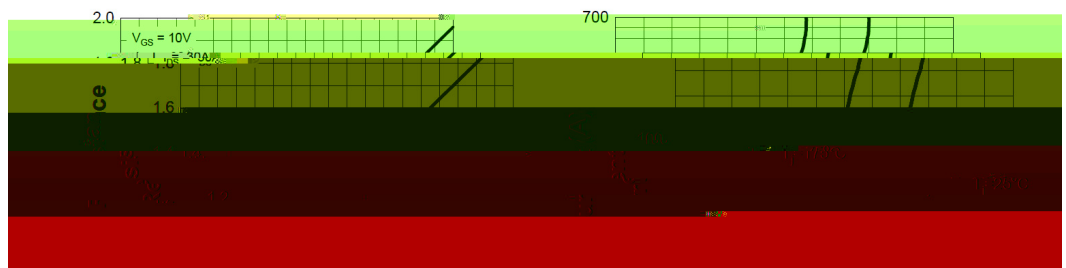
|                                |                     |                       |                       |                       |       |         |
|--------------------------------|---------------------|-----------------------|-----------------------|-----------------------|-------|---------|
| Drain-Source Breakdown Voltage | BV                  | V <sub>GS</sub> =0V   | I <sub>D</sub> =250μA | 40                    |       | V       |
|                                | GS(th)              | V                     | DS=V <sub>GS</sub>    | I <sub>D</sub> =250μA | 1.0   | 2.0     |
|                                |                     | V <sub>GS</sub> =0V   | V <sub>DS</sub> =0V   |                       |       | 1 μA    |
|                                | GSS                 | V <sub>GS</sub> =±20V | V <sub>DS</sub> =0V   |                       |       | ±0.1 μA |
| On-Resistance                  | r <sub>DS(on)</sub> | V <sub>GS</sub> =4.5V | I <sub>D</sub> =20A   | 0.75                  | 0.85  | mΩ      |
| Drain-Source Diode Forward     | SD                  | V <sub>GS</sub> =0V   | I <sub>S</sub> =30A   |                       | 1.15  | 1.45 mΩ |
|                                |                     | V <sub>GS</sub> =0V   | I <sub>S</sub> =30A   |                       | 1.3   | V       |
|                                | rr                  | V <sub>GS</sub> =0V   | I <sub>S</sub> =30A   |                       | 1.15  | 1.45 mΩ |
| Input Capacitance              | C <sub>iss</sub>    | V <sub>DS</sub> =20V  | V <sub>GS</sub> =0V   |                       | 14406 | pF      |
| Output Capacitance             | C <sub>oss</sub>    | f=1.0MHz              |                       |                       | 1043  |         |
| Reverse Transfer Capacitance   | Crss                |                       |                       |                       | 369   |         |

Parameter

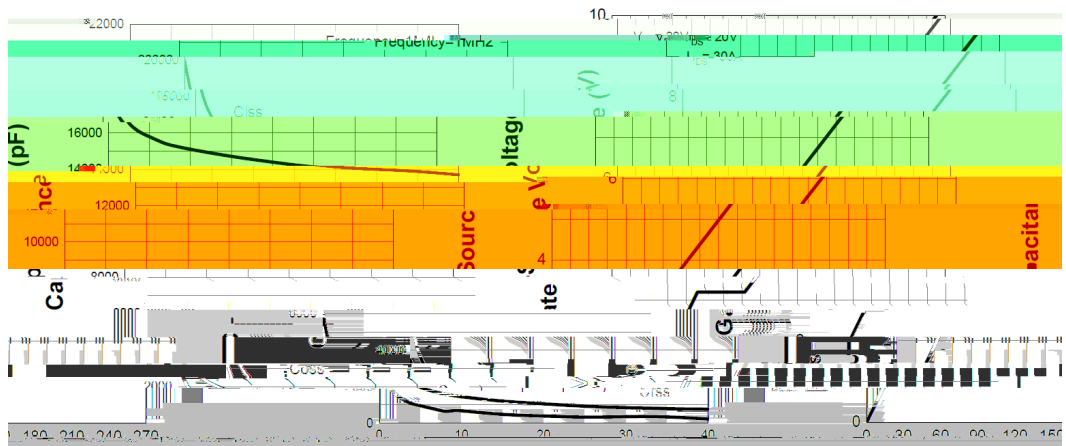




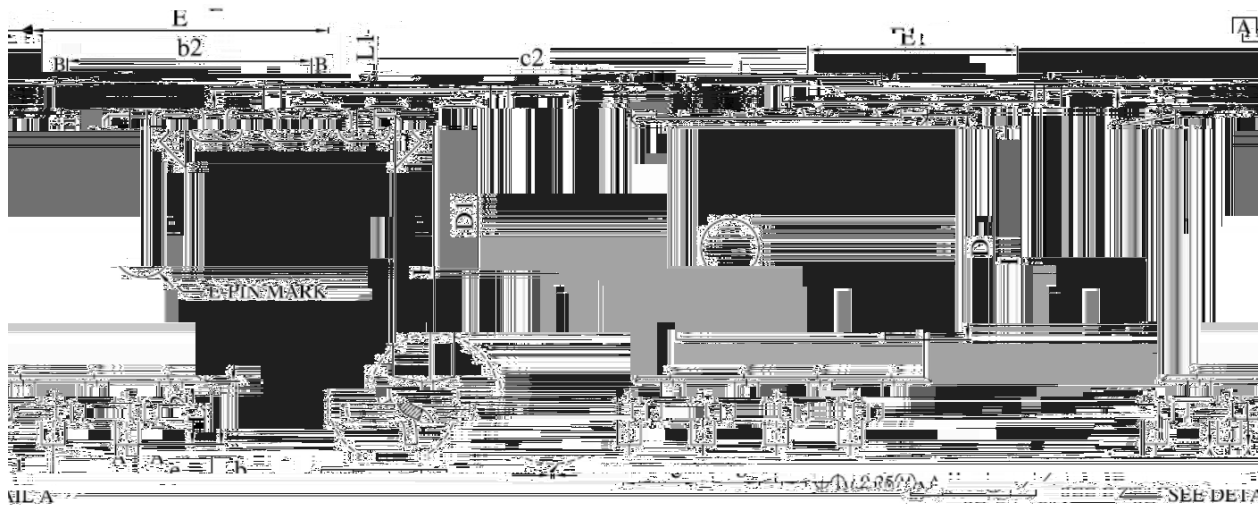
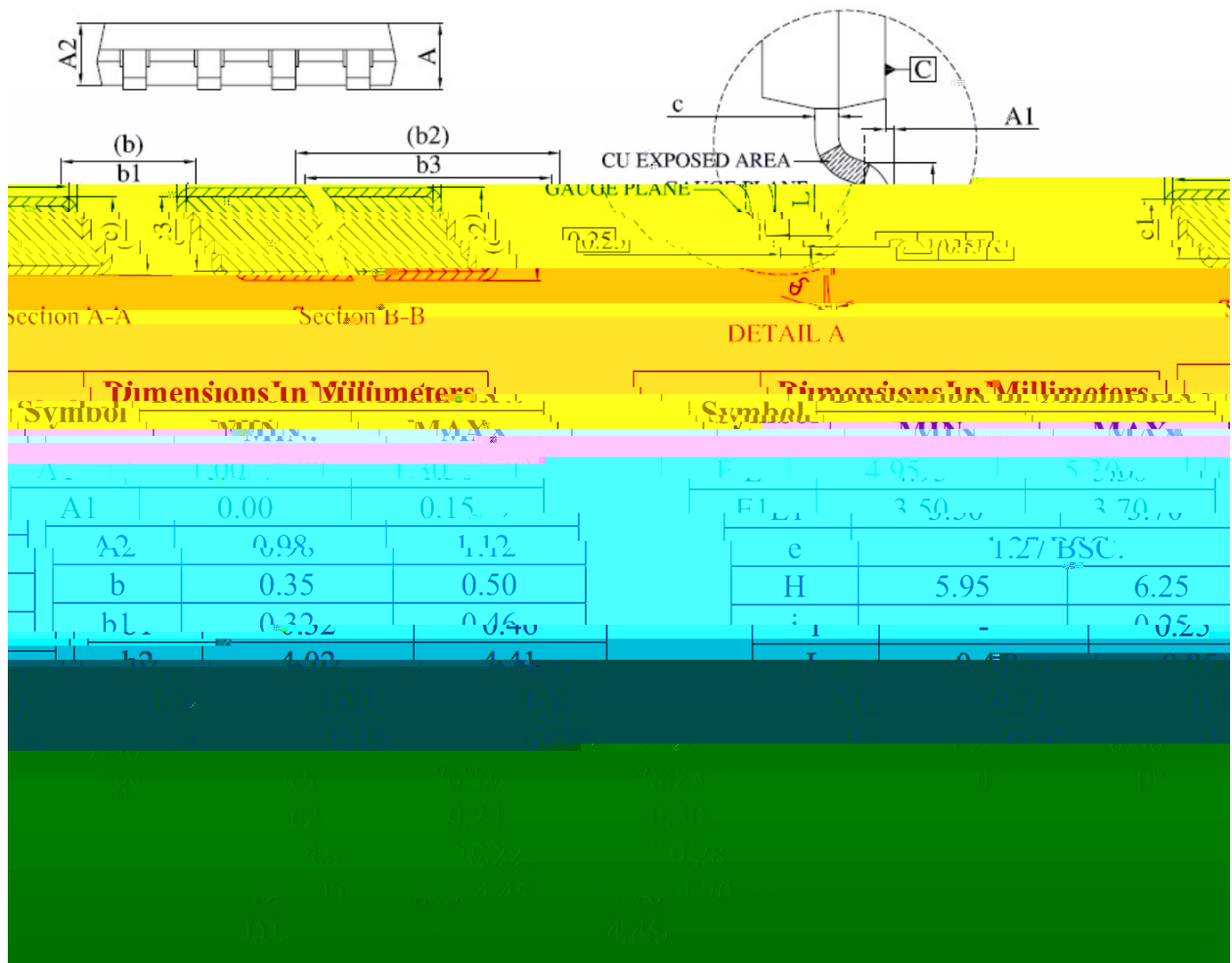
Threshold Voltage // Transfer Characteristics 8. Normalized Threshold Voltage



Forward Current 9. Normalized On-Resistance 10. Normalized On-Resistance



$Q_G$  - Gate Charge (nC)  $V_{DS}$  - Drain-Source Voltage (V) 11. Capacitance





BR

008N04S

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Note

BR: Company Code

008N04S: Product Type Code

\*\*\*\*: Lot No. Code, code change with Lot No.

