

**/ Descriptions**

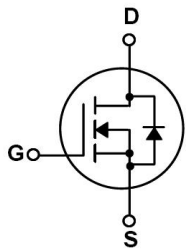
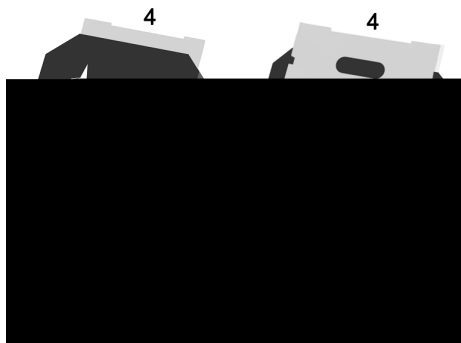
TO-252      SiC N      MOS

SiC N-CHANNEL MOSFET in a TO-252 Plastic Package.

**/ Features** $V_{DS}=650V$     $I_D=7A$  $R_{DS(on)}@15V \leq 650m\Omega$  (Type. 500m $\Omega$ ) $R_{DS(on)}@18V \leq 600m\Omega$  (Type. 378m $\Omega$ )**/ Applications**

LED      PD      PC

LED driver, PD charger, PC adapter, Air-conditioning, E-bike charger.

**/ Equivalent Circuit****/ Pinning**

PIN1   G

PIN 2   D

PIN 3   S

PIN 4   D

**/ Marking**

See Marking Instructions.

/ Absolute Maximum Ratings(Tc=25 )

| Parameter                                                                                      | Symbol                   | Rating | Unit |
|------------------------------------------------------------------------------------------------|--------------------------|--------|------|
| Drain-Source Voltage                                                                           | V <sub>DSS</sub>         | 650    | V    |
| Continuous DC Drain Current for R <sub>th(j-c,typ.)</sub> ,<br>Limited by T <sub>VJ(max)</sub> | I <sub>D</sub> (Tc=25 )  | 7      | A    |
|                                                                                                | I <sub>D</sub> (Tc=100 ) | 5.7    | A    |

Peak Drain Current, tp Limited by T<sub>VJ(me5G(max)13.5())TJ10.4958 0 0 10.5 254.94 621.1403 Tm7.2852 Tc( l)TJ7.0172 0 0 7.02 337.26 620.6603 Tm-0</sub>

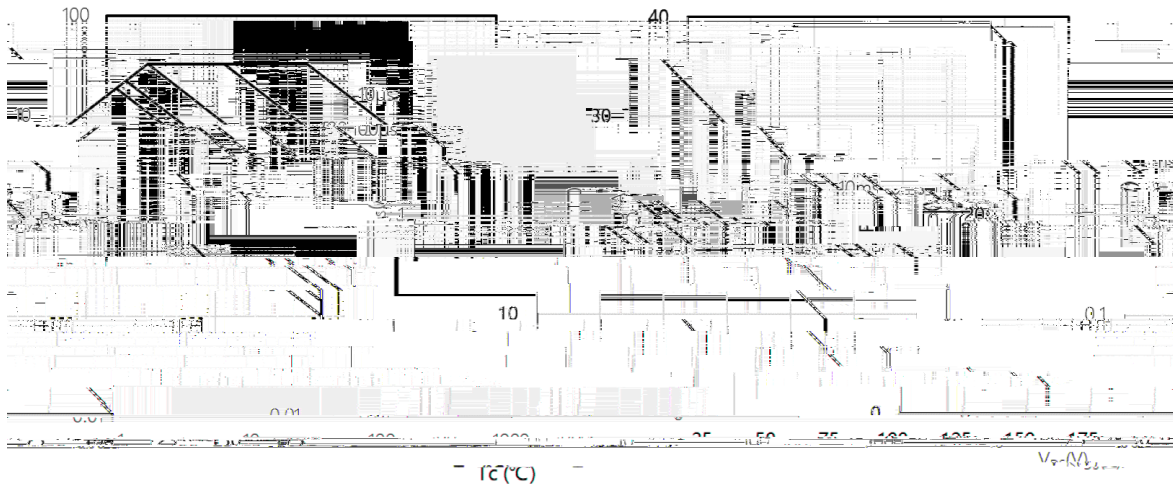
/ Electrical Characteristics(Tc=25 )

|  |    |  |      |  |    |
|--|----|--|------|--|----|
|  | rr |  | 0.19 |  | μJ |
|--|----|--|------|--|----|

## Rev.C Jul.-2026

[illegible]

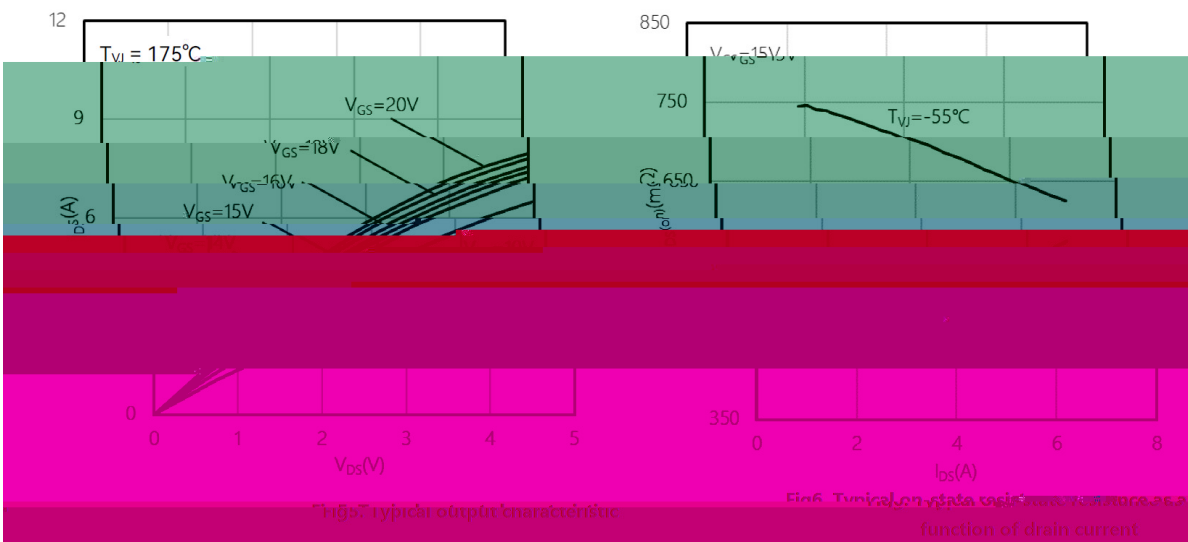
/ Electrical Characteristic Curve



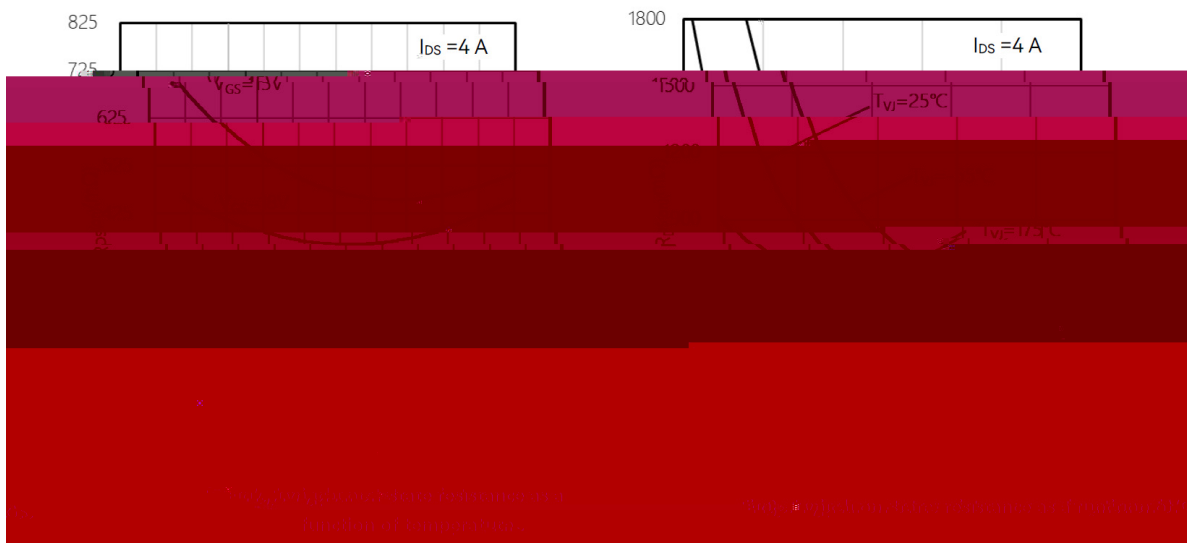
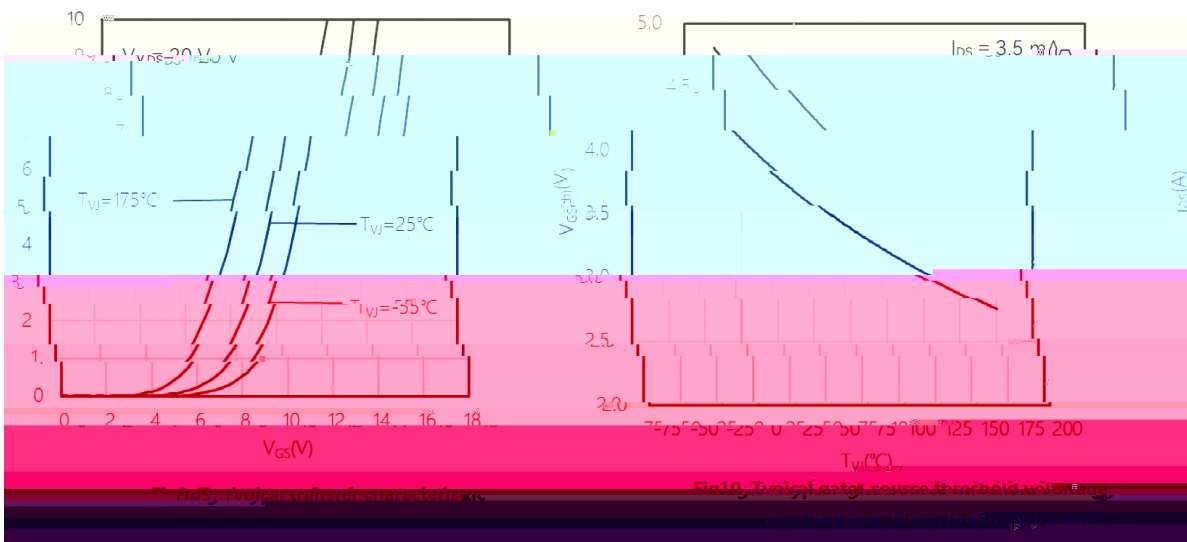
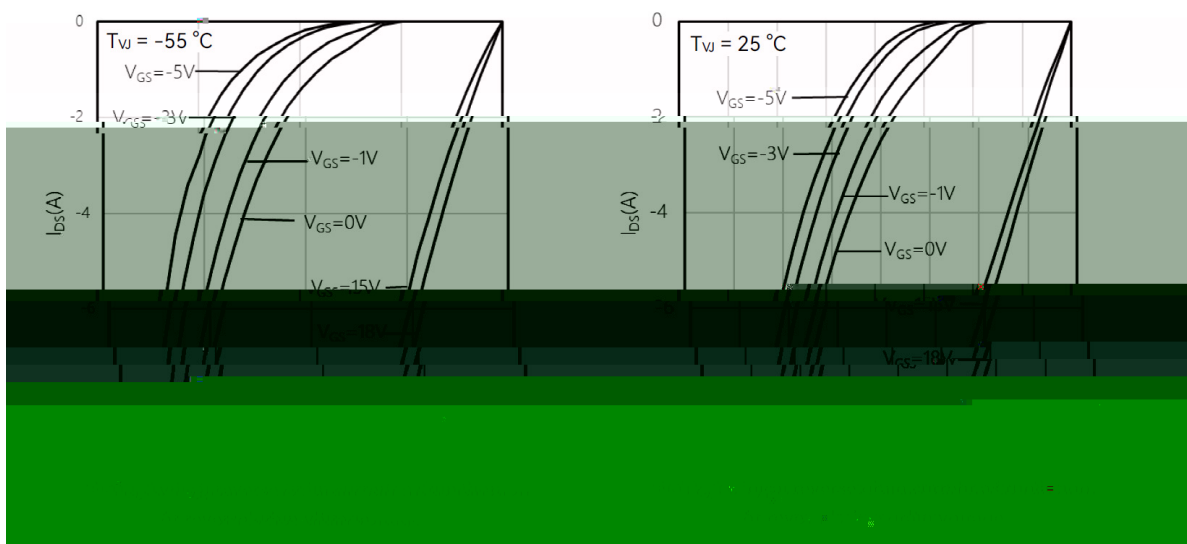
(SOA)

Fig2. Power dissipation

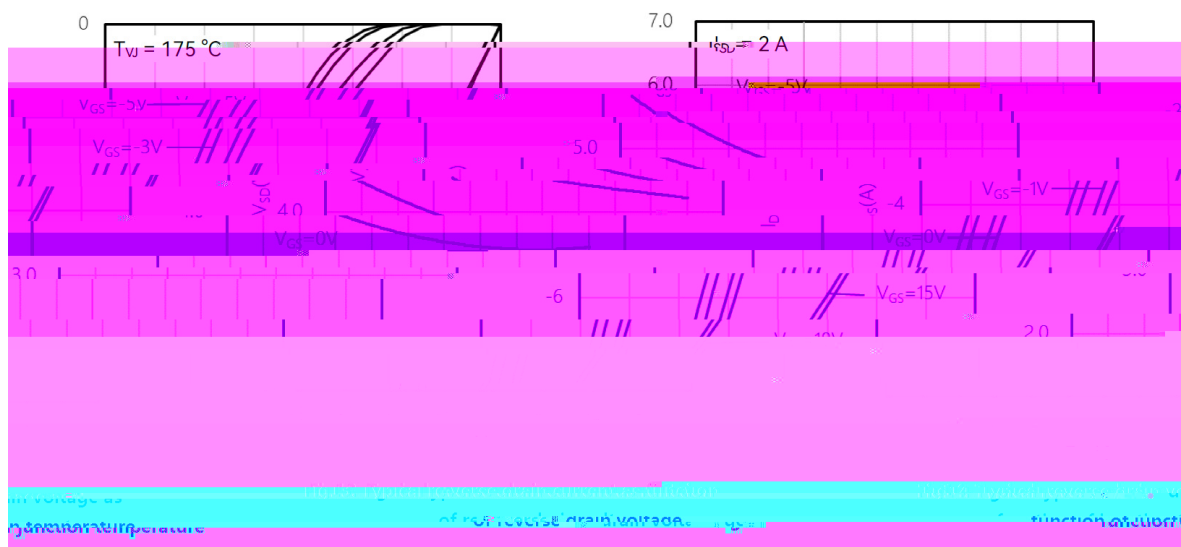
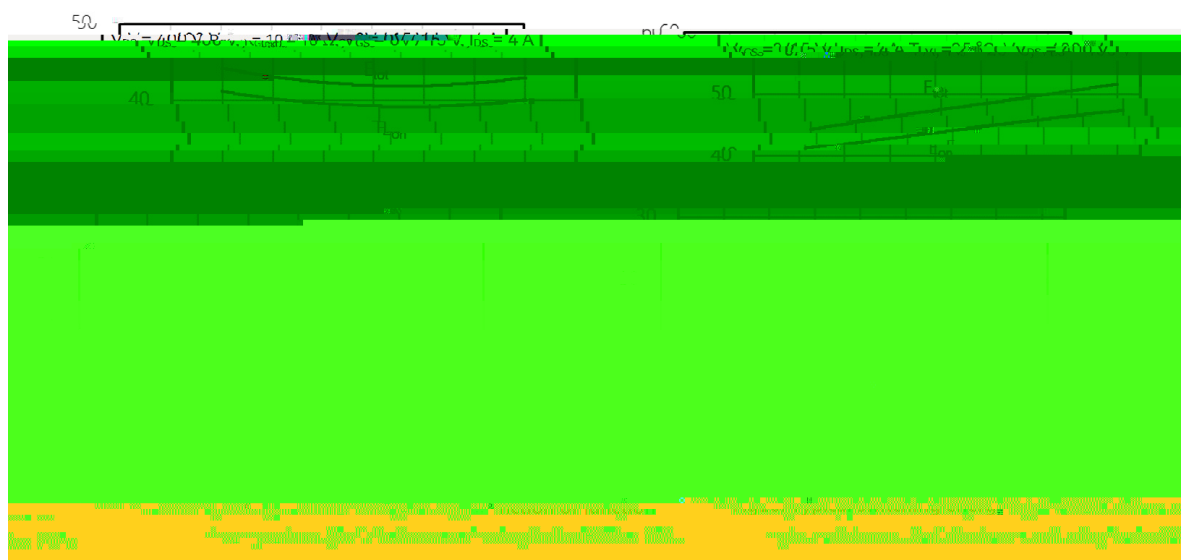
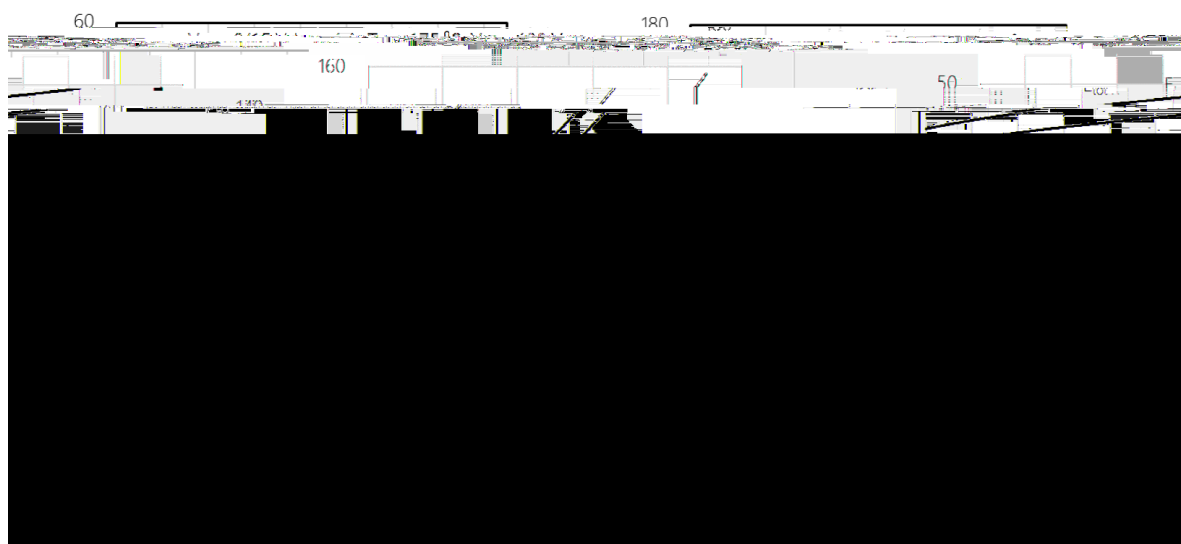
Fig1. Safe operating area



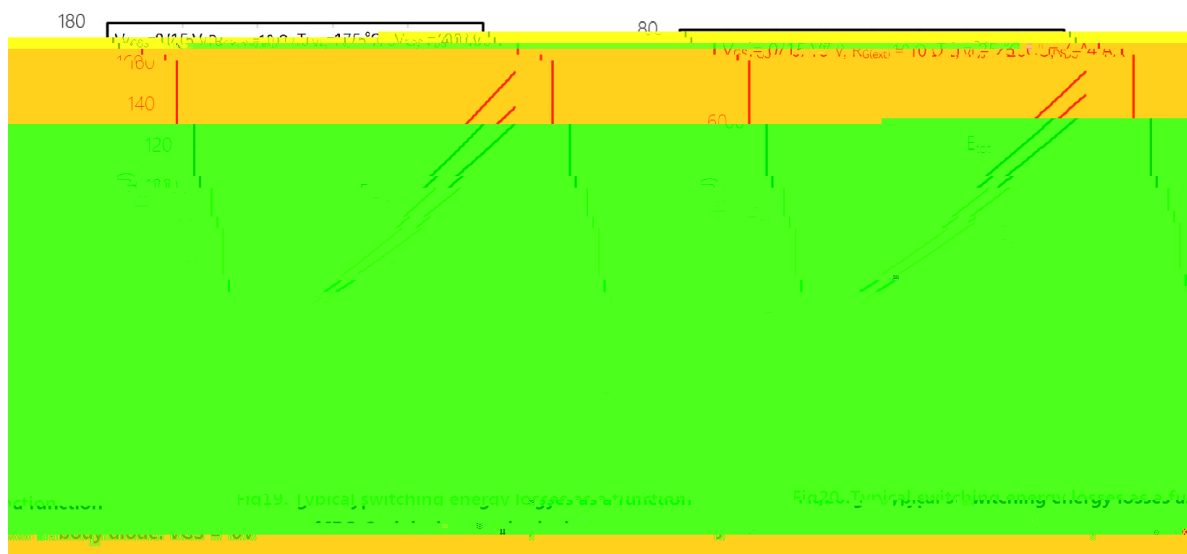
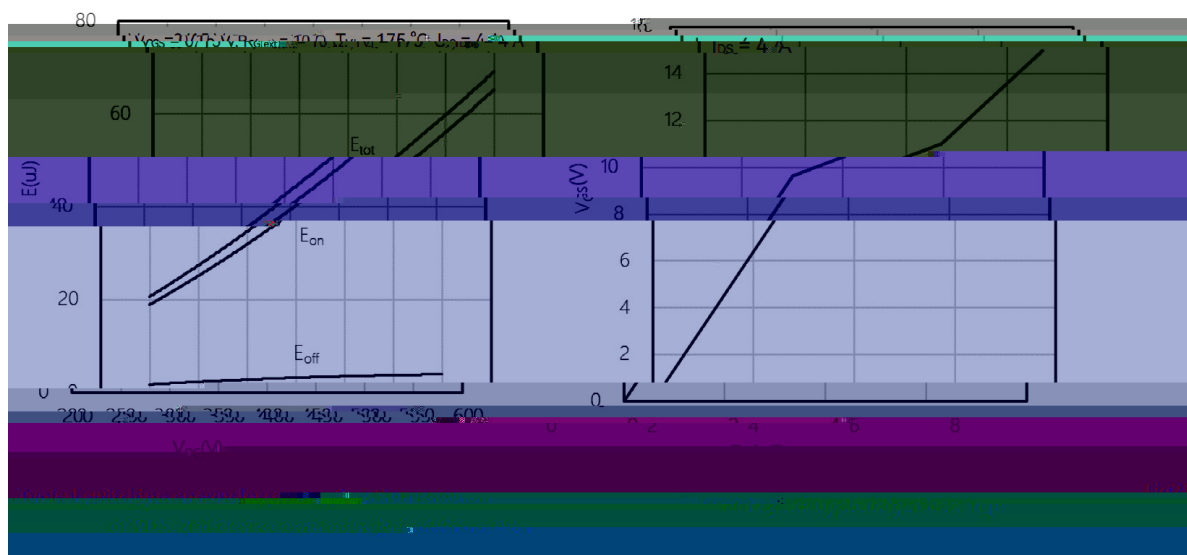
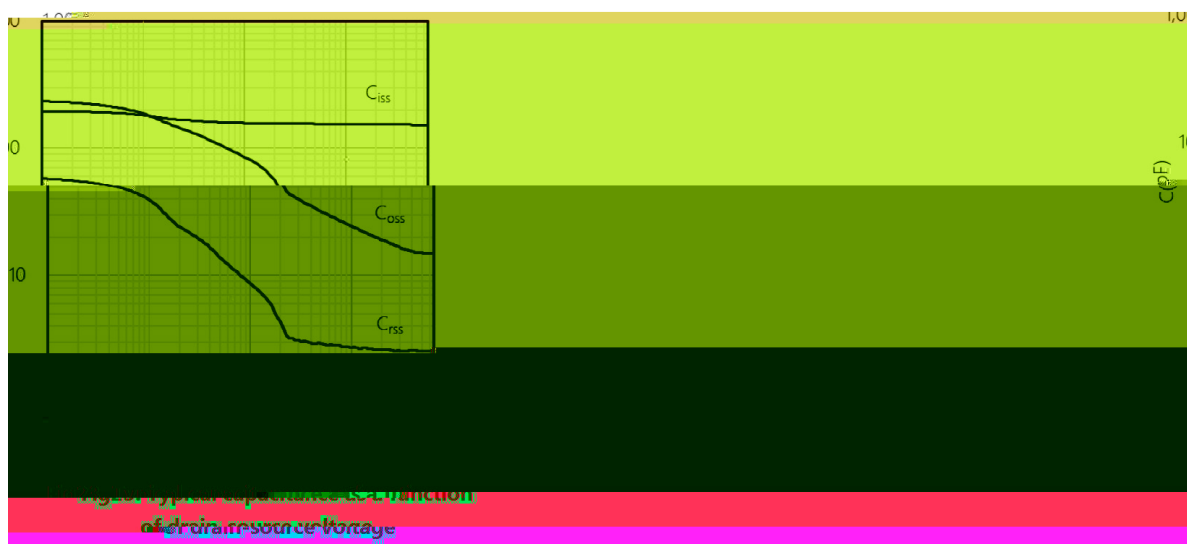
# Electrical Characteristic Curve



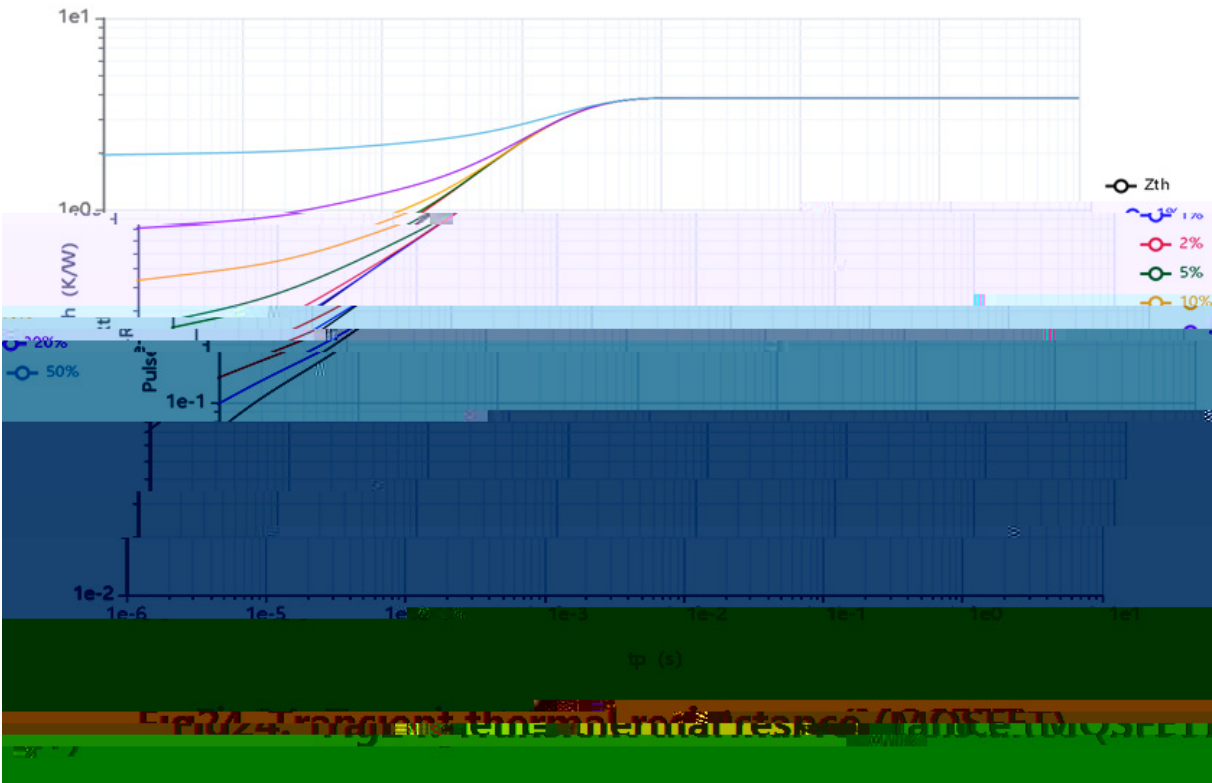
/ ElectricalCharacteristicCurve



## / Electrical Characteristic Curve

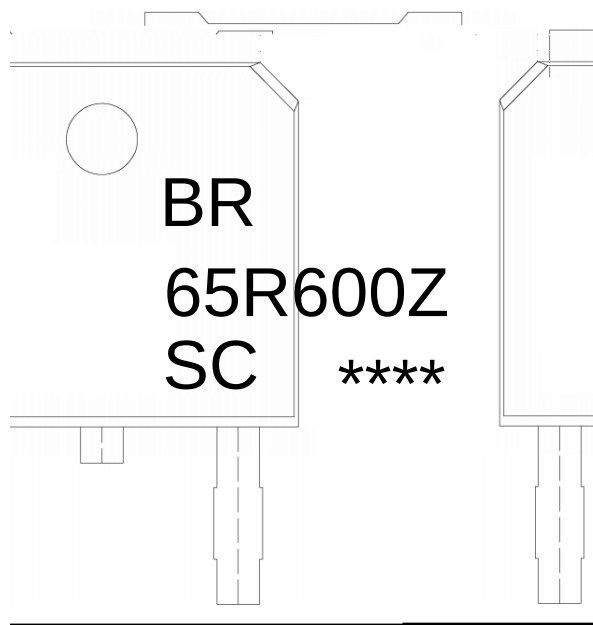


/ Electrical Characteristic Curve





## / Marking Instructions



BR

65R600Z

SC

\*\*\*\*

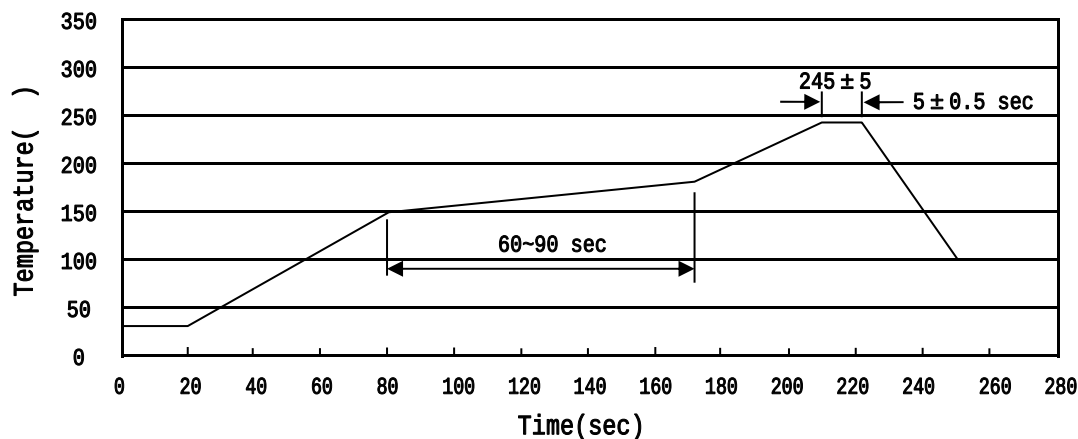
Note:

BR: Company Code

65R600Z: Product Type Code

SC: SiC

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

**( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)**


Note:

- |   |       |     |    |            |                                           |
|---|-------|-----|----|------------|-------------------------------------------|
| 1 | 150   | 180 | 60 | 90sec;     | 1.Preheating:150~180 °C, Time:60~90sec.   |
| 2 | 245±5 |     |    | 5±0.5sec;  | 2.Peak Temp.:245±5 °C, Duration:5±0.5sec. |
| 3 |       |     | 2  | 10 °C/sec. | 3. Cooling Speed: 2~10 °C/sec.            |

**/ Resistance to Soldering Heat Test Conditions**

260±5      10±1 sec.      Temp.:260±5      Time:10±1 sec

**/ Packaging SPEC.**
**/ REEL**

| Package Type | Units |   |       |   |        | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|-------|---|-------|---|--------|-----------------------------------|------------|-------------|
|              |       |   |       |   |        |                                   |            |             |
| TO-252       | 2,500 | 2 | 5,000 | 6 | 30,000 | 13 ×16                            | 360×360×50 | 380×335×366 |

**/ TUBE**

| Package Type | Units |    |       |   |        | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|-------|----|-------|---|--------|-----------------------------------|------------|-------------|
|              |       |    |       |   |        |                                   |            |             |
| TO-251/252   | 75    | 48 | 3,600 | 5 | 18,000 | 526×20.5×5.25                     | 555×164×50 | 575×290×180 |

**/ Notices**

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