# 80V, 198A, 2.8mΩ N-channel Power SGT MOSFET

## JMSH0803RE

### Product Summary

| Parameters | Value | Unit |
|---|---|---|
| $V_{DSS}$ | 80 | V |
| $V_{GS(th)_Typ}$ | 3.2 | V |
| $I_D$(@$V_{GS}$=10V) | 198 | A |
| $R_{DS(ON)_Typ}$(@$V_{GS}$=10V | 2.8 | m |

### Ordering Information

| Device | Marking | MSL | Form | Package | Reel(pcs) | Per Carton (pcs) |
|---|---|---|---|---|---|---|
| JMSH0803RE-13 | SH0803R | 3 | Tape&Reel | TO-263-3L | 800 | 4000 |

### Absolute Maximum Ratings (@ $T_C$ = 25°C unless otherwise specified)

| Symbol | Parameter | | Value | Unit |
|---|---|---|---|---|
| $V_{DS}$ | Drain-to-Source Voltage | | 80 | V |
| $V_{GS}$ | Gate-to-Source Voltage | | | V |
| | | $T_C$ = 25°C | | A |
| | | $T_C$ = 100°C | | |
| $I_{DM}$ | | | | A |
| $E_{AS}$ | | | | mJ |
| | | $T_C$ = 25°C | | W |
| | | $T_C$ = 100°C | | |
| $T_J$, $T_{STG}$ | | | | °C |

| Symbol | Unit |
|---|---|
| R | |
| R | |

**Electrical Characteristics** ($T_J$ = 25°C unless otherwise specified)

| Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| **Off Characteristics** | | | | | |
| $V_{(BR)DSS}$ | | 80 | - | - | V |
| $I_{DSS}$ | | - | - | 1.0 | A |
| $I_{GSS}$ | | - | - | ±100 | nA |
| | | | | | |
| $V_{GS(th)}$ | | 2.2 | 3.2 | 4.1 | V |
| $R_{DS(ON)}$ | | - | 2.8 | 3.6 | m |
| | | | | | |
| $R_g$ | | - | 2.5 | - | |
| $C_{iss}$ | | - | 6508 | 9762 | pF |
| $C_{oss}$ | | - | 1198 | 1797 | pF |
| $C_{rss}$ | | - | 30 | 60 | pF |
| $Q_g$ | | - | 93 | - | nC |
| $Q_{gs}$ | | - | | | |
| | | | | | |
| | | | | | |

# Typical Performance Characteristics

Figure 1: Power De-rating

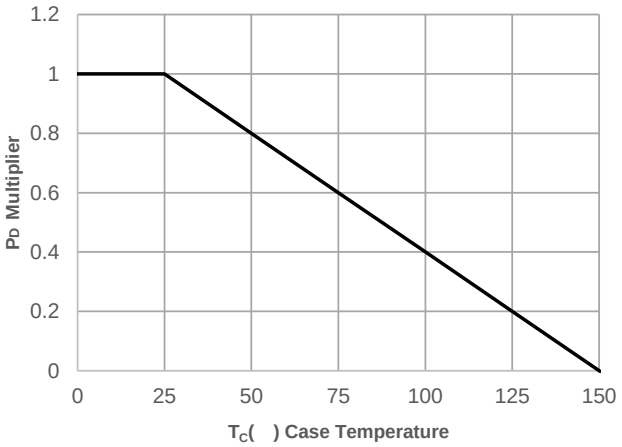
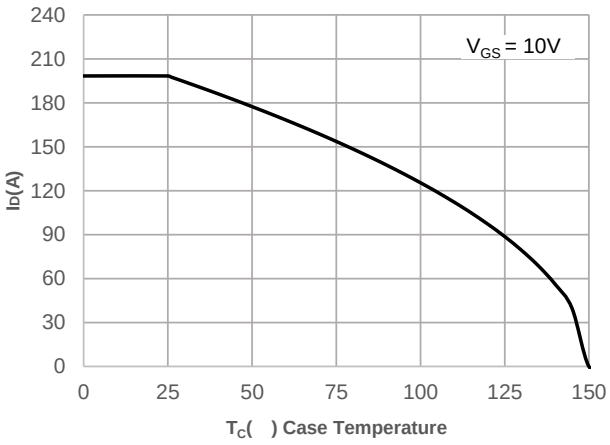
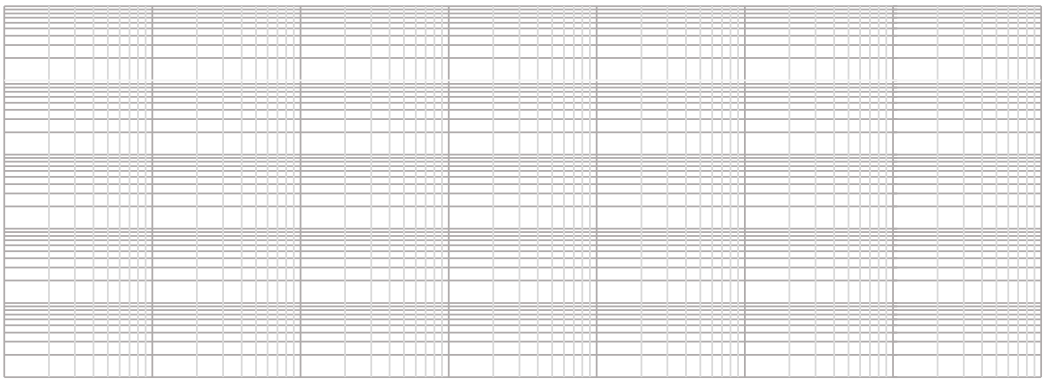


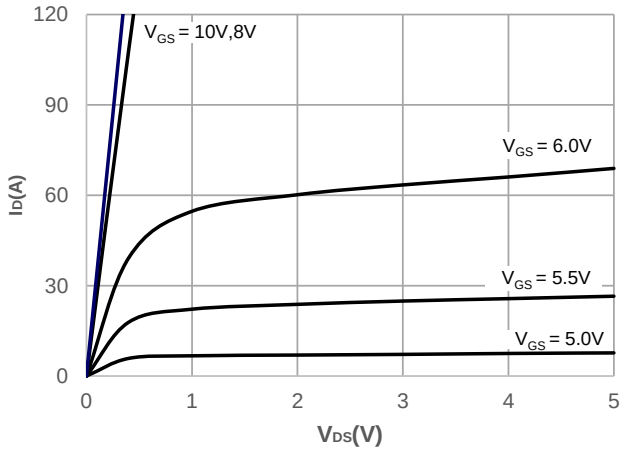

Figure 2: Current De-rating

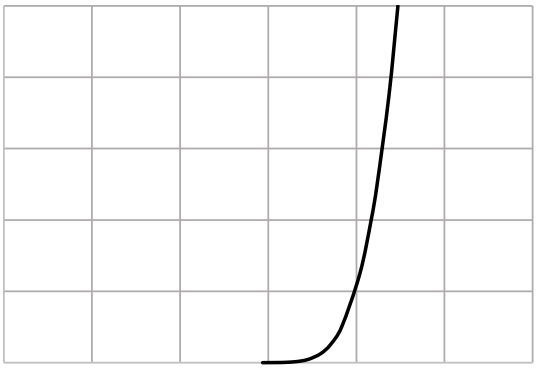


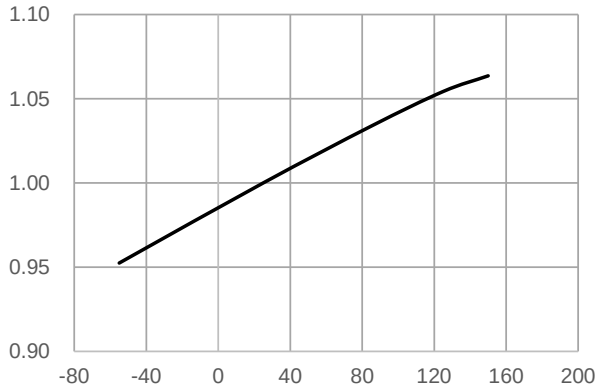
## Typical Performance Characteristics

Figure 5: Output Characteristics



## Typical Performance Characteristics



## Test Circuit

**Figure 1: Gate Charge Test Circuit & Waveform**

## Package Mechanical Data(TO-263-3L)

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