

## JMSH0602MG

### Product Summary

| Parameters                      | Value | Unit |
|---------------------------------|-------|------|
| $V_{DSS}$                       | 60    | V    |
| $V_{GS(th)_{Typ}}$              | 2.7   | V    |
| $I_D(@V_{GS}=10V)$              | 255.2 | A    |
| $R_{DS(ON)_{Typ}}(@V_{GS}=10V)$ | 1.1   | mΩ   |

### Ordering Information

| Device        | Marking | MSL | Form      | Package    | Reel(pcs) | Per Carton (pcs) |
|---------------|---------|-----|-----------|------------|-----------|------------------|
| JMSH0602MG-13 | SH0602M | 1   | Tape&Reel | PDFN5x6-8L | 5000      | 50000            |

### Absolute Maximum Ratings (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

| Symbol         | Parameter                                     | Value                                                 | Unit             |
|----------------|-----------------------------------------------|-------------------------------------------------------|------------------|
| $V_{DS}$       | Drain-to-Source Voltage                       | 60                                                    | V                |
| $V_{GS}$       | Gate-to-Source Voltage                        | $\pm 20$                                              | V                |
| $I_D$          | Continuous Drain Current                      | $T_C = 25^\circ\text{C}$<br>$T_C = 100^\circ\text{C}$ | A                |
| $I_{DM}$       | Pulsed Drain Current <sup>(1)</sup>           | Refer to Fig.4                                        | A                |
| $E_{AS}$       | Single Pulsed Avalanche Energy <sup>(2)</sup> | 850                                                   | mJ               |
| $P_D$          | Power Dissipation                             | $T_C = 25^\circ\text{C}$<br>$T_C = 100^\circ\text{C}$ | W                |
| $T_J, T_{STG}$ |                                               |                                                       | $^\circ\text{C}$ |

| Symbol | Parameter                                              | Max | Unit               |
|--------|--------------------------------------------------------|-----|--------------------|
| R      | Thermal Resistance, Junction to Ambient <sup>(3)</sup> | 43  | $^\circ\text{C/W}$ |
| R      |                                                        |     |                    |



## Typical Performance Characteristics

Figure 1: Power De-rating

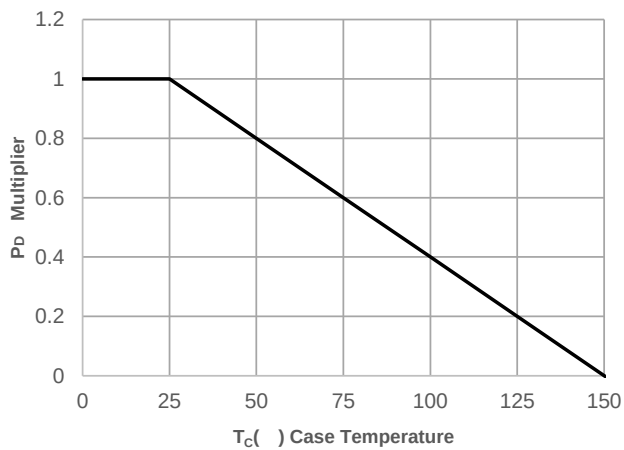


Figure 2: Current De-rating

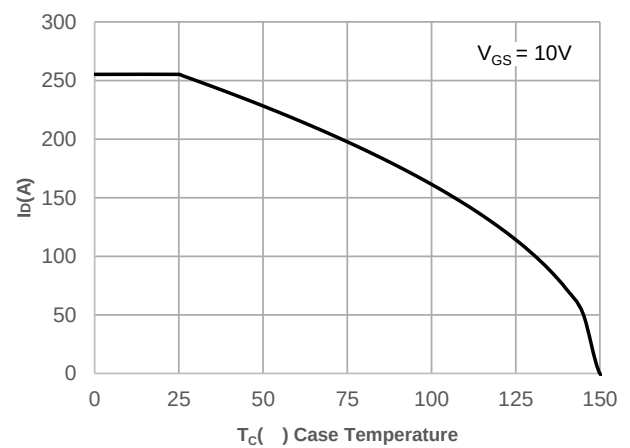


Figure 3: Normalized Maximum Transient Thermal Impedance

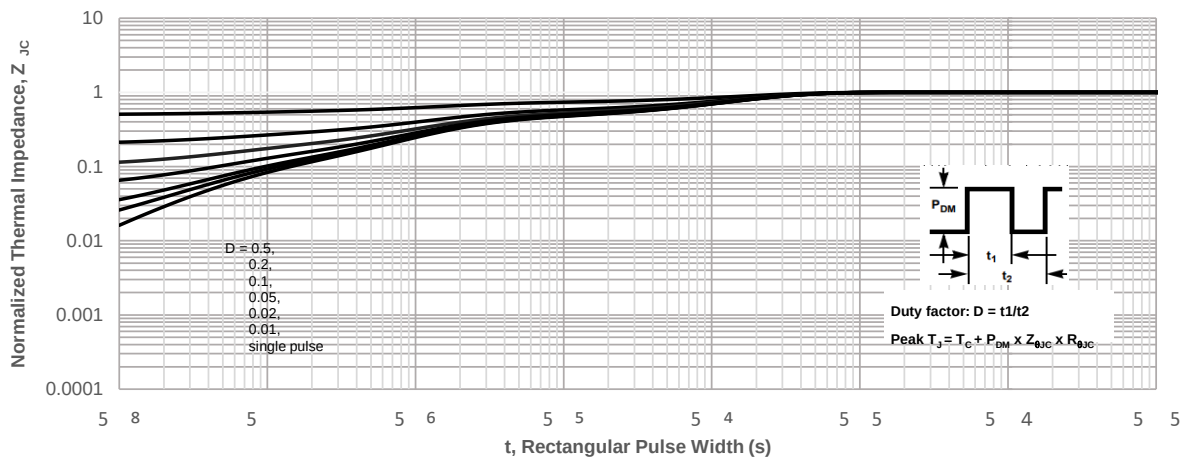
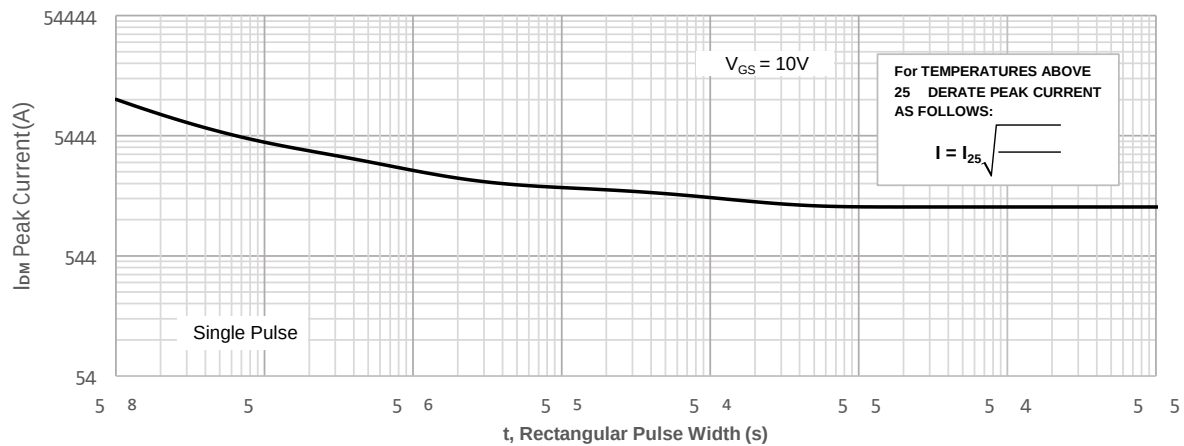


Figure 4: Peak Current Capacity



Typical Performance Characteristics

Figure 5: Output Characteristics

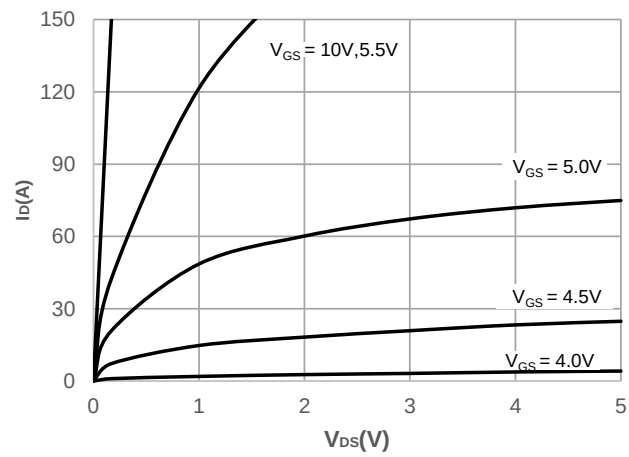
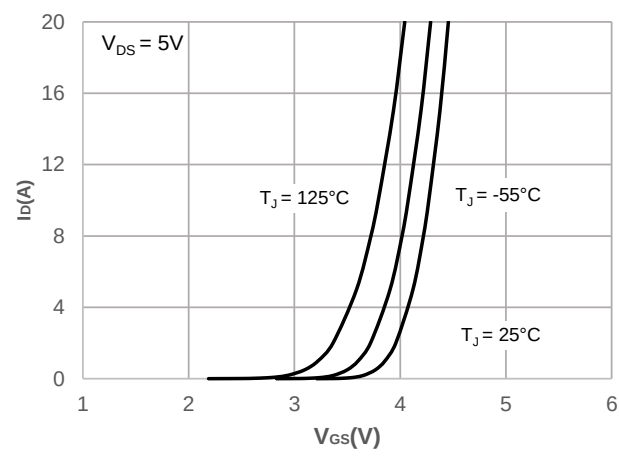
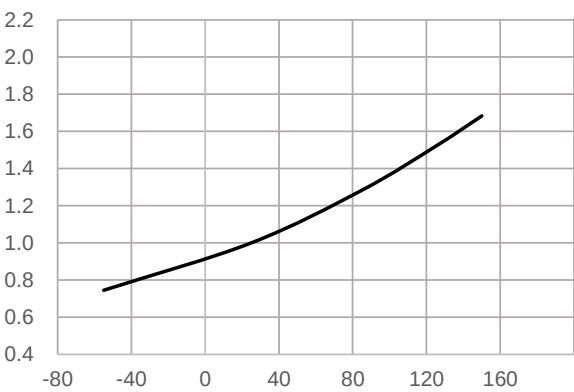
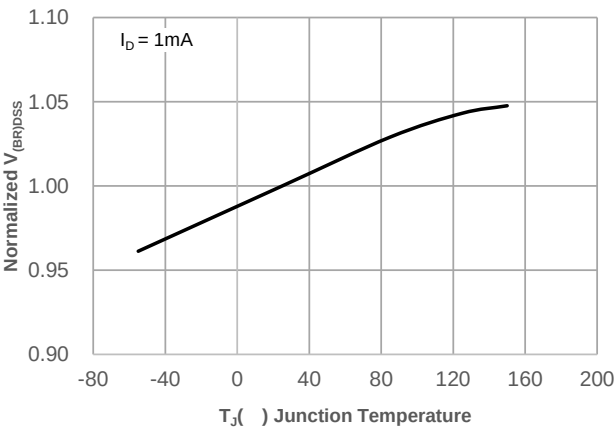


Figure 6: Typical Transfer Characteristics



Typical Performance Characteristics

Figure 11: Normalized Breakdown voltage vs. Junction Temperature



## Test Circuit



Figure 1: Gate Charge Test Circuit & Waveform

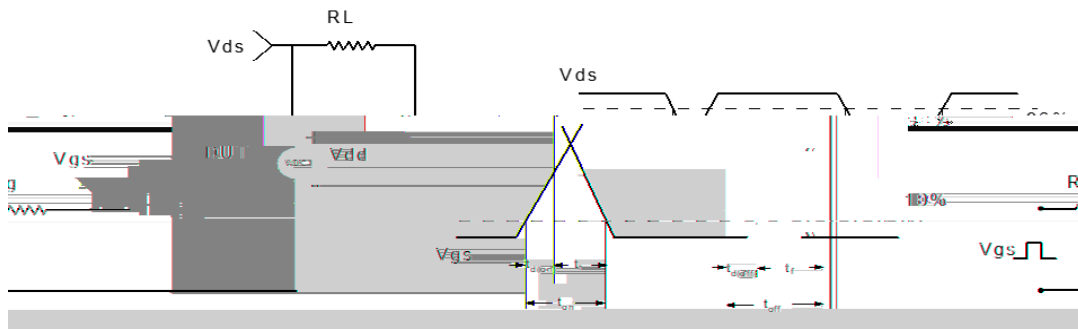


Figure 2: Resistive Switching Test Circuit & Waveform

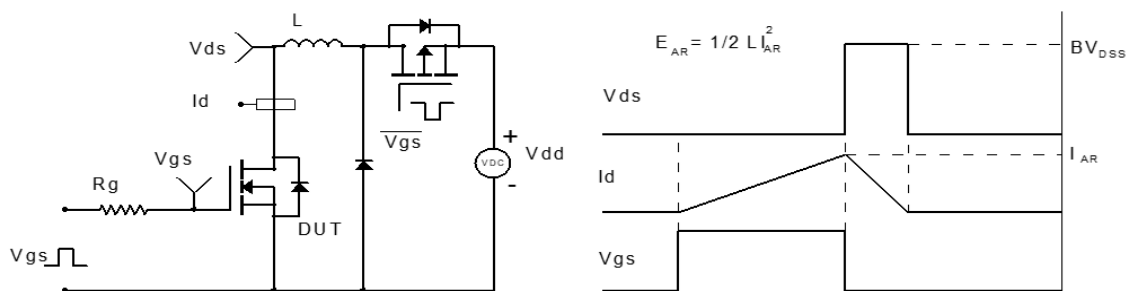


Figure 3: Unclamped Inductive Switching Test Circuit& Waveform

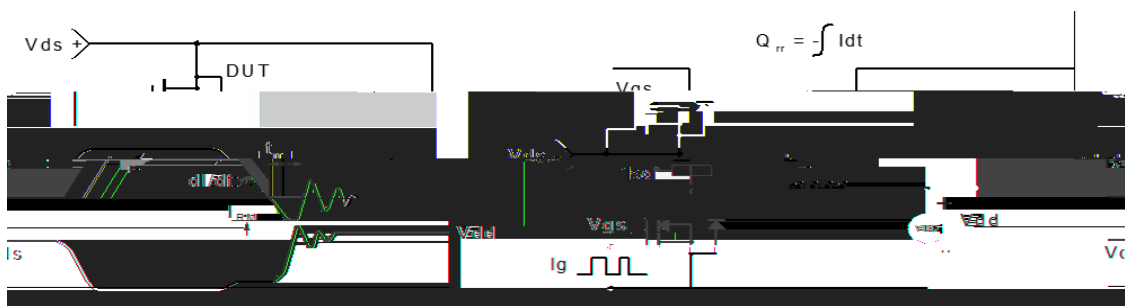


Figure 4: Diode Recovery Test Circuit & Waveform

