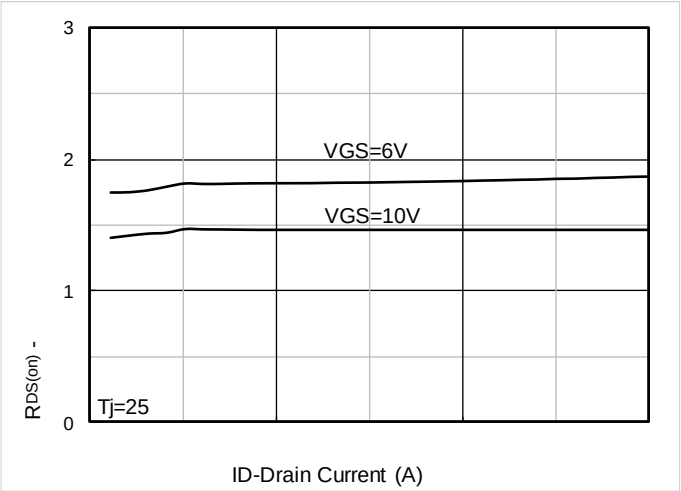
Electrical Characteristics ($T_J$=25 unless otherwise noted)

| Parameter | Symbo l | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Static Parameter | | | | | | |
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $V_{GS}$= 0V, $I_D$ | 100 | - | - | V |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=100V, $V_{GS}$=0V | - | - | 1 | |
| | | $V_{DS}$=100V, $V_{GS}$=0V, Tj=150 | - | - | 100 | |
| Gate-Body Leakage Current | $I_{GSS}$ | $V_{GS}$= ±20V, $V_{DS}$=0V | - | - | ±100 | nA |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}$= $V_{GS}$, $I_D$ | 2 | 2.8 | 4 | V |
| Static Drain-Source On-Resistance | $R_{DS(ON)}$ | $V_{GS}$=10V, $I_D$=150A | - | 1.35 | 1.7 | |
| | | $V_{GS}$=10V, $I_D$=20A | - | 1.35 | 1.7 | |
| | | $V_{GS}$=6V, $I_D$=20A | - | 1.75 | 2.5 | |
| Diode Forward Voltage | $V_{SD}$ | $I_S$=150A, $V_{GS}$=0V | - | 0.9 | 1.2 | V |


3
2
1
0
VGS=6V
VGS=10V
Tj=25
RDS(on) -
ID-Drain Current (A)

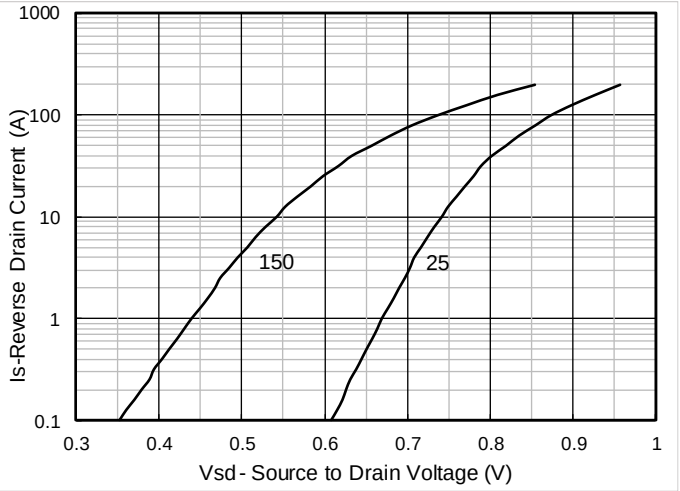

1000
100
10
1
0.1
150
25
Is-Reverse Drain Current (A)
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Vsd - Source to Drain Voltage (V)

Figure 7.

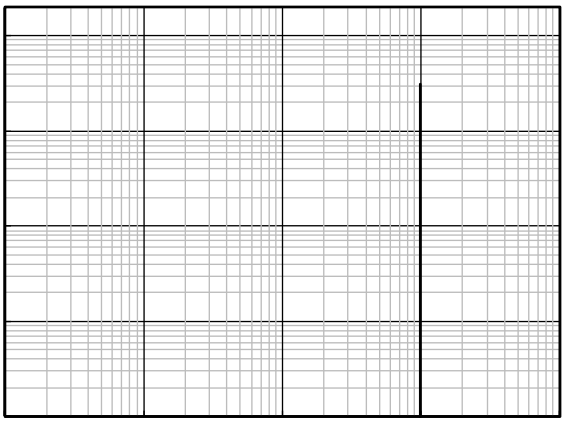


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

## Test Circuit s & Waveforms

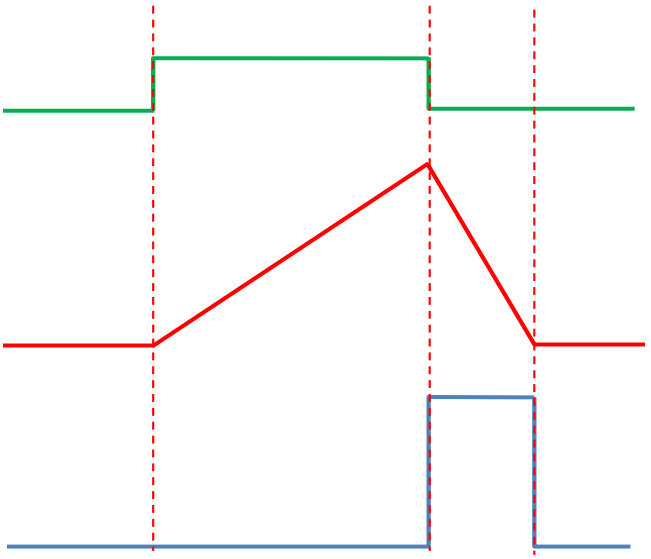


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

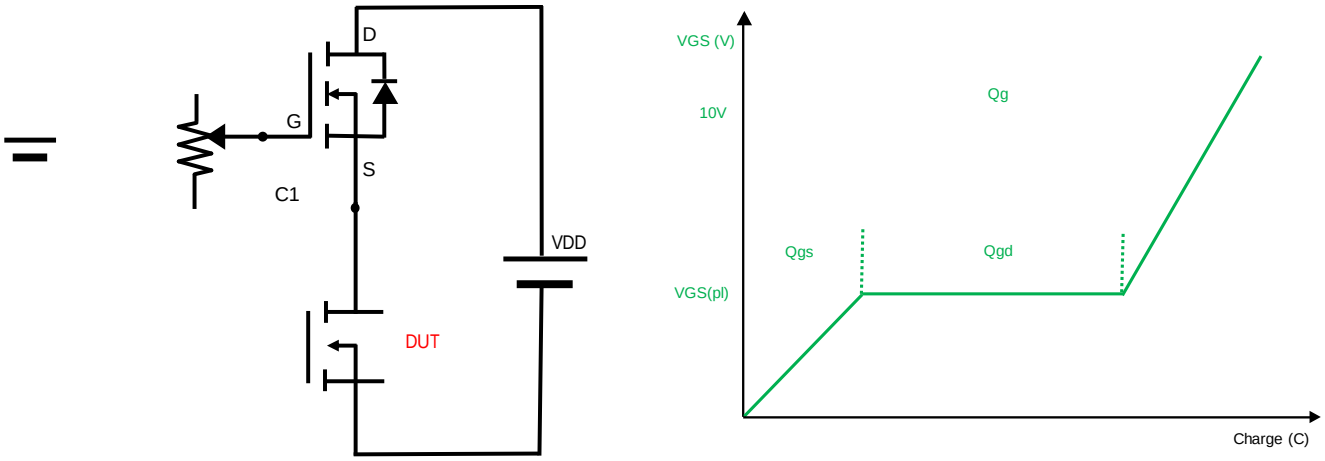



Figure B. Gate Charge Test Circuit & Waveform

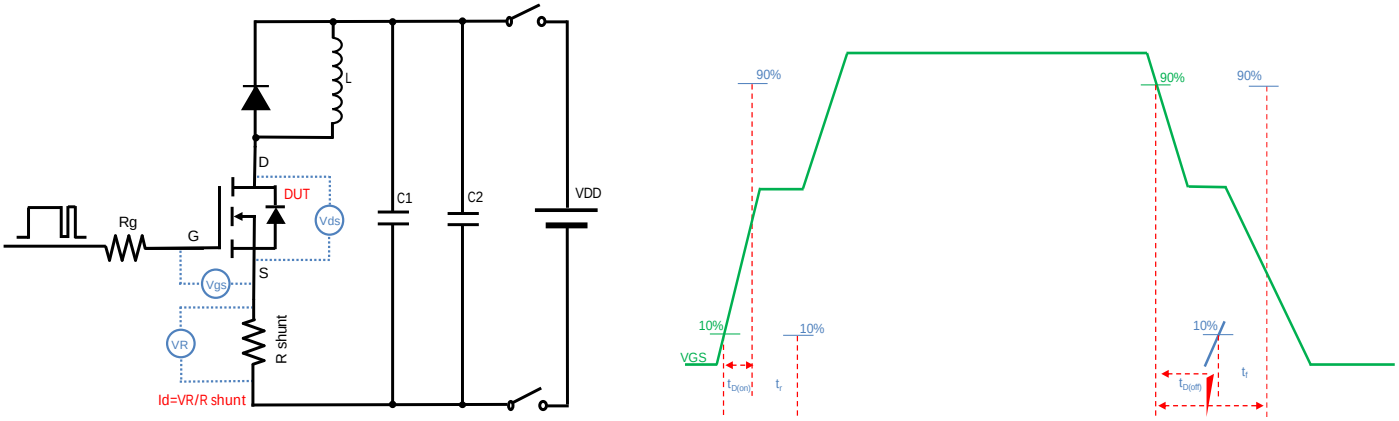



Figure C. Resistive Switching Test Circuit & Waveform

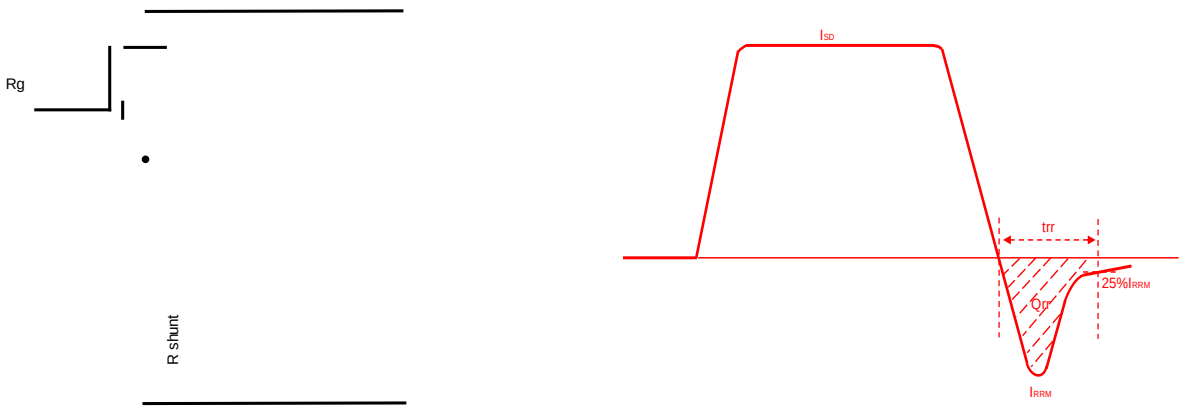



Figure D. Diode Recovery Test Circuit & Waveform

## TOLL Package information

| SYMBOL | MILLIMETER | | |
|---|---|---|---|
| | MIN | NOM | MAX |
| A | 2.2 | 2.3 | 2.4 |
| A1 | 1.7 | 1.8 | 1.9 |
| b | 0.7 | 0.8 | 0.9 |
| b1 | 9.7 | 9.8 | 9.9 |
| b2 | 1.1 | 1.2 | 1.3 |
| c | 0.4 | 0.5 | 0.6 |
| D | | | |

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.03mm.
3.The pad layout is for reference purposes only.

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