## Description

### JMT N-channel

Applications

- 20V, 50A
  $R_{DS(ON)}$ < 8.1m # $V_{GS}$ = 4.5V
  $R_{DS(ON)}$ < 10.7m # $V_{GS}$ = 2.5V
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead Free

TO-252-3L(DPAK) Top View

### Package Marking and Ordering Information

| Device Marking | Device | Outline | Package | Reel Size | Reel(pcs) | Per Carton (pcs) |
|---|---|---|---|---|---|---|
| JMTK2007A | JMTK2007A | TAPING | TO-252-3L | 13" | 2500 | 25000 |

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

| Symbol | Parameter | | Value | Units |
|---|---|---|---|---|
| $V_{DS}$ | Drain-to-Source Voltage | | 20 | V |
| $V_{GS}$ | Gate-to-Source Voltage | | ±12 | V |
| $I_D$ | Continuous Drain Current | $T_C$ = 25°C | 50 | A |
| | | $T_C$ = 100°C | 32 | |
| $I_{DM}$ | Pulsed Drain Current (1) | | 200 | A |
| $E_{AS}$ | Single Pulsed Avalanche Energy (2) | | 49 | mJ |
| $P_D$ | Power Dissipation | $T_C$ = 25°C | 31 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient (3) | | 32 | °C/W |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | | 4.0 | |
| $T_J$, $T_{STG}$ | Junction & Storage Temperature Range | | -55 to 150 | °C |

## Typical Performance Characteristics

Figure 7: Normalized Breakdown voltage vs. Junction Temperature

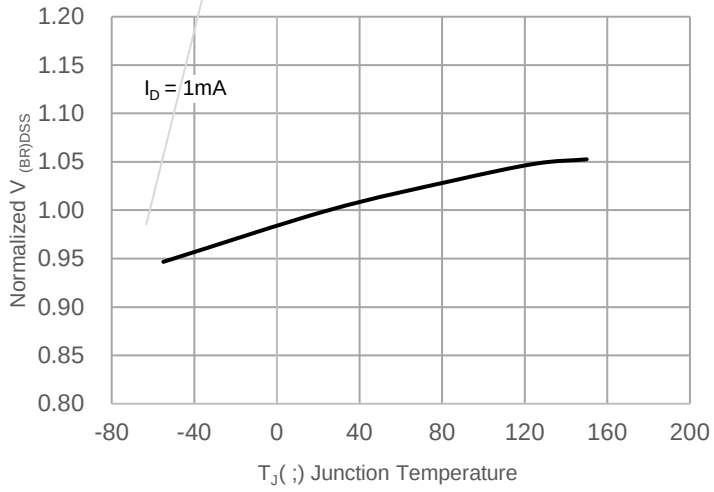
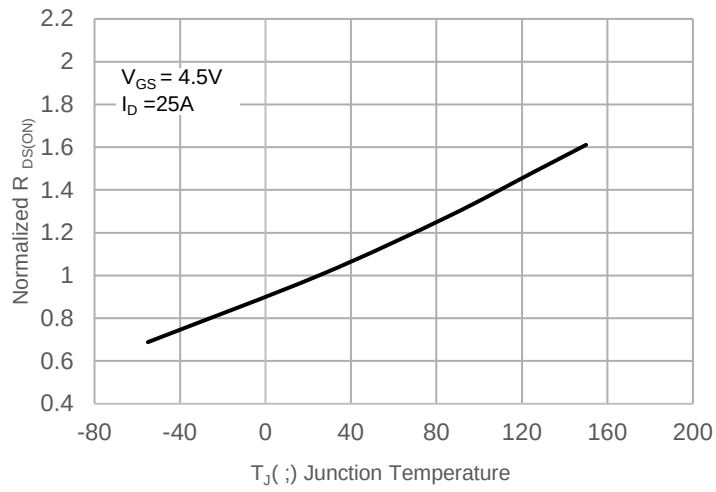
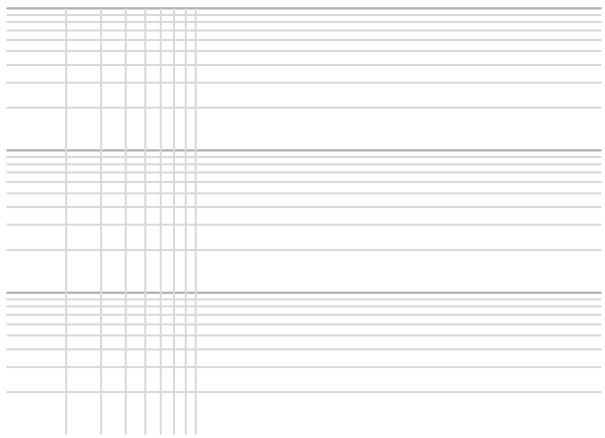



Figure 8: Normalized on Resistance vs. Junction Temperature



## 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

Package Mechanical Data(TO-252-3L)

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