



N-Channel Enhancement Mode Field Effect Transistor

Product Summary

- V_{DS} 100V
- I_D 300A
- $R_{DS(ON)}$ (at $V_{GS}=10V$) $< 1.7m\Omega$
- $R_{DS(ON)}$ (at $V_{GS}=6V$) $< 2.5m\Omega$
- 100% EAS Tested
- 100% ∇V_{DS} Tested

General Description

- Split Gate Trench MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free
- Moisture Sensitivity Level 1

Applications

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YJT300G10H

Typical Electrical and Thermal Characteristics Diagrams

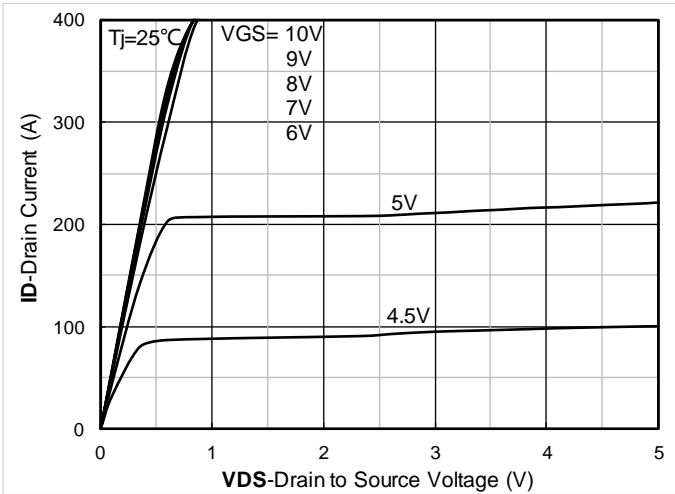


Figure 1. Output Characteristics

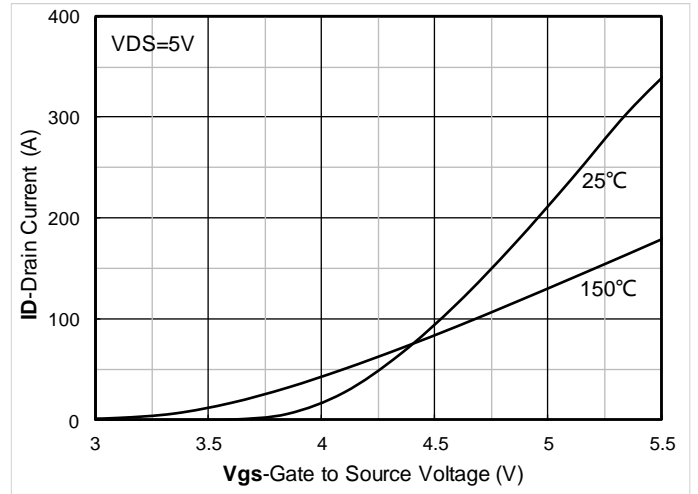


Figure 2. Transfer Characteristics

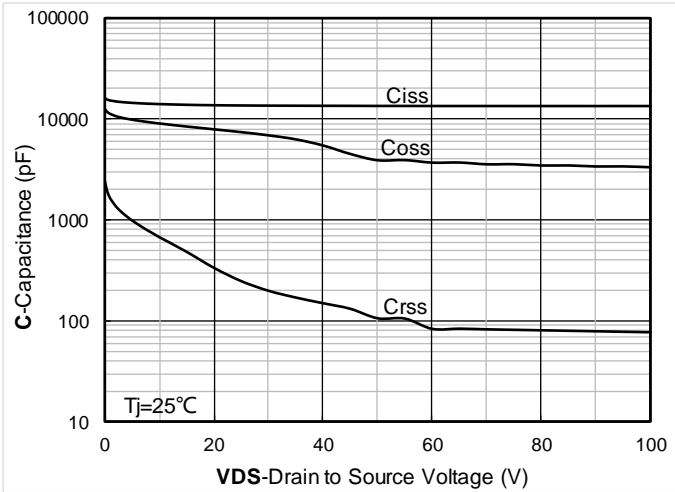


Figure 3. Capacitance Characteristics

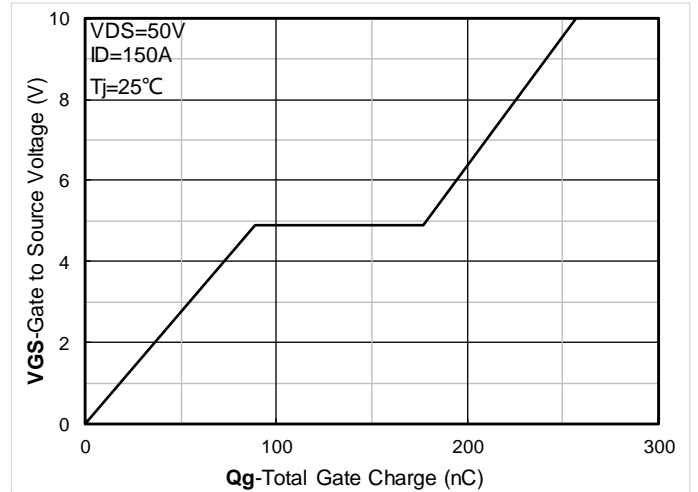


Figure 4. Gate Charge

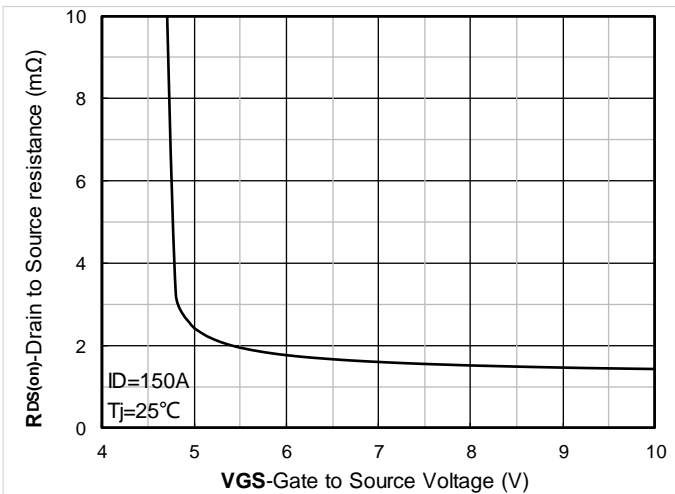


Figure 5. On-Resistance vs Gate to Source Voltage

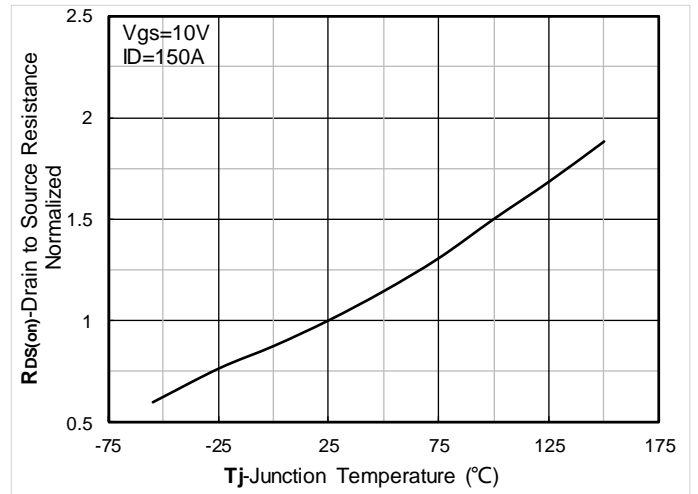


Figure 6. Normalized On-Resistance



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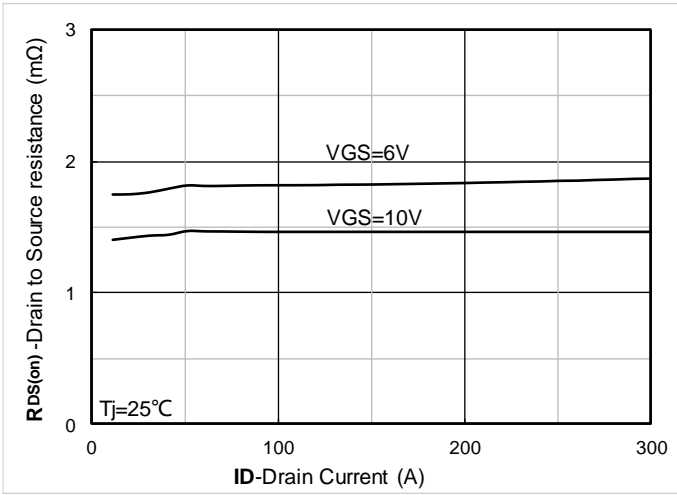


Figure 7. RDS(on) VS Drain Current

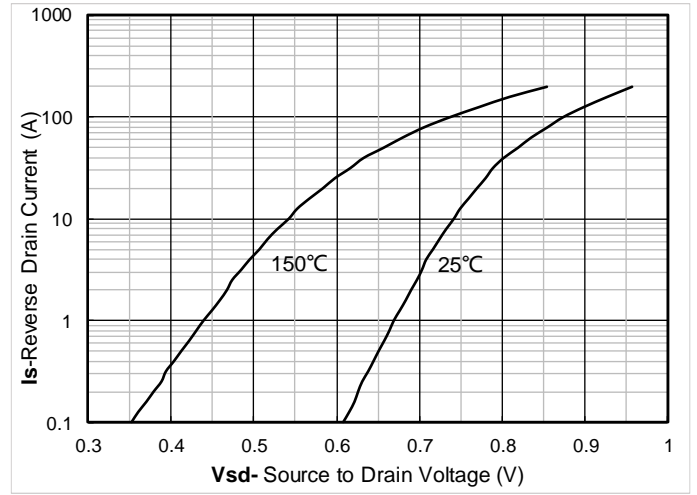


Figure 8. Forward characteristics of reverse diode

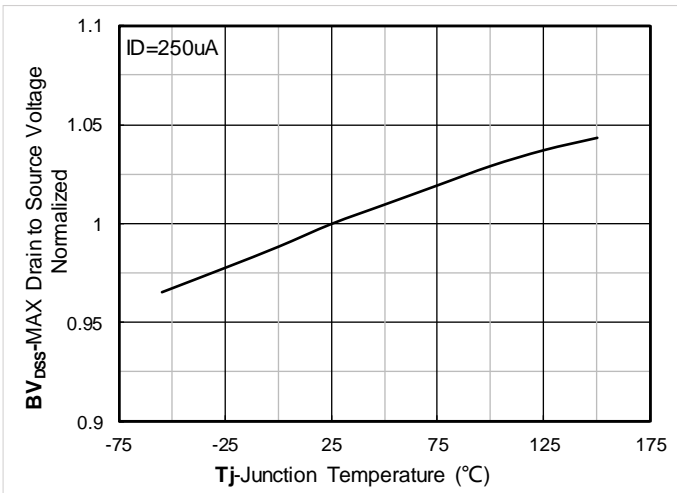


Figure 9. Normalized breakdown voltage

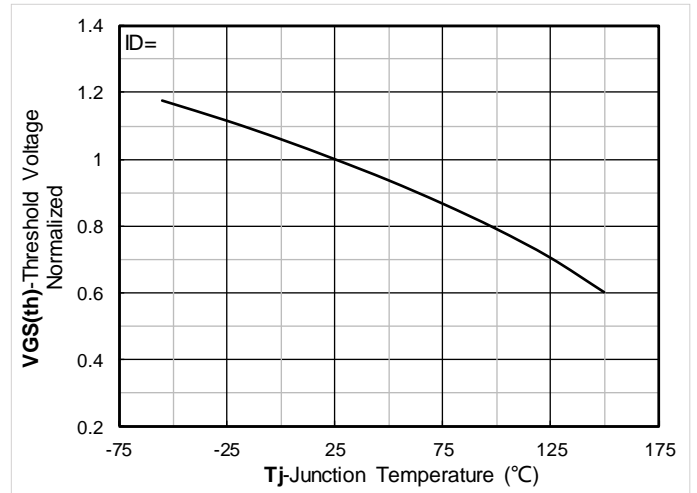


Figure 10. Normalized Threshold voltage

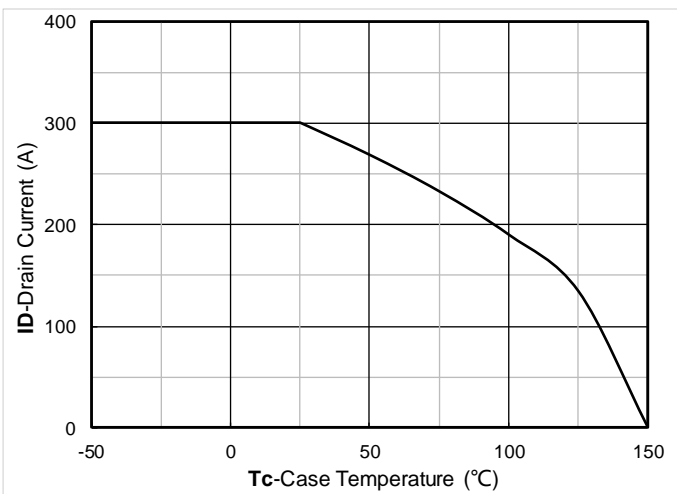


Figure 11. Current dissipation

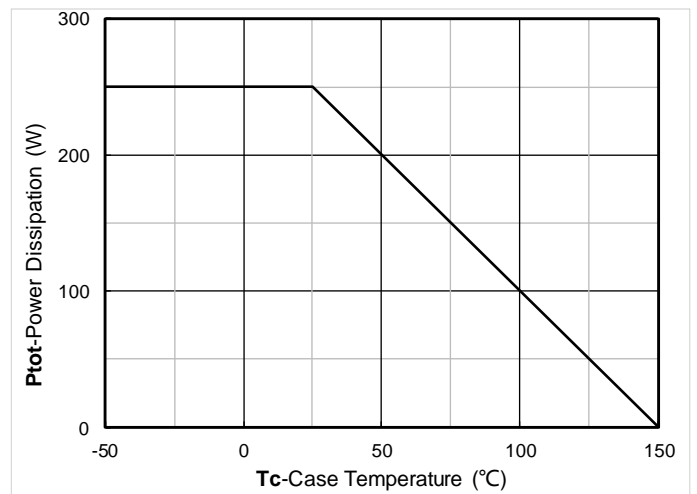


Figure 12. Power dissipation

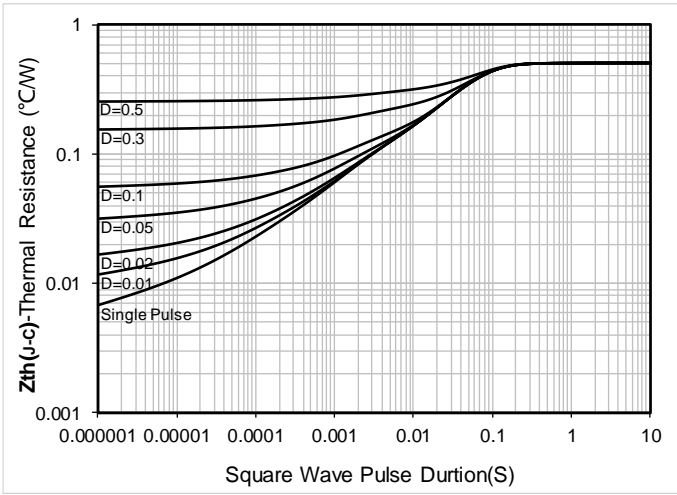


Figure 13. Maximum Transient Thermal Impedance

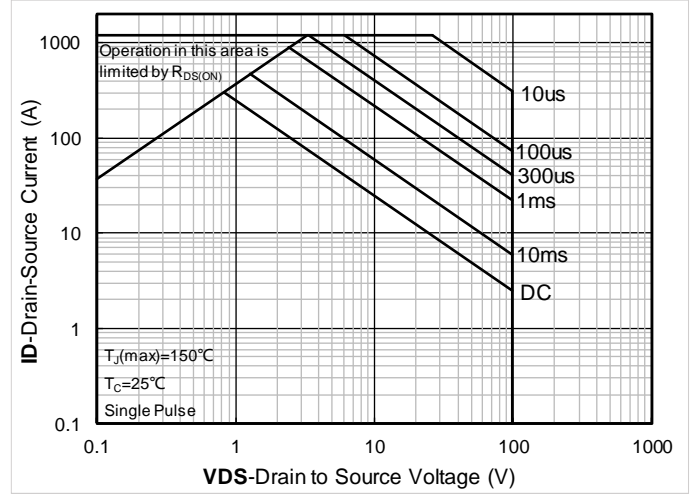


Figure 14. Safe Operation Area

■ Test Circuits & Waveforms

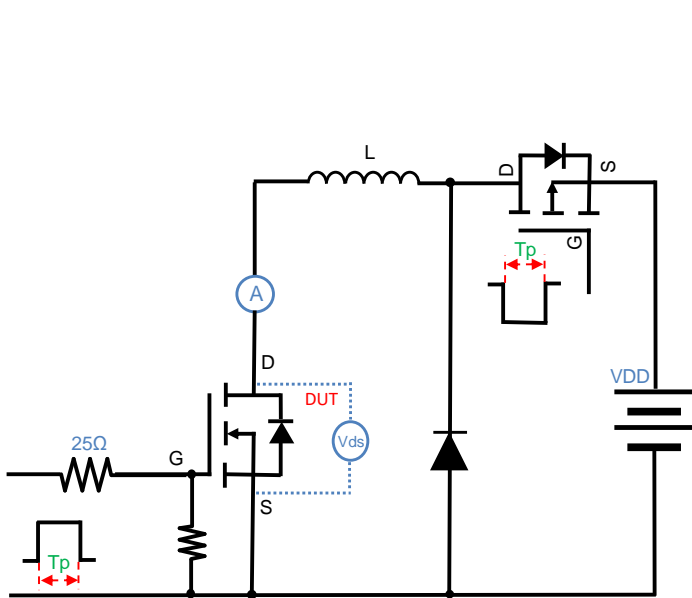
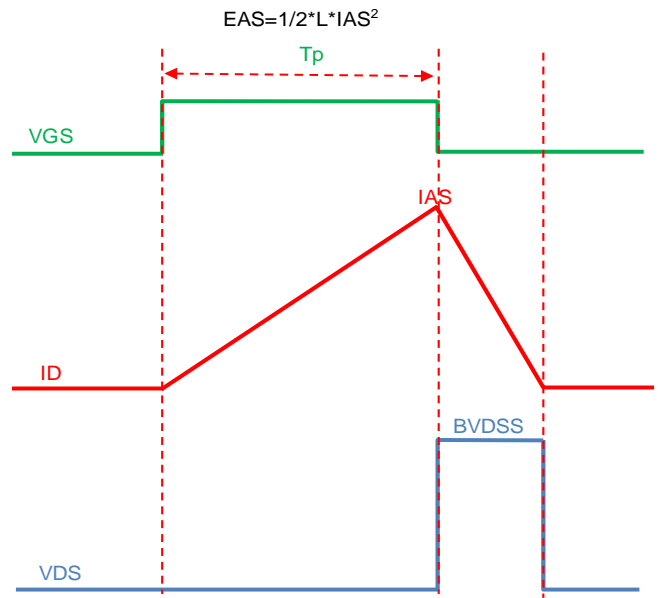


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform



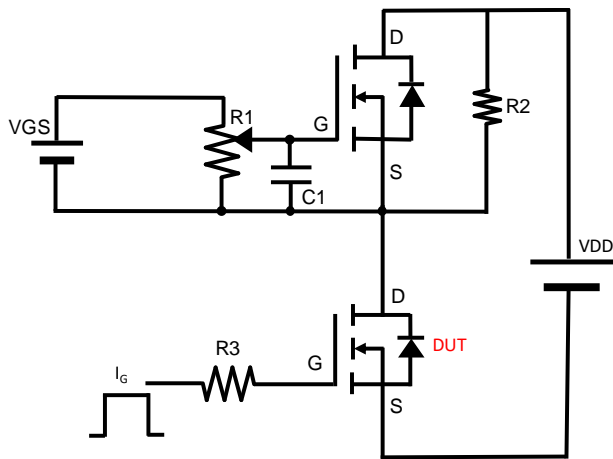


Figure B. Gate Charge Test Circuit & Waveform

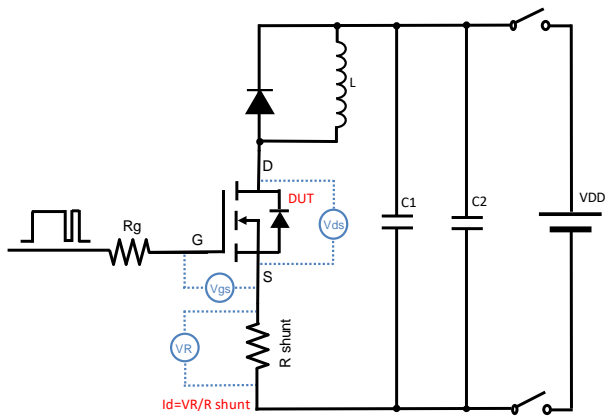


Figure C. Resistive Switching Test Circuit & Waveform

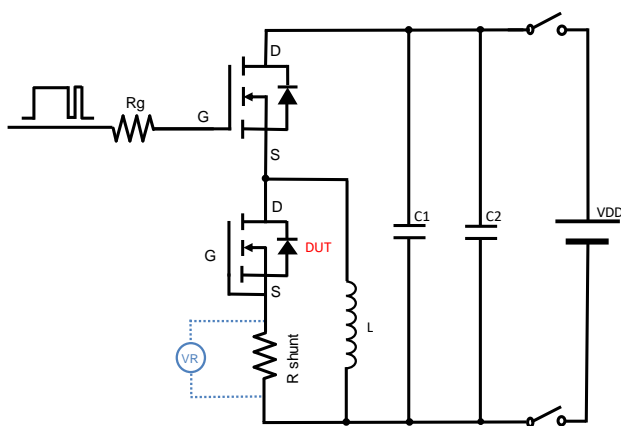
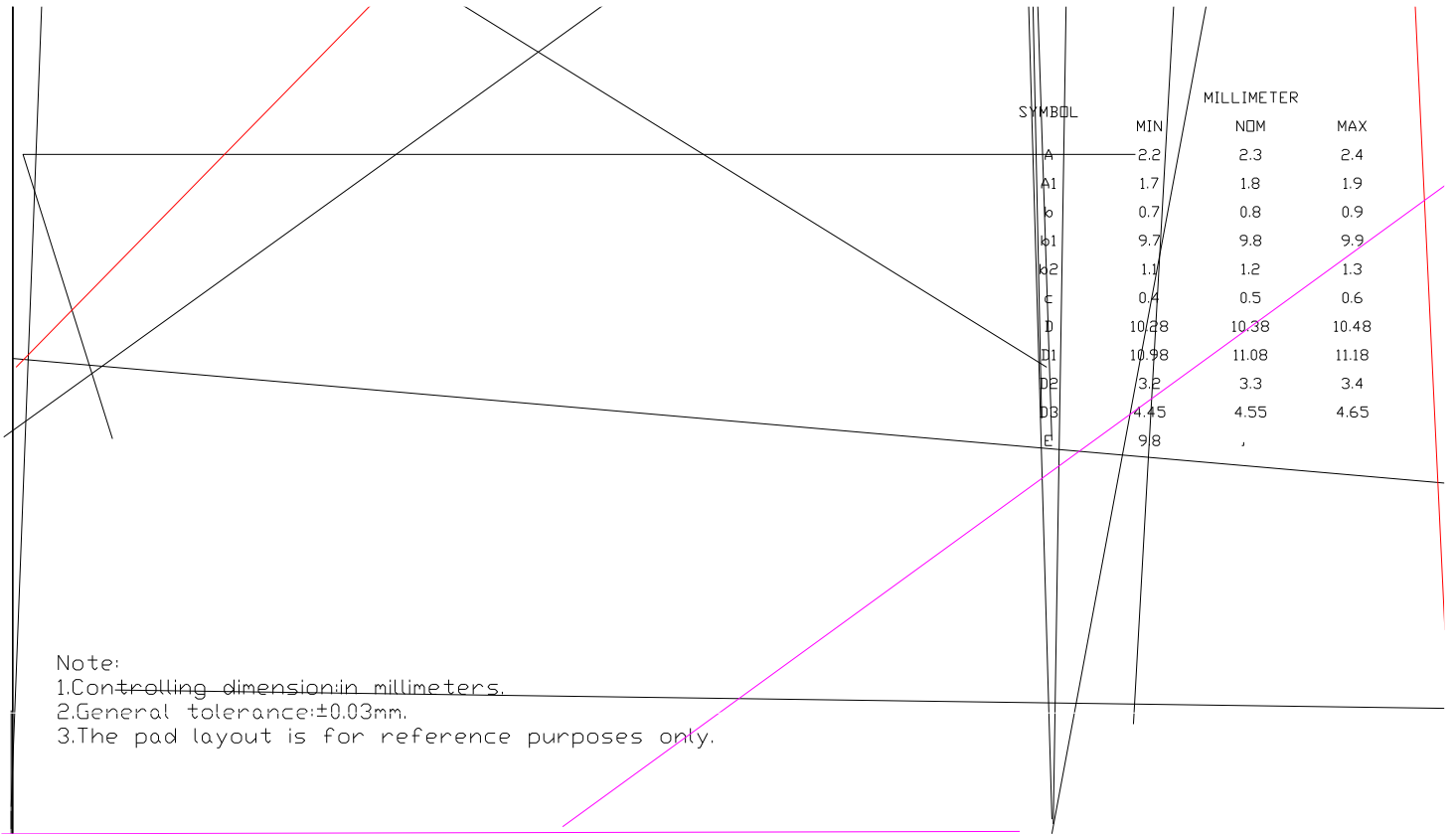


Figure D. Diode Recovery Test Circuit & Waveform



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■ TOLL Package information





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