



BSS138BX

N-Channel and N-Channel Complementary MOSFET

Product Summary

V_{DS}	50V
I_D	300mA
$R_{DS(ON)}$ (at $V_{GS}=10V$)	1100m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	1200m

General Description

Trench Power MV MOSFET technology
Voltage controlled small signal switch
Low input Capacitance
Fast Switching Speed
Low Input / Output Leakage
Moisture Sensitivity Level 1
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Battery operated systems
Solid-state relays
Direct logic-level interface TTL/CMOS

Absolute Maximum Ratings ($T_A=25$ unless otherwise noted)

Parameter	
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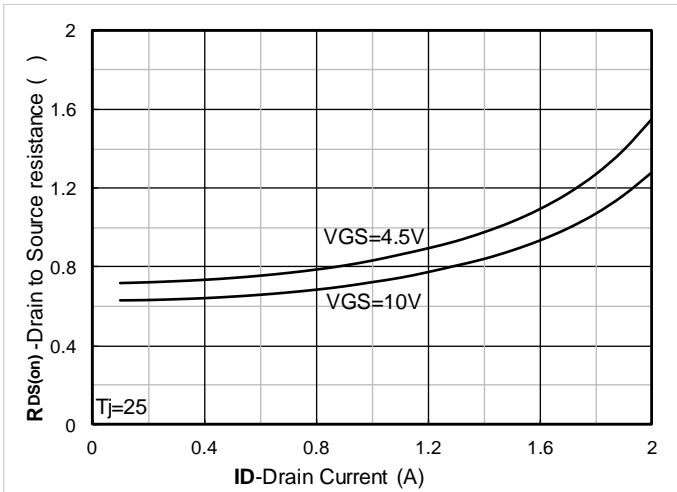


Figure 7. $R_{DS(on)}$ VS Drain Current

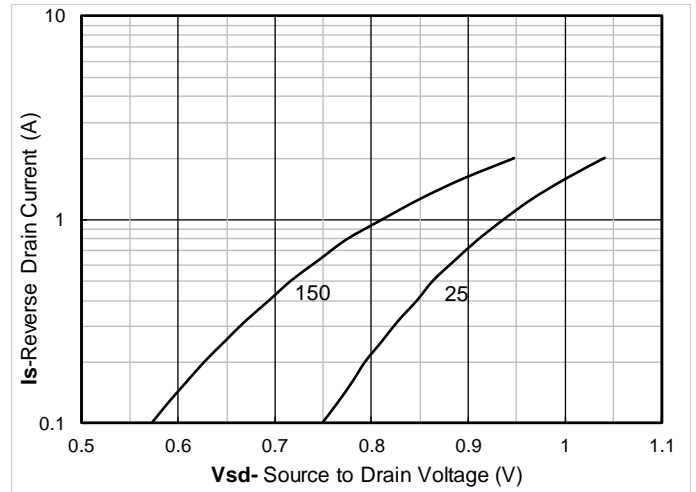


Figure 8. Forward characteristics of reverse diode

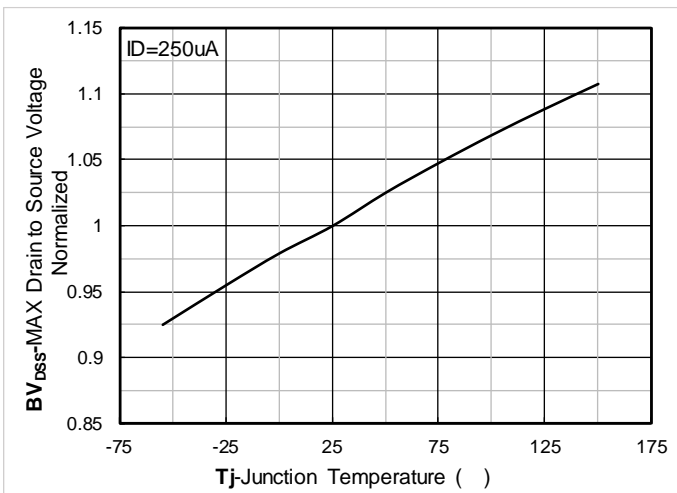


Figure 9. Normalized breakdown voltage

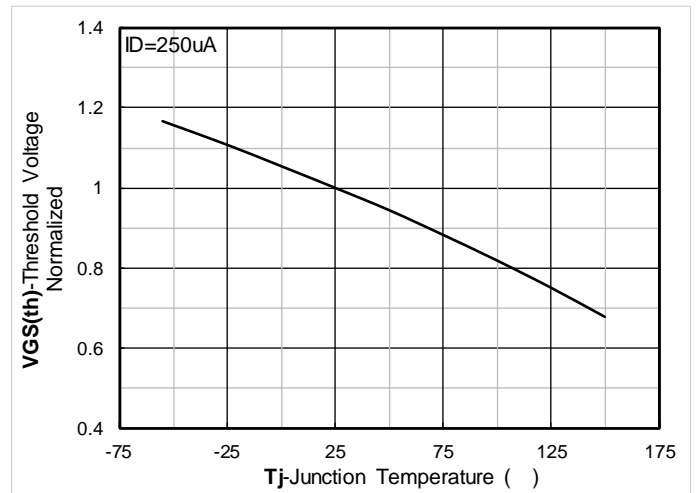


Figure 10. Normalized Threshold voltage

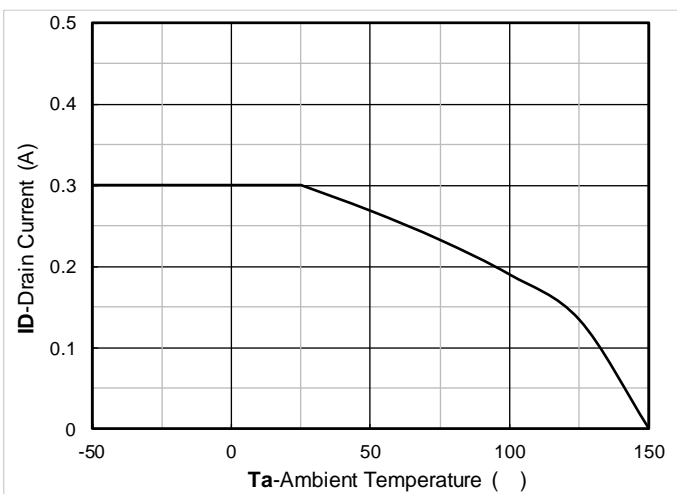


Figure 11. Current dissipation

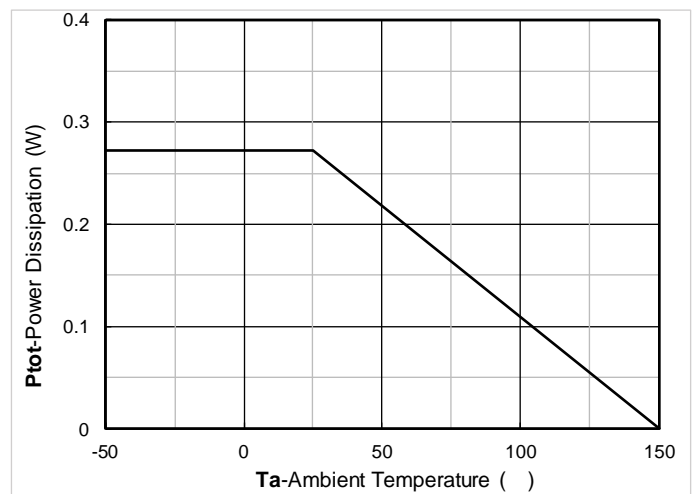


Figure 12. Power dissipation

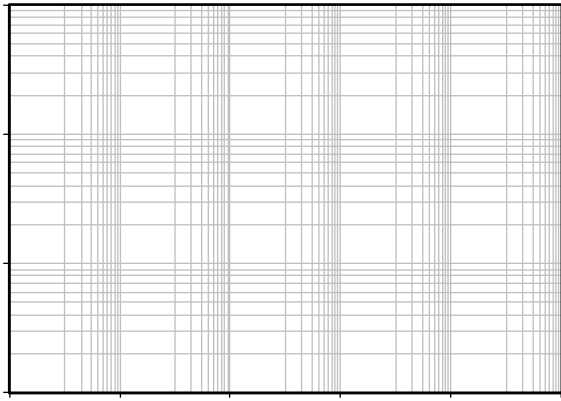


Figure 13. Maximum Transient Thermal Impedance

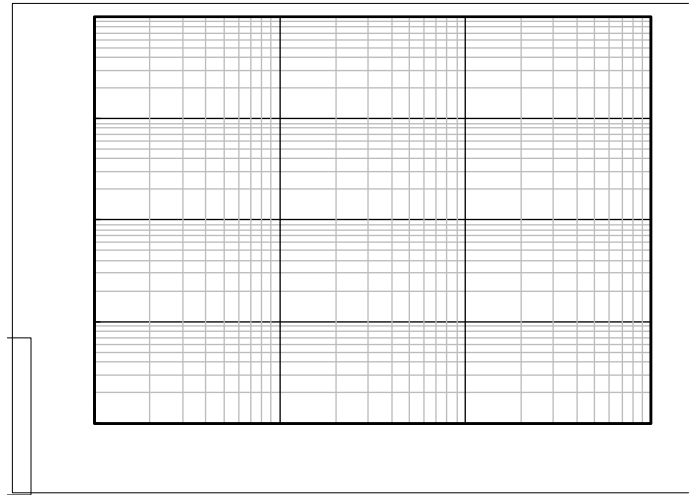


Figure 14. Safe Operation Area

Test Circuits & Waveforms

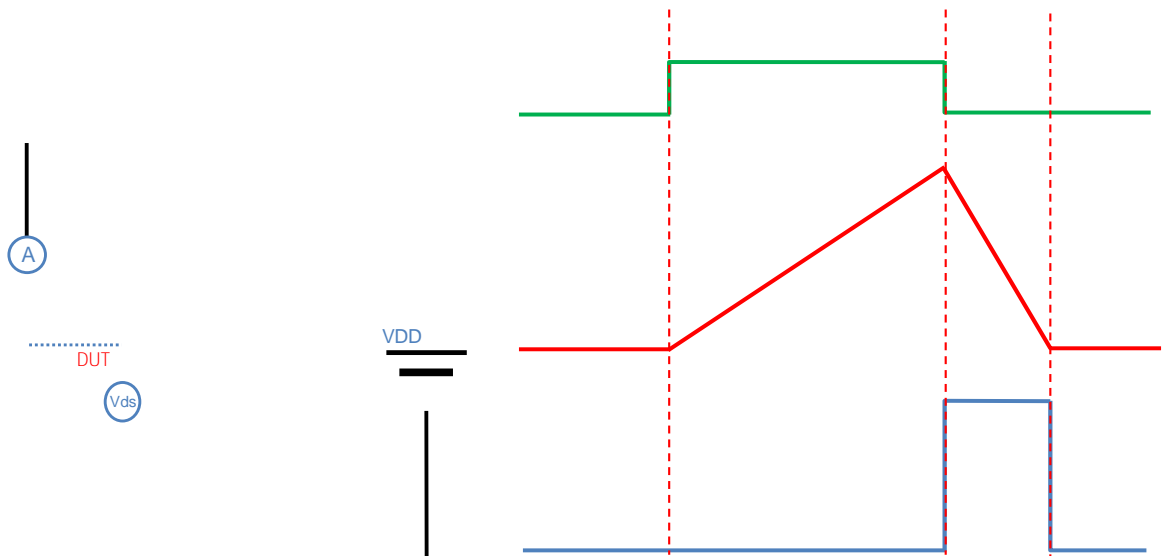


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform



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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