



N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	100V
I_D	60A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	11m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	15m
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 $R_{DS(ON)}$
Moisture Sensitivity Level 1
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Power switching application
Uninterruptible power supply
DC-DC convertor

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	100	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current	$T_A=25^\circ C$	I_D	11	A
	$T_A=100^\circ C$		7.5	
	$T_C=25^\circ C$		60	
	$T_C=100^\circ C$		42	
Pulsed Drain Current ^A		I_{DM}	200	A
Avalanche energy ^B		EAS	100	mJ



Typical Electrical and Thermal Characteristics Diagrams

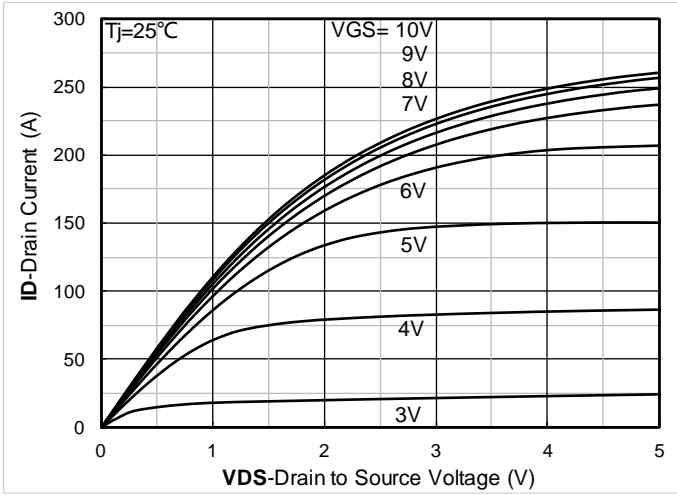


Figure 1. Output Characteristics

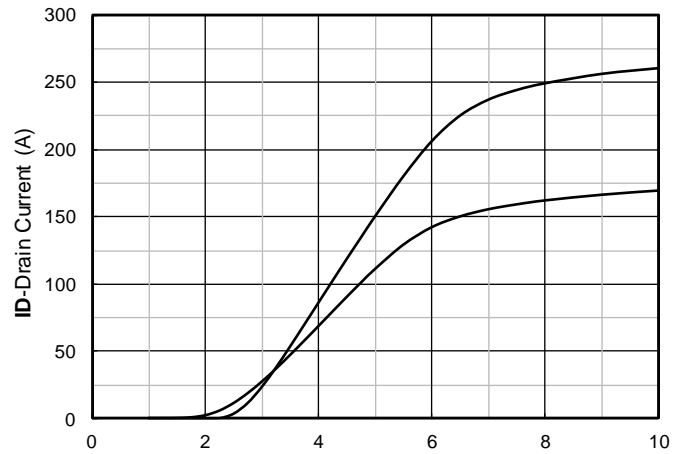


Figure 2. Transfer Characteristics

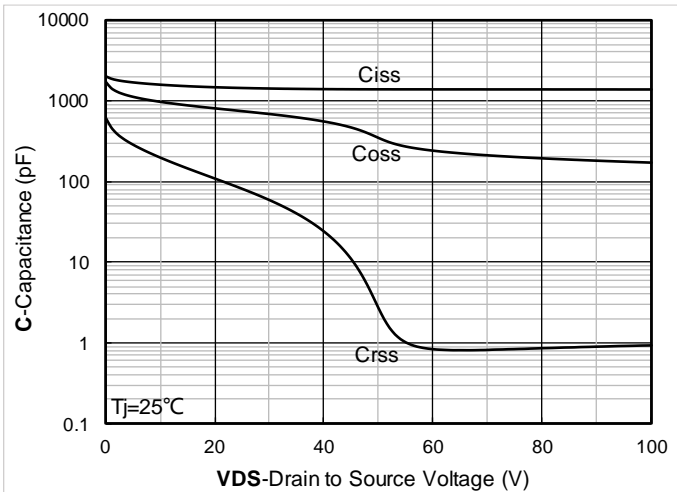


Figure 3. Capacitance Characteristics

Figure 4. Gate Charge

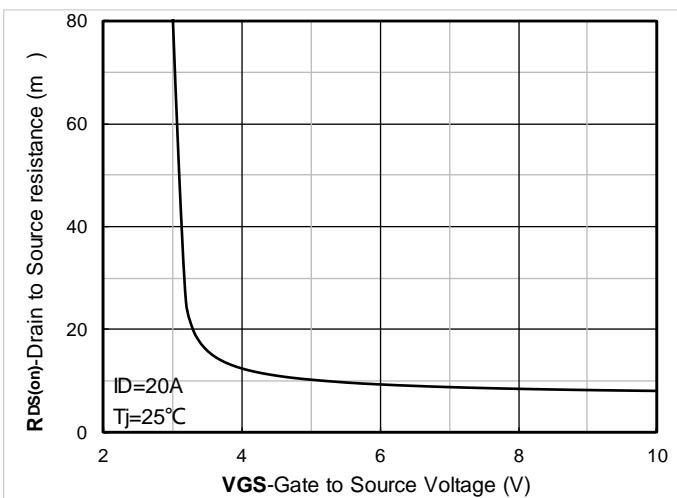


Figure 5. On-Resistance vs Gate to Source Voltage

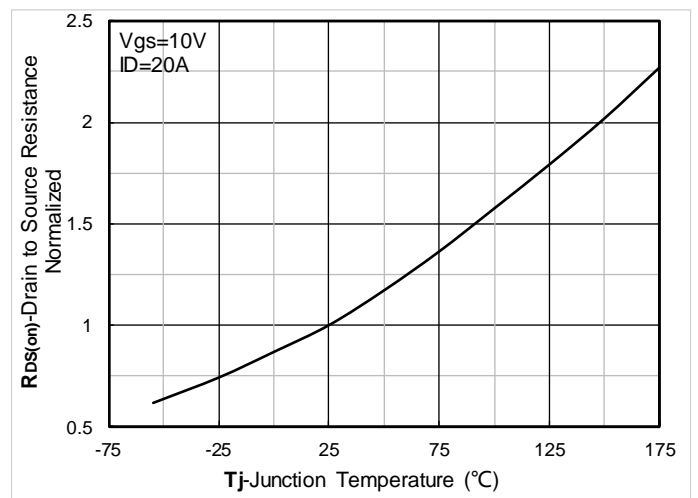


Figure 6. Normalized On-Resistance



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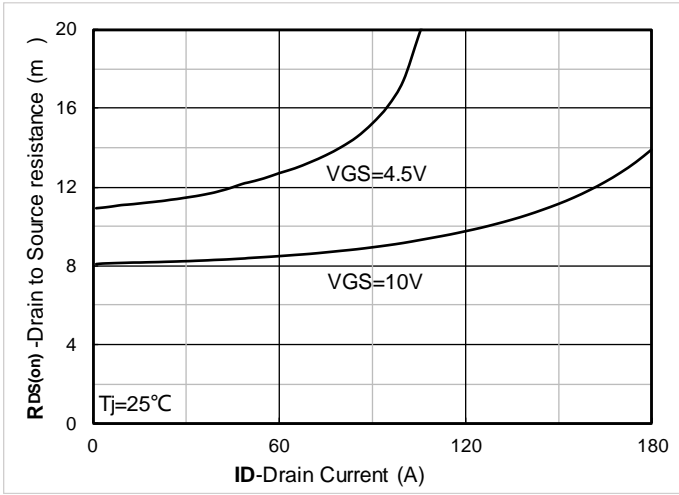


Figure 7. $R_{DS(on)}$ VS Drain Current

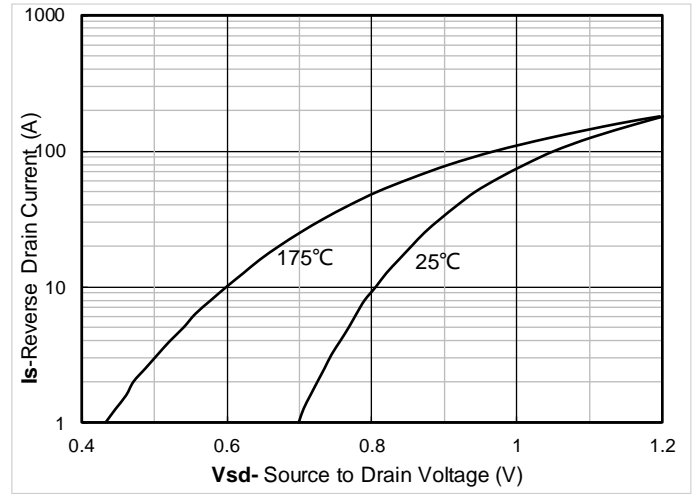


Figure 8. Forward characteristics of reverse diode

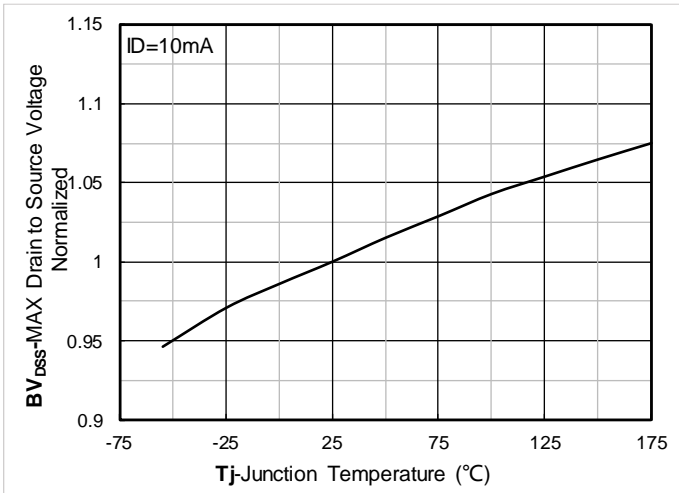


Figure 9. Normalized breakdown voltage

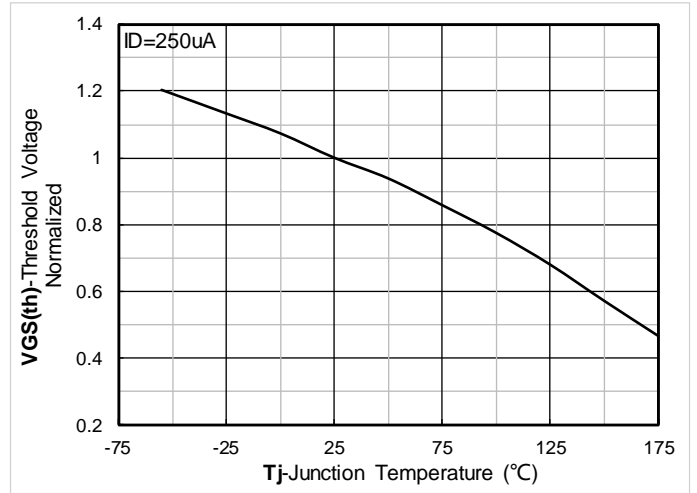


Figure 10. Normalized Threshold voltage

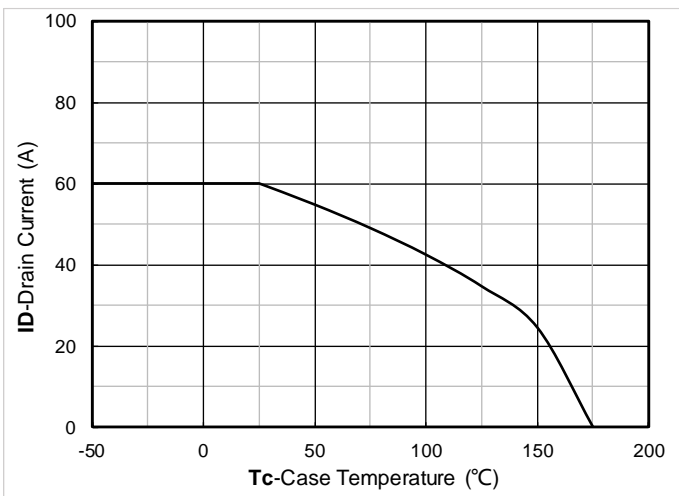


Figure 11. Current dissipation

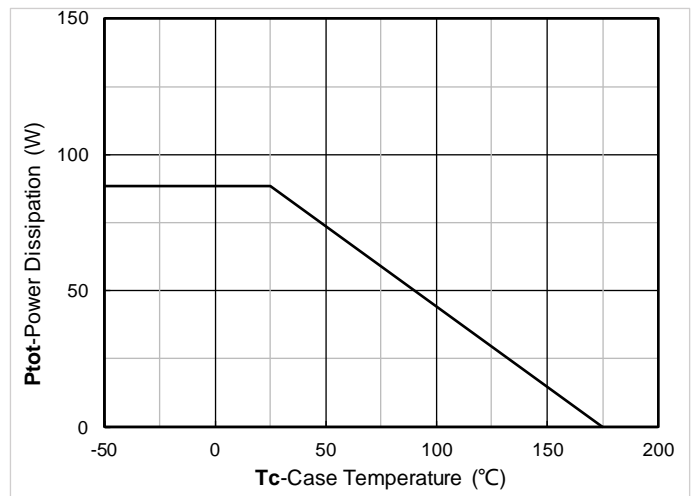


Figure 12. Power dissipation

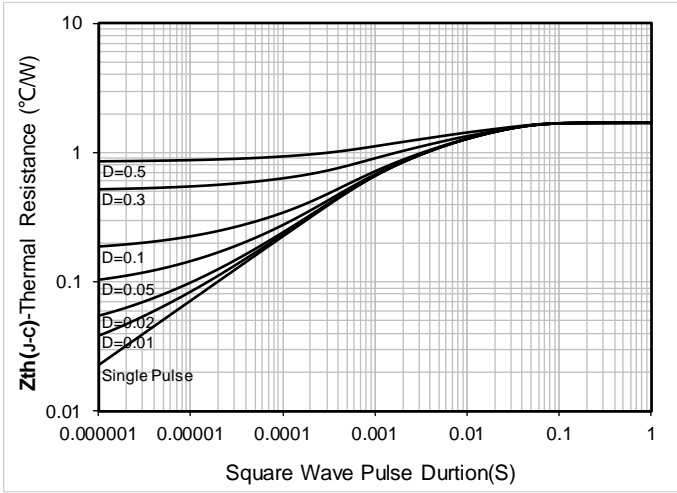


Figure 13. Maximum Transient Thermal Impedance

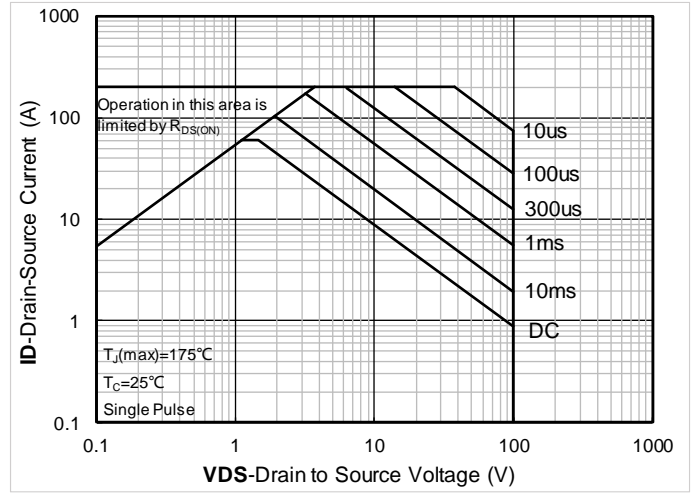


Figure 14. Safe Operation Area

Test Circuits & Waveforms

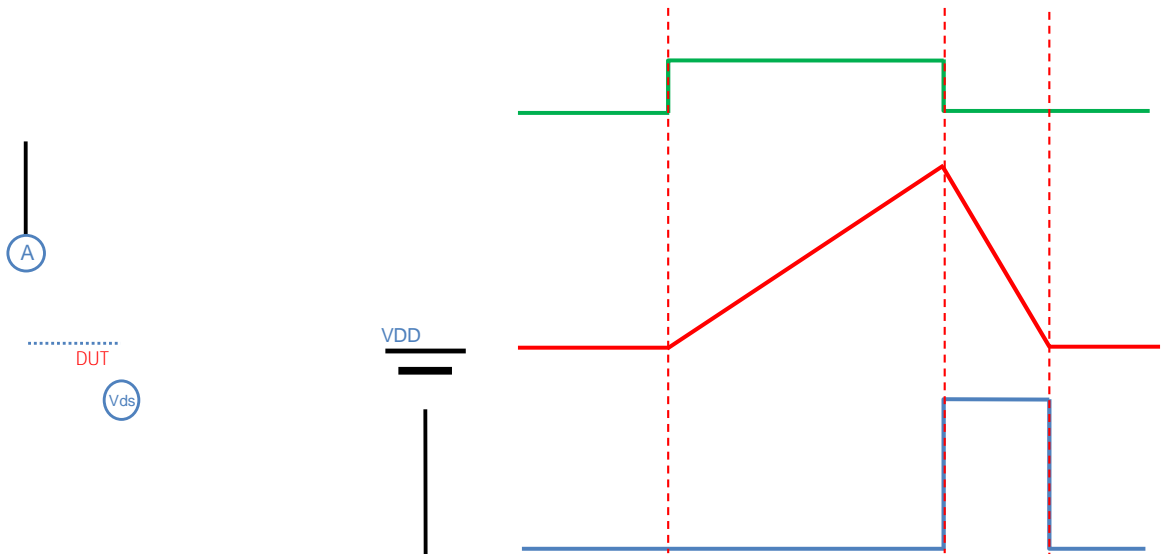


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform



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TO-263-HY Package information

TOP VIEW

SIDE VIEW

BOTTOM VIEW

SYMBOL	DIMENSIONS					
	INCHES			Millimeter		
	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.
A1	0.000	---	0.010	0.000	---	0.250
A2	0.174	0.180	0.185	4.430	4.580	4.730
b	0.028	0.032	0.036	0.720	0.820	0.920
b2	0.046	0.050	0.054	1.180	1.280	1.380
c	0.013	0.015	0.018	0.330	0.390	0.450
c2	0.048	0.050	0.053	1.220	1	1.340
D1						
D2	0.303	0.315	0.327	7.700		8.300
E	0.571	0.591	0.610	14.500		15.500
E1	0.337	0.341	0.348	8.550		8.850
E2						
e	0.200BSC			5.080BSC		
L	0.070		0.110	1.790		2.790
L1						
L2	0.030		0.070	0.770		1.770
L3	0.197REF					
	0°		8°	0°		8°

NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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