



YJD50G10A

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	100V
I_D	50A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	14m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	20m
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
	$T_A=25$	9	
Drain Current	I_D		A



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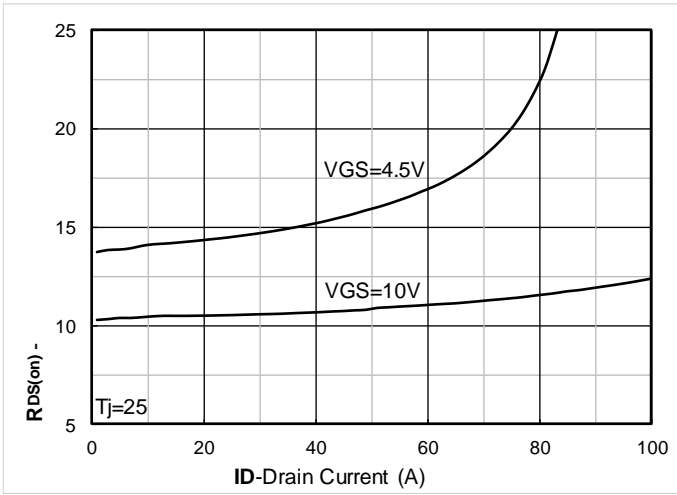


Figure 7. RDS(on) VS Drain Current

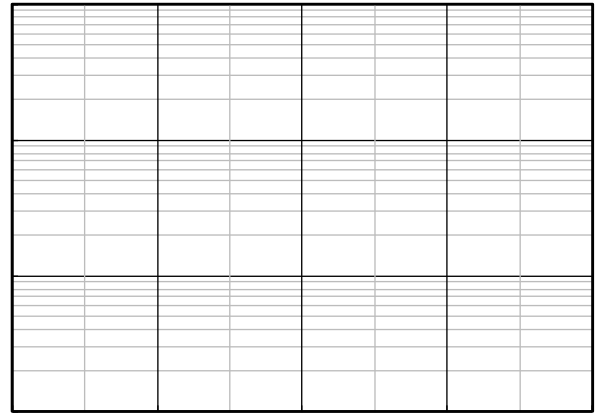


Figure 8. Forward characteristics of reverse diode

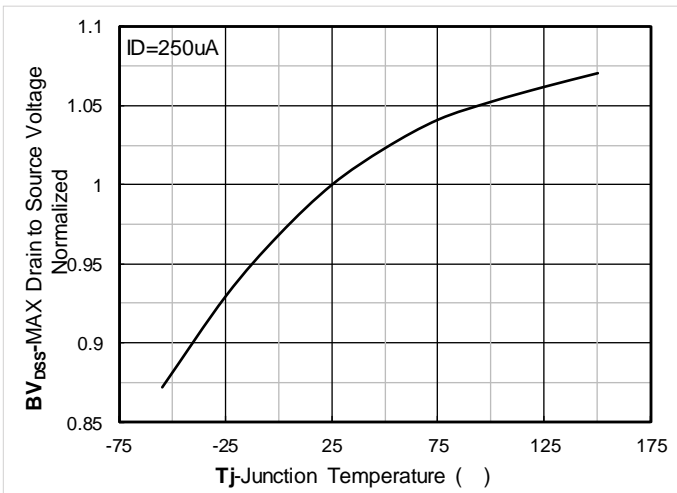


Figure 9. Normalized breakdown voltage

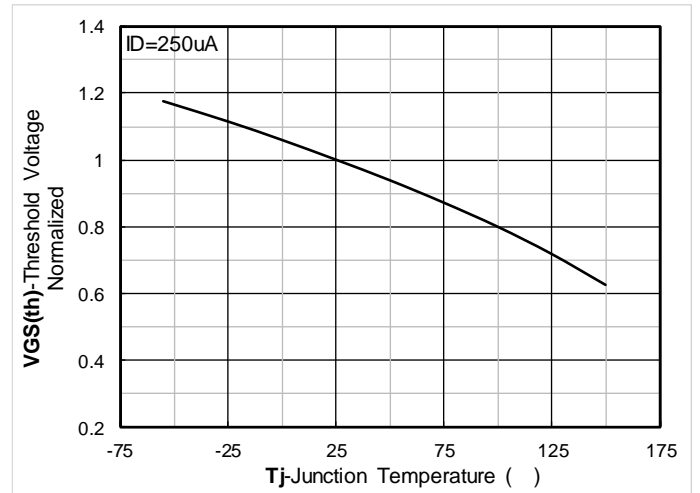
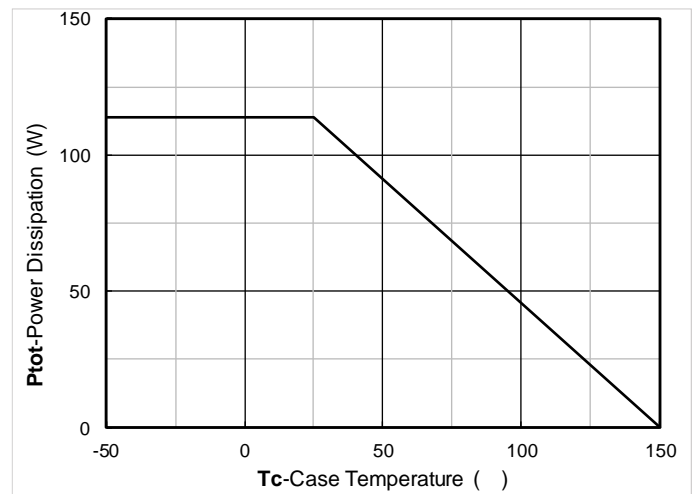
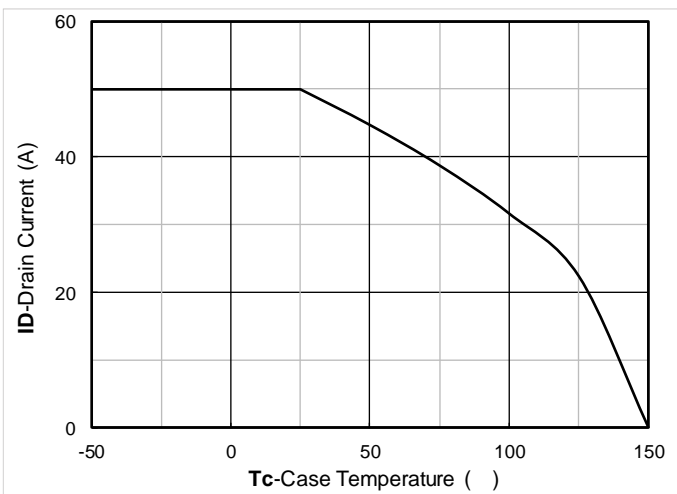


Figure 10. Normalized Threshold voltage



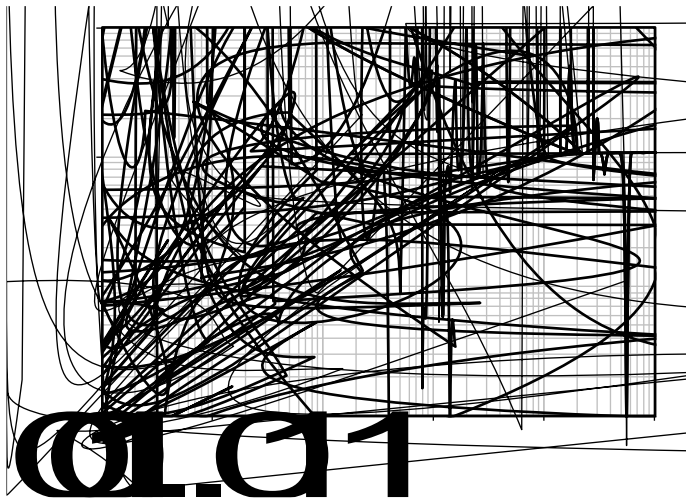


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

Test Circuits & Waveforms

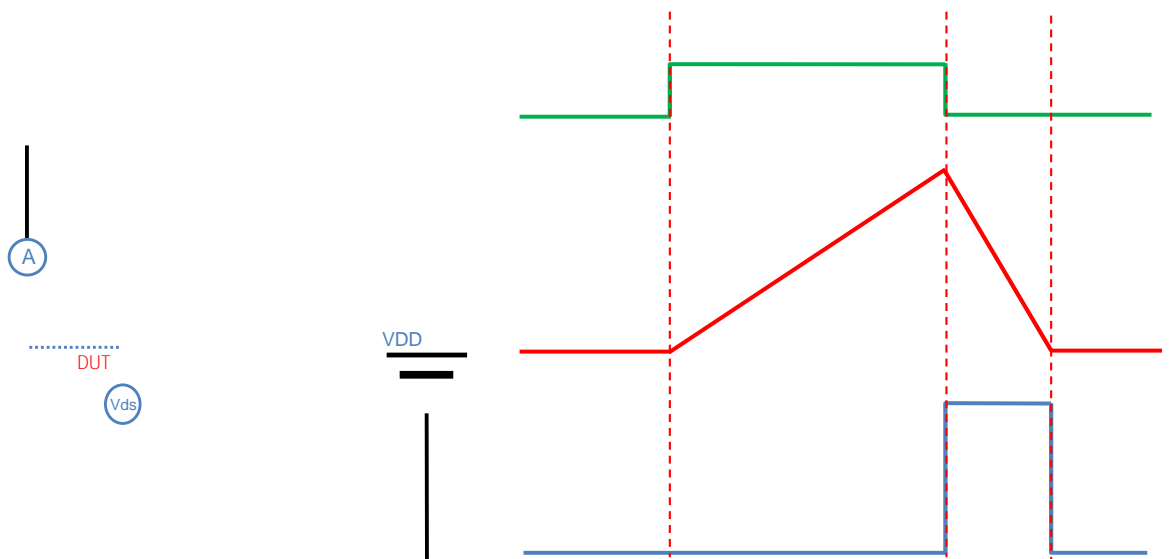


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

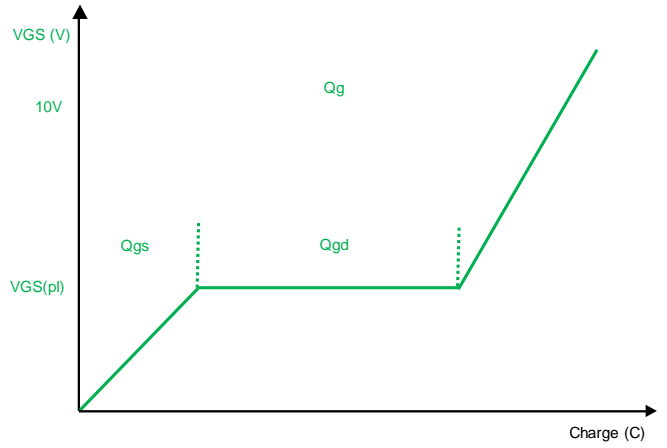
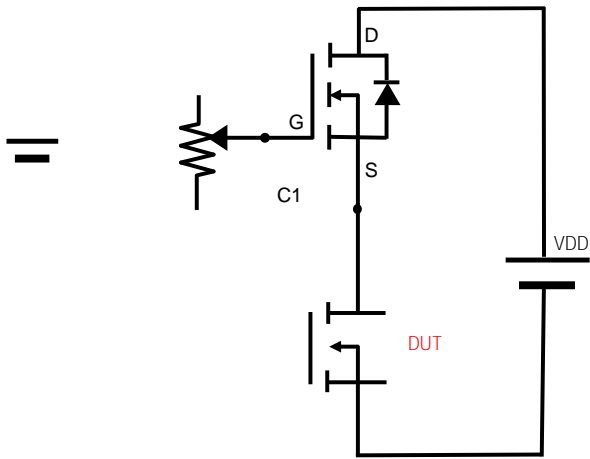


Figure B. Gate Charge Test Circuit & Waveform

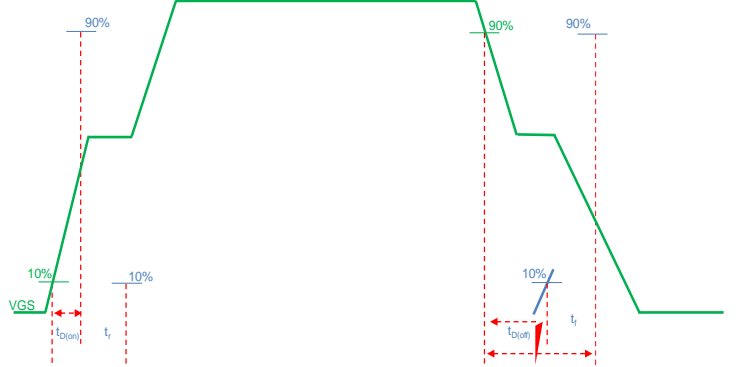


Figure C. Resistive Switching Test Circuit & Waveform

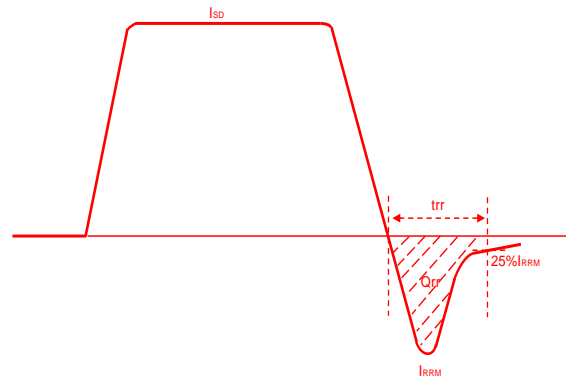
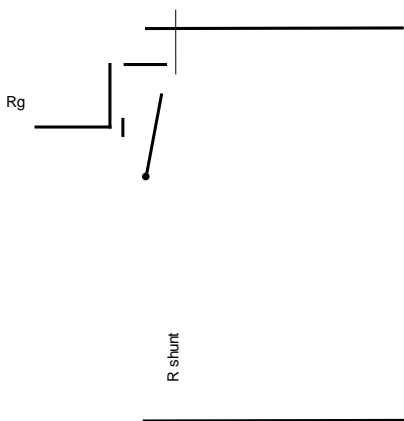
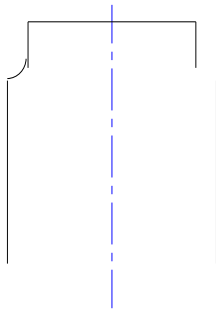
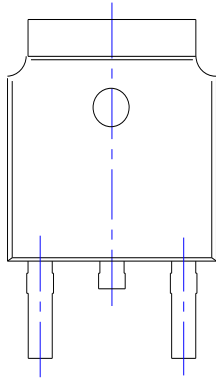


Figure D. Diode Recovery Test Circuit & Waveform



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TO-252-B Package information



SYMBOL	DIMENSIONS				
	INCHES				
	MIN.	NOM.			
A1	0.000				
A2	0.087	0.091			
A3	0.035	0.039			
b	0.026	0.030			
c	0.018	0.020			
D	0.256	0.260			
D1					
D2	0.181	0.189			
E	0.390	0.398			
E1	0.236	0.240			

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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