



YJD60G10A

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	100V
I_D	60A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	12m
$R_{DS(ON)}$ (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 $R_{DS(ON)}$
Epoxy Meets UL 94 V-0 Flammability Rating
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	9	A
	$T_A=100^{\circ}C$		5	
	$T_C=25^{\circ}C$		60	
	$T_C=100^{\circ}C$		C 377	
Pulsed Drain Current ^A		I_{DM}	170	A
Avalanche energy ^B U		EAS		

YJD60G10A



YJD60G10A

Typical Electrical and Thermal Characteristics Diagrams

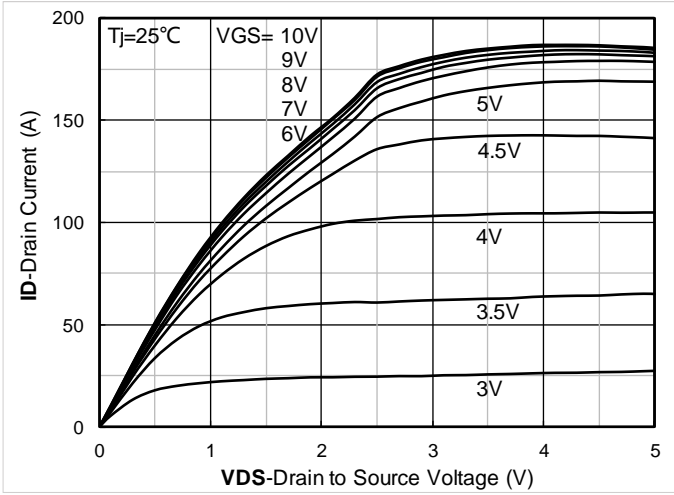


Figure 1. Output Characteristics

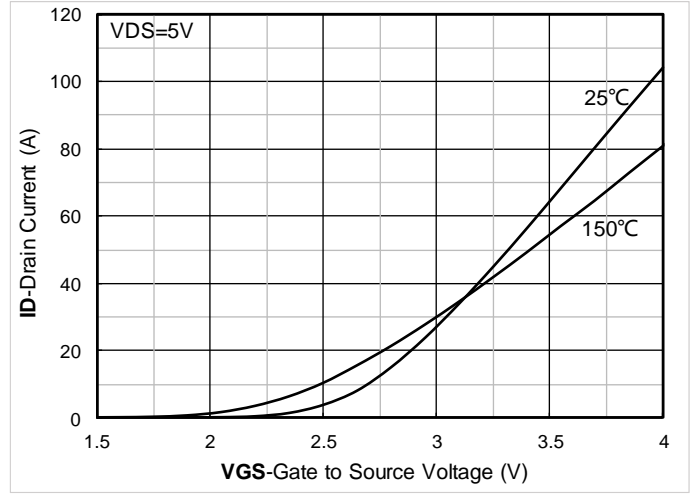


Figure 2. Transfer Characteristics

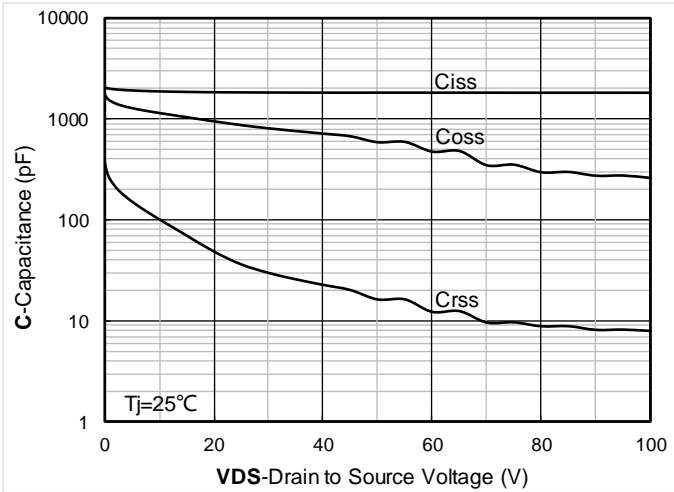
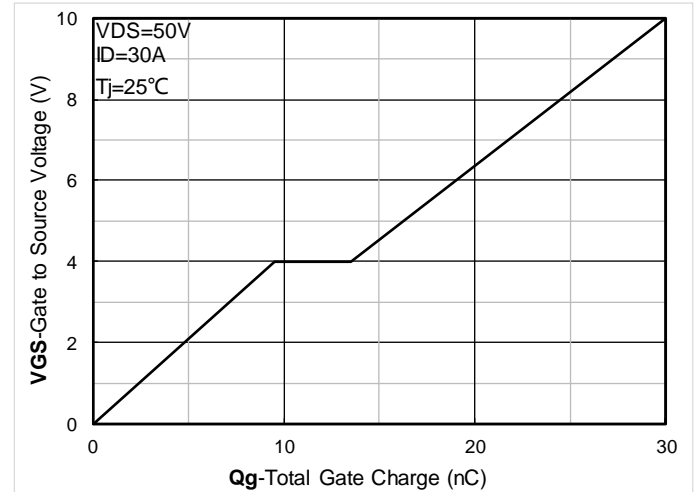


Figure 3. Capacitance Characteristics



i.



YJD60G10A

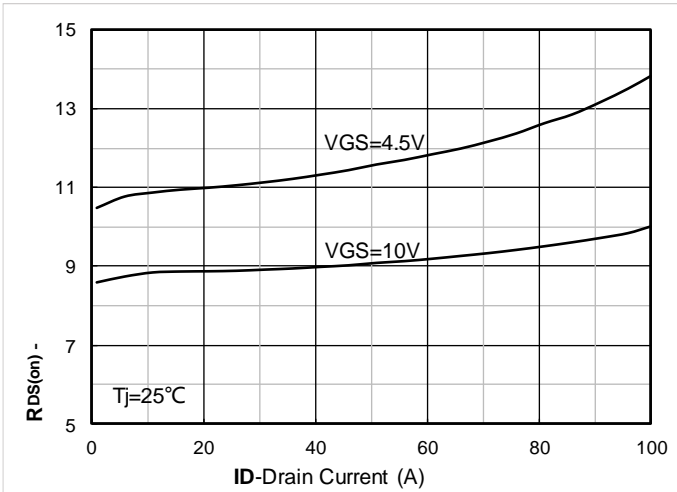


Figure 7. RDS(on) VS Drain Current

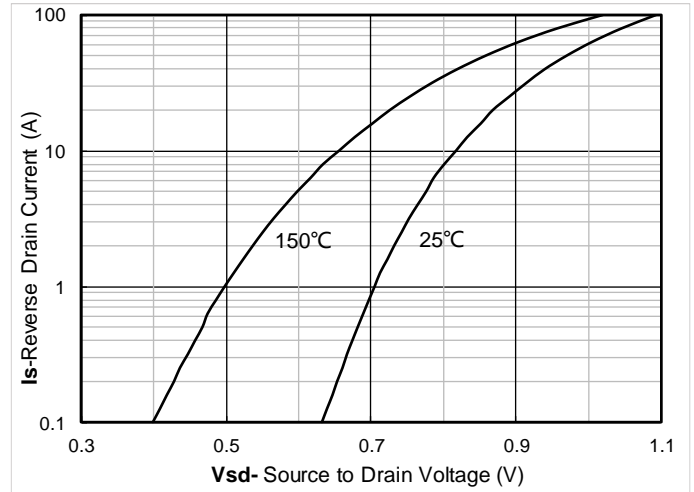


Figure 8. Forward characteristics of reverse diode

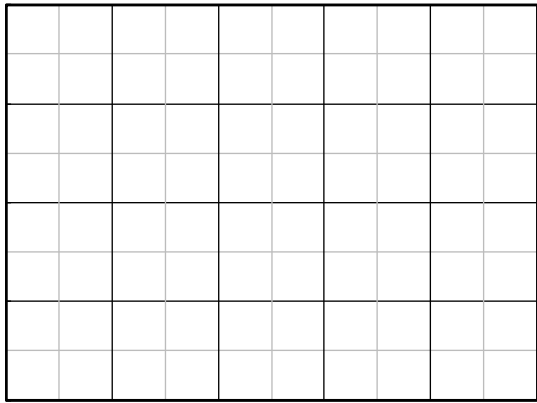


Figure 9. Normalized breakdown voltage

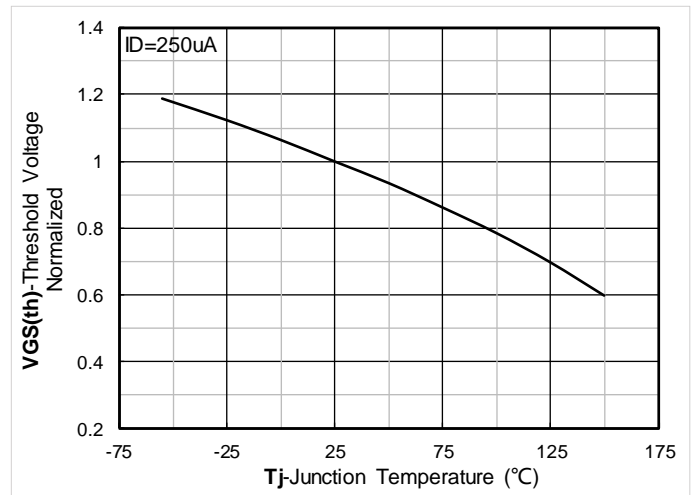


Figure 10. Normalized Threshold voltage

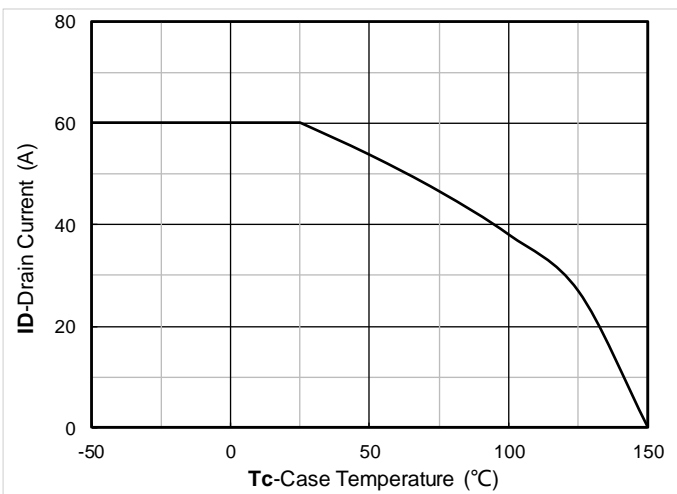


Figure 11. Current dissipation

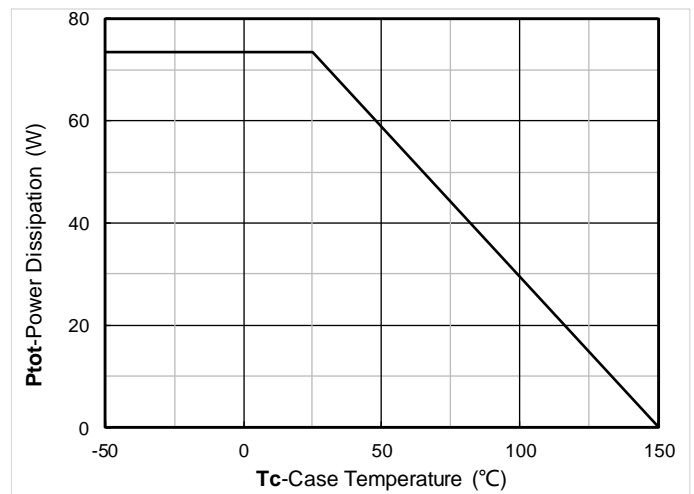


Figure 12. Power dissipation

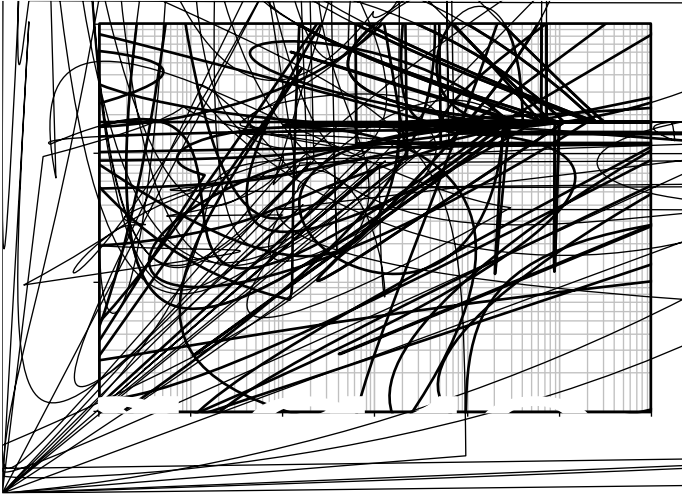


Figure 13. Maximum Transient Thermal Impedance

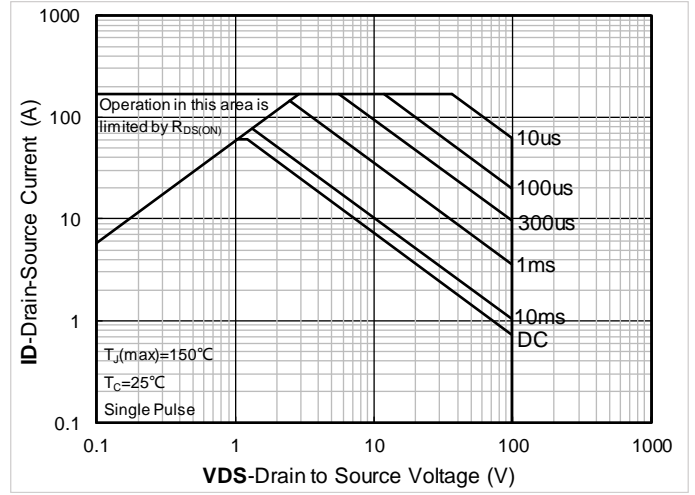


Figure 14. Safe Operation Area

Test Circuits & Waveforms

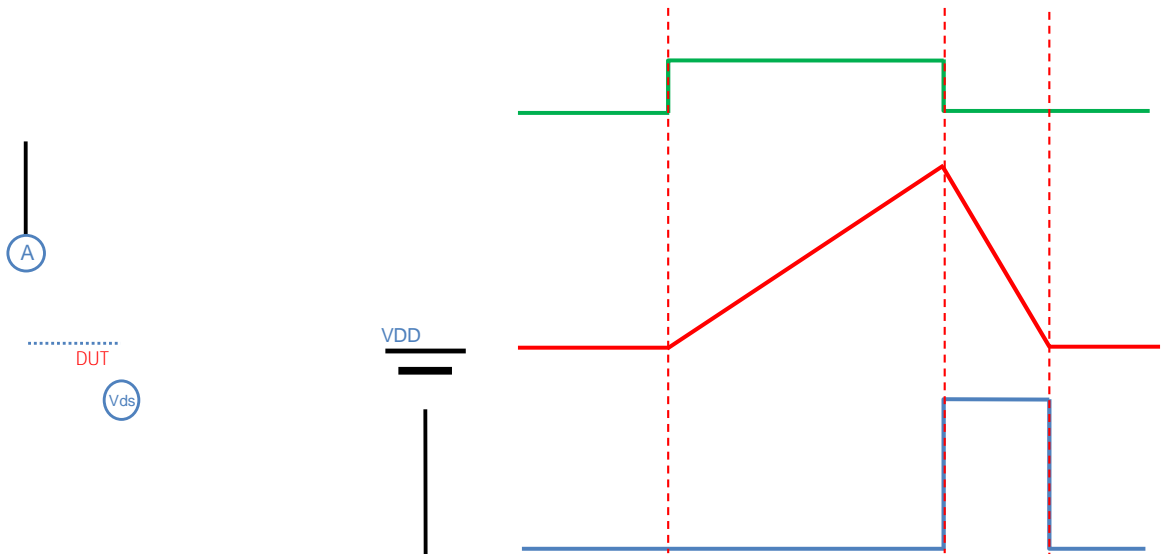


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

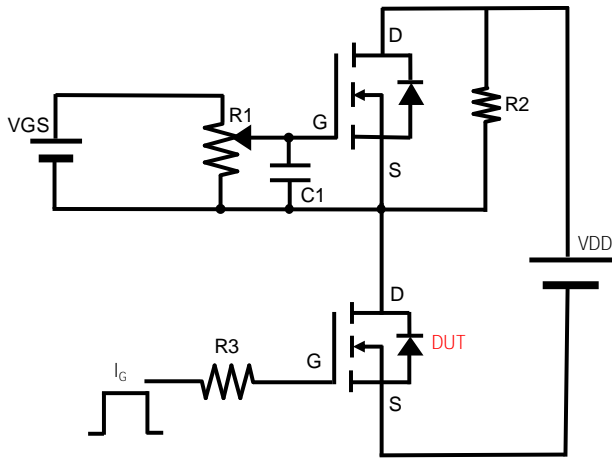


Figure B. Gate Charge Test Circuit & Waveform

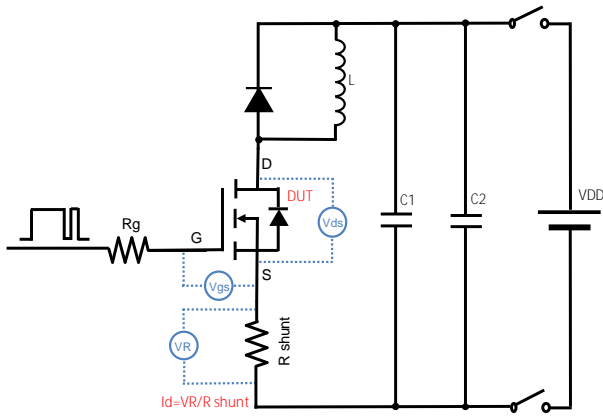


Figure C. Resistive Switching Test Circuit & Waveform

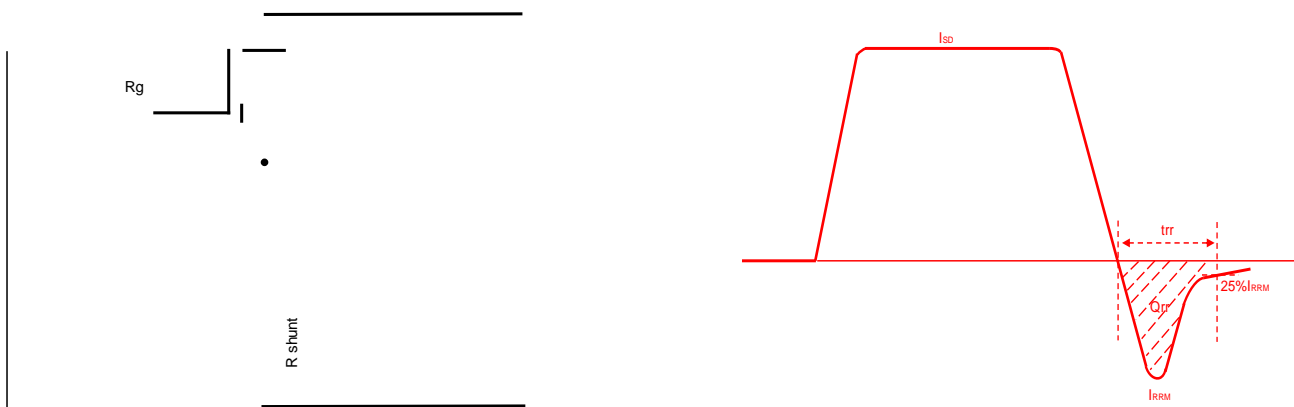
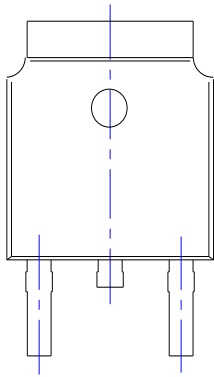


Figure D. Diode Recovery Test Circuit & Waveform



YJD60G10A

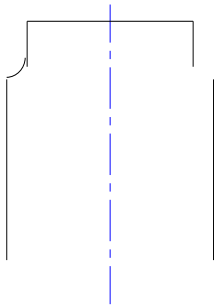
TO-252-B Package information



TOP VIEW



SIDE VIEW



BOTTOM VIEW

SUGGESTED SOLDER PAD LAYOUT

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.



YJD60G10A

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.21yangjie.com> , o