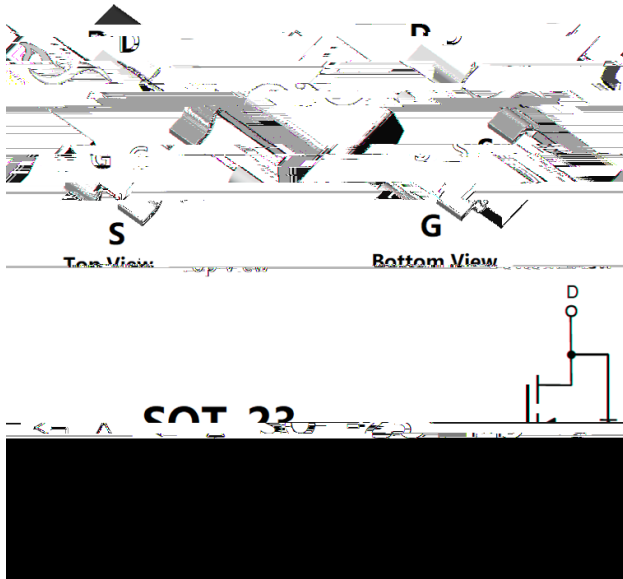




N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	20V
I_D	4.5A
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	27m
$R_{DS(ON)}$ (at $V_{GS}=2.5V$)	35m

General Description

Trench Power MV MOSFET technology
 High Speed switching
 Moisture Sensitivity Level 1
 Epoxy Meets UL 94 V-0 Flammability Rating
 Halogen Free

Applications

PWM application
 Load switch

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	20	V
Gate-source Voltage		V_{GS}	± 10	V
Drain Current	$T_A=25$	I_D	4.5	A
	$T_A=100$		2.8	
Pulsed Drain Current ^A		I_{DM}	30	A
Total Power Dissipation ^C	$T_A=25$	P_D	1	W
	$T_A=100$		0.4	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient ^D	Steady-State	R_{JA}	100	125	/W

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL2302C	F2	2302C.	3000	30000	120000	7" reel



YJL2302C

RECOMMEND
[YJL2302A](#)
FOR NEW DESIGN

Electrical Characteristics ($T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	20	-	-	



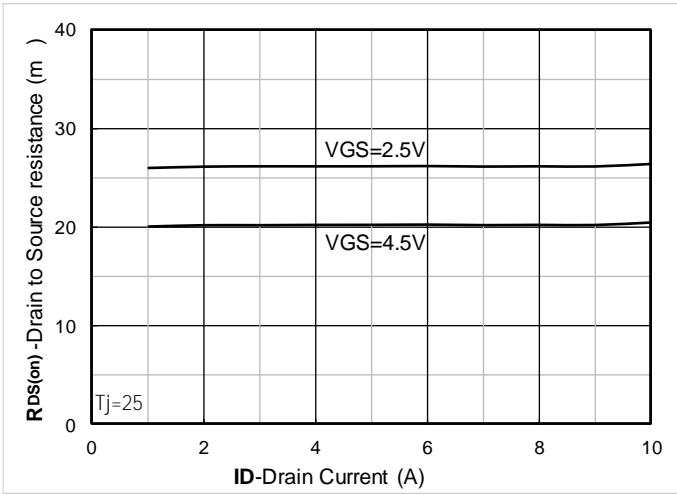


Figure 7. RDS(on) VS Drain Current

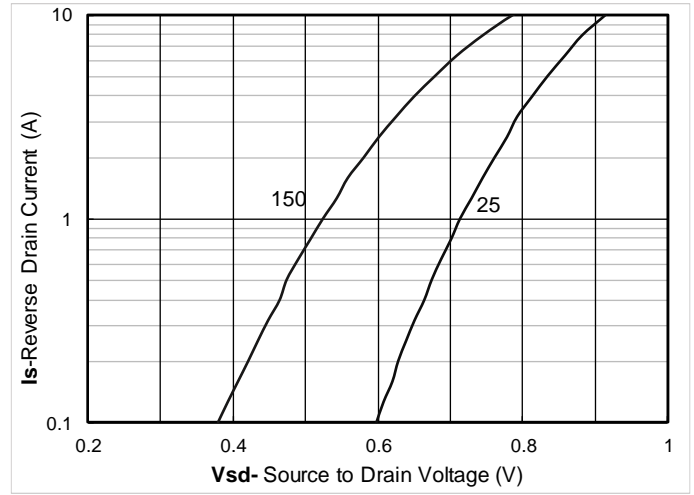


Figure 8. Forward characteristics of reverse diode

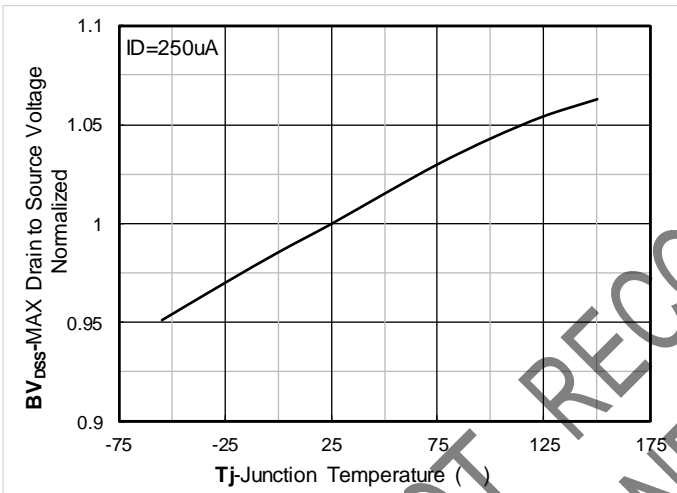


Figure 9. Normalized breakdown voltage

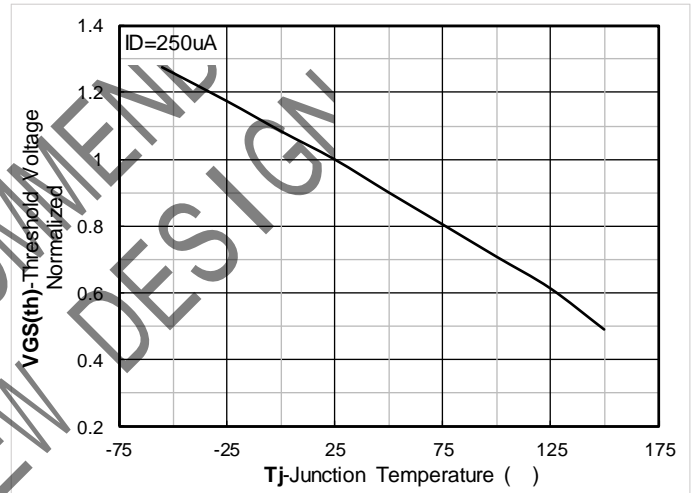


Figure 10. Normalized Threshold voltage

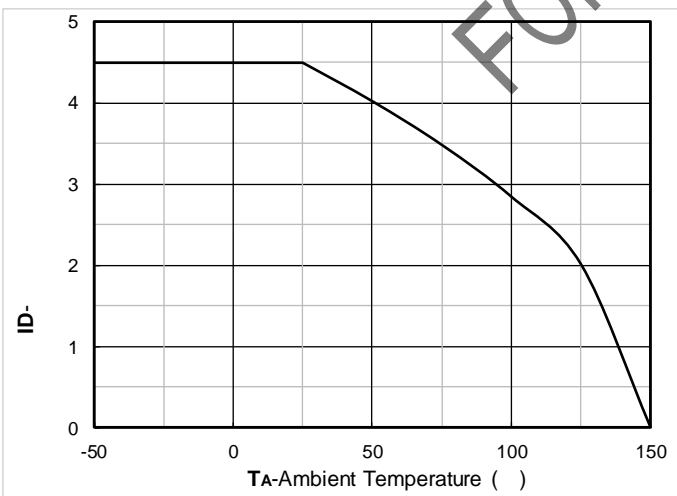


Figure 11. Current dissipation

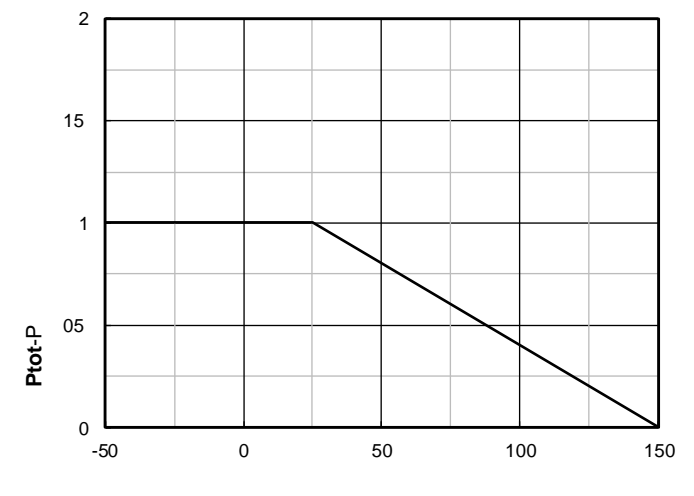


Figure 12. Power dissipation

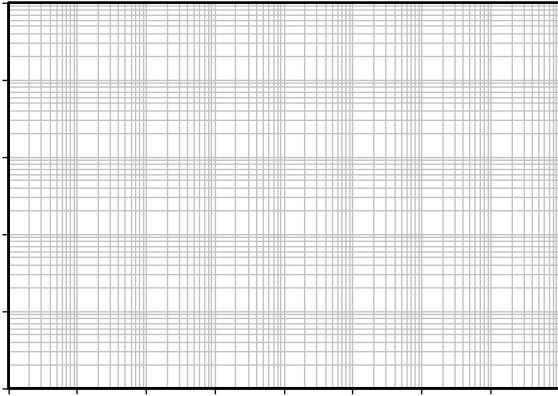


Figure 13. Maximum Transient Thermal Impedance

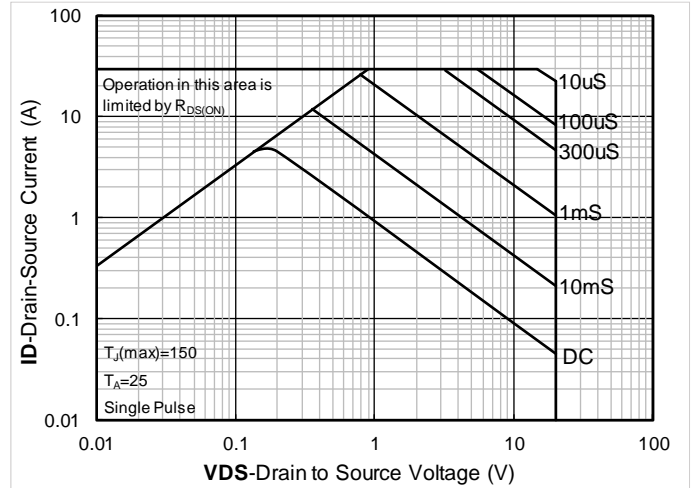


Figure 14. Safe Operation Area

Test Circuits & Waveforms

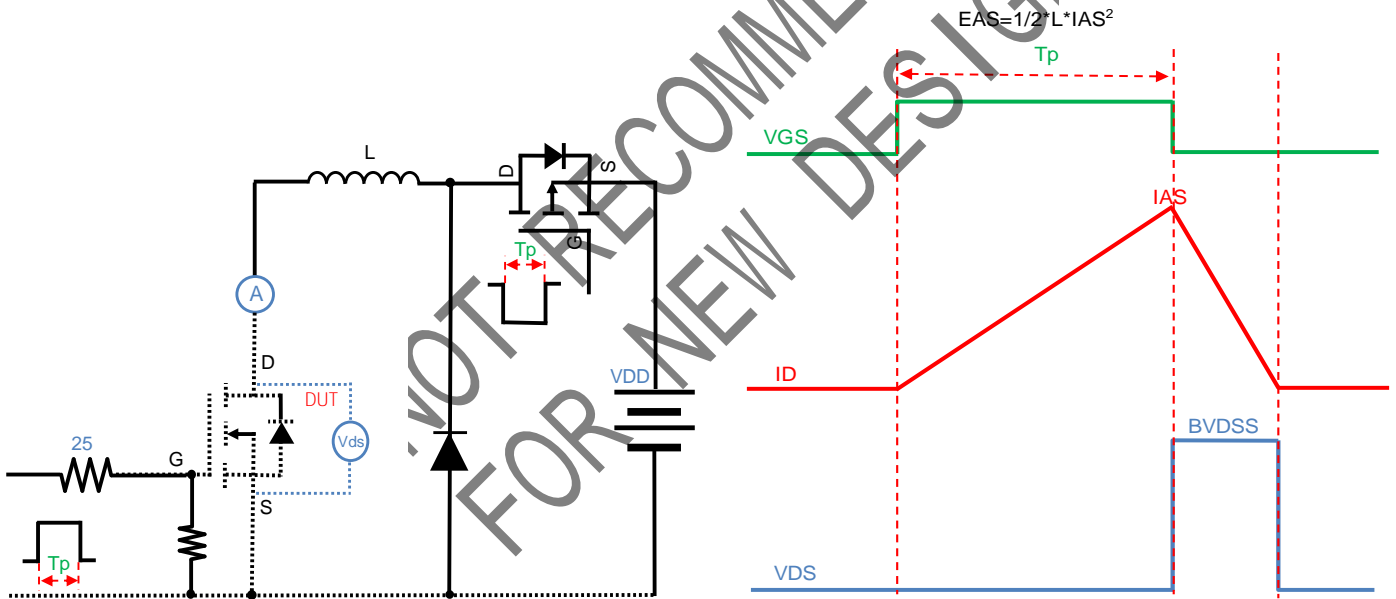


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

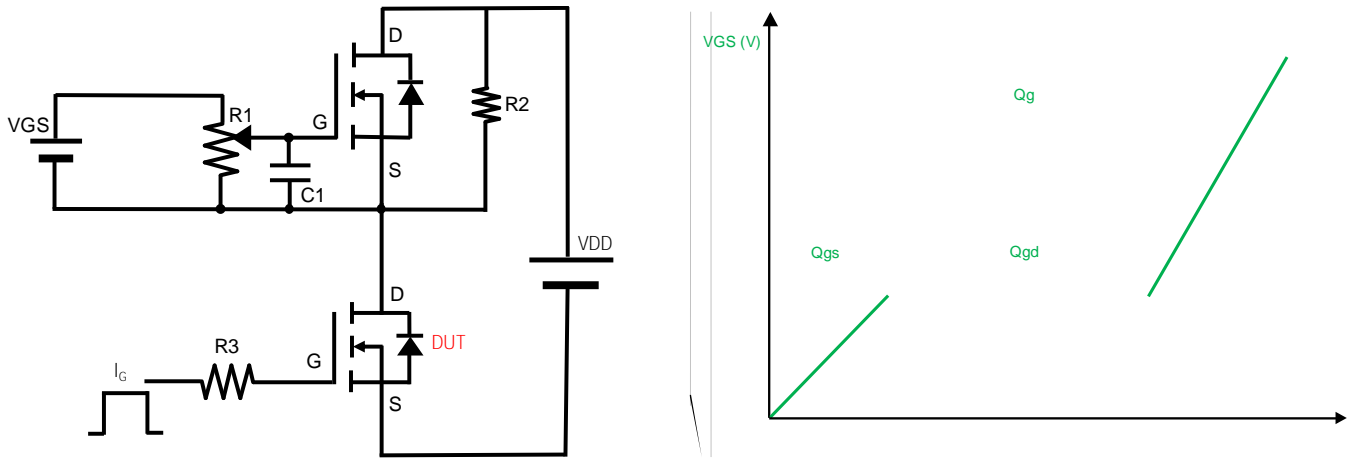


Figure B. Gate Charge Test Circuit & Waveform

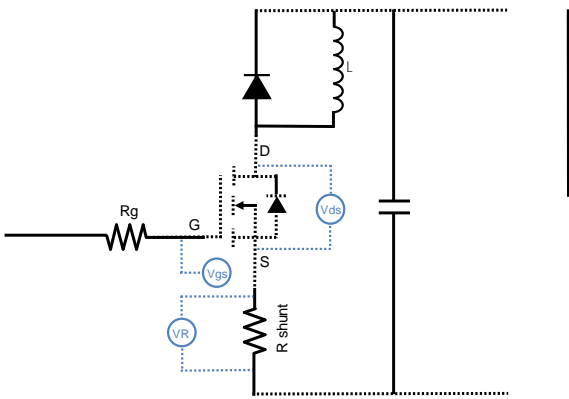


Figure C. Resistive Switching Test Circuit & Waveform

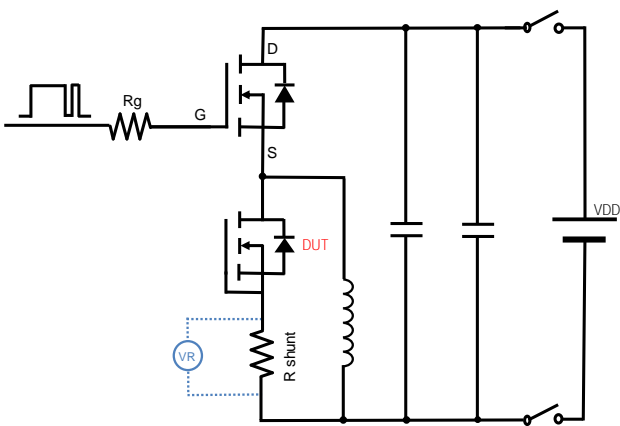


Figure D.



SOT-23 Package information



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