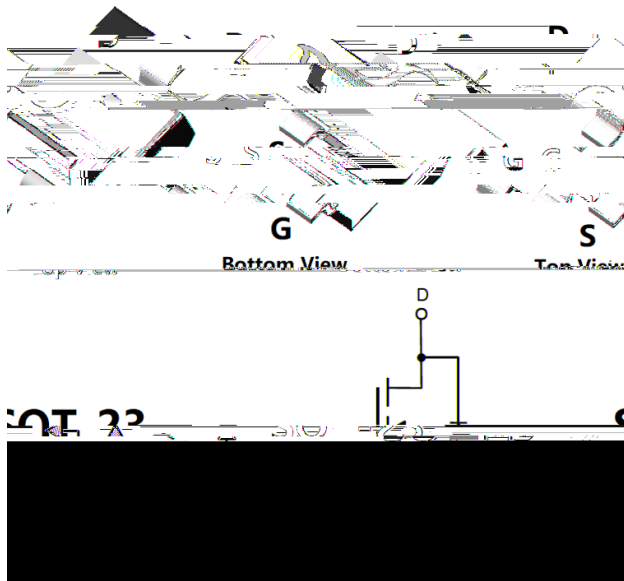




N-Channel Enhancement Mode Field Effect Transistor



Product Summary

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

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	$R_{\theta JA}$	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 =250μA	20	-	-	



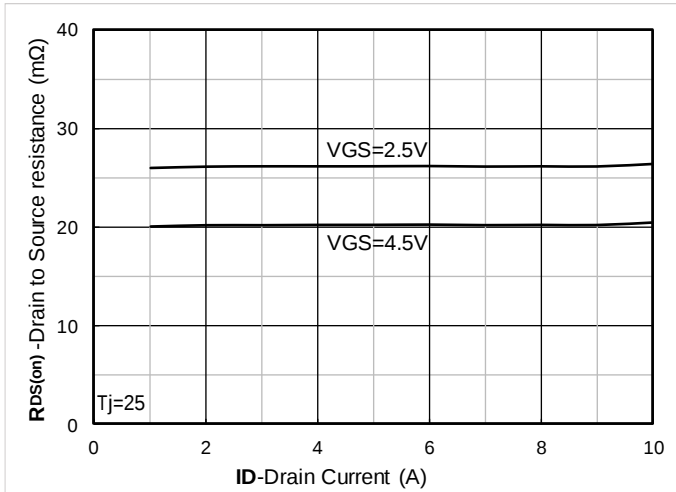


Figure 7. RDS(on) VS Drain Current

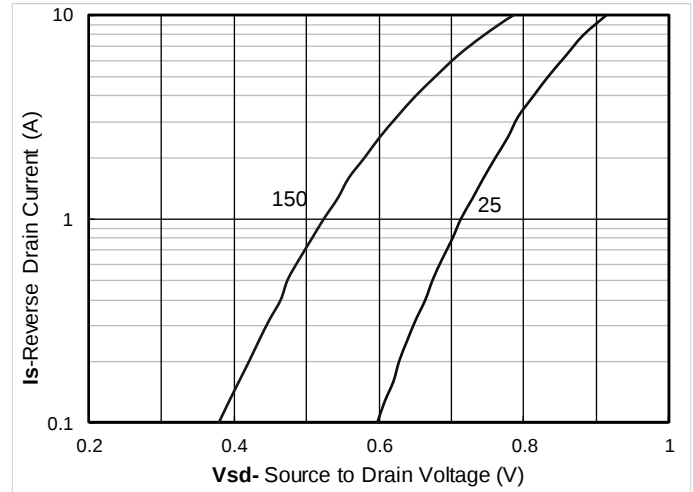


Figure 8. Forward characteristics of reverse diode

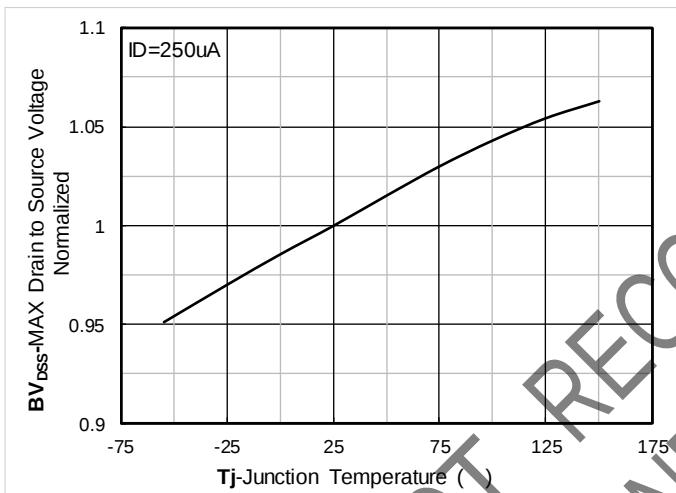


Figure 9. Normalized breakdown voltage

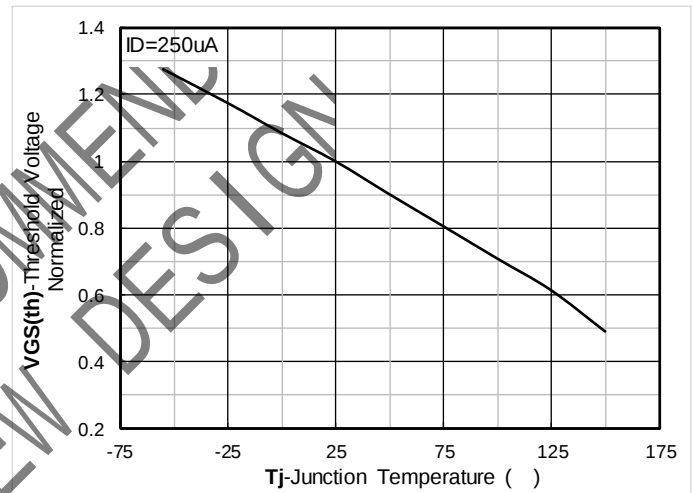


Figure 10. Normalized Threshold voltage

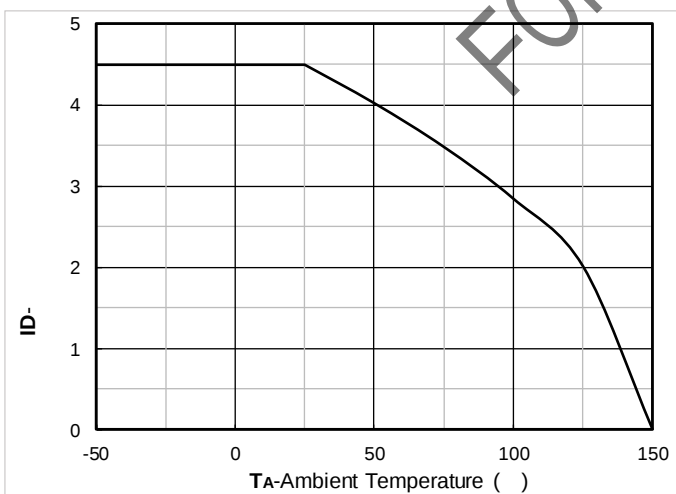


Figure 11. Current dissipation

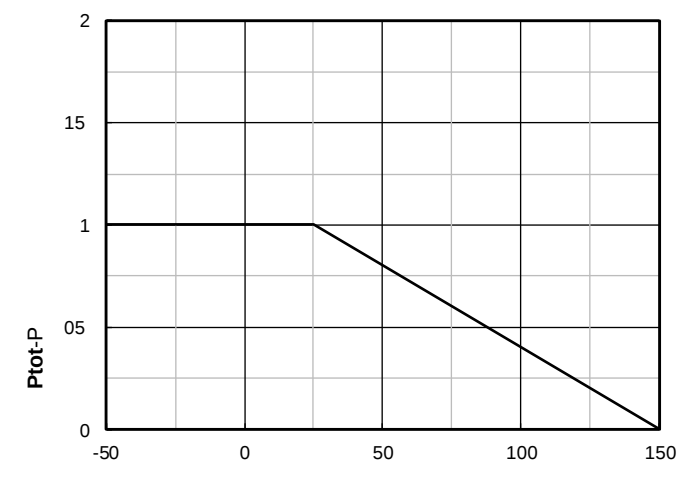


Figure 12. Power dissipation

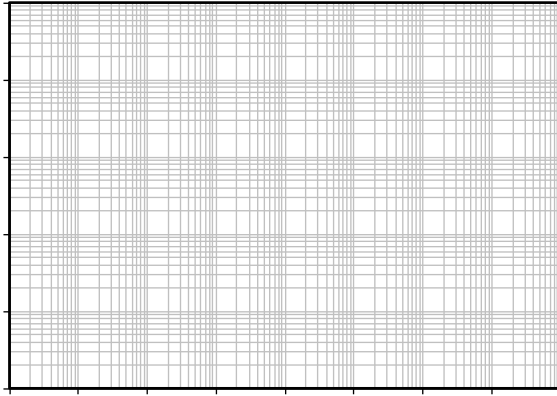


Figure 13. Maximum Transient Thermal Impedance

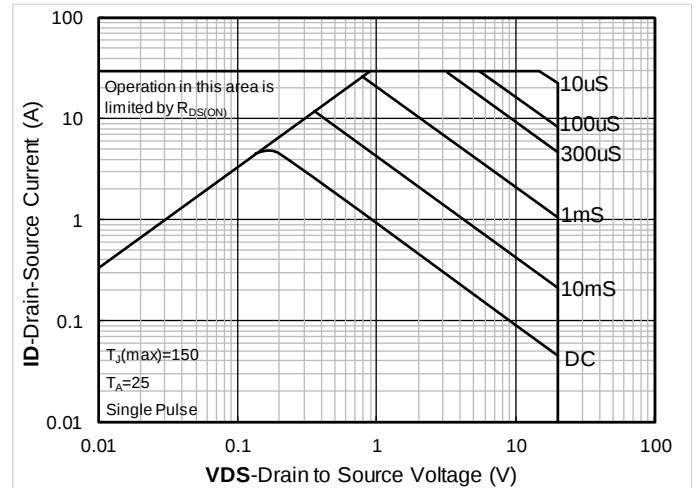


Figure 14. Safe Operation Area

■ Test Circuits & Waveforms

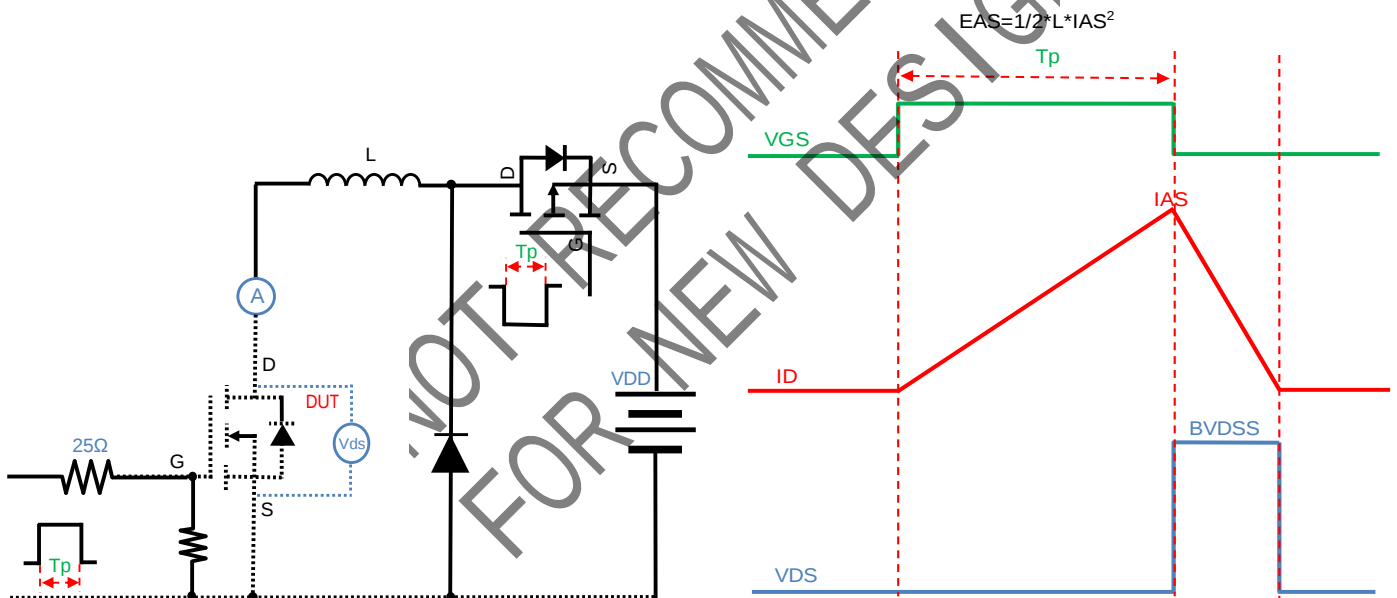


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

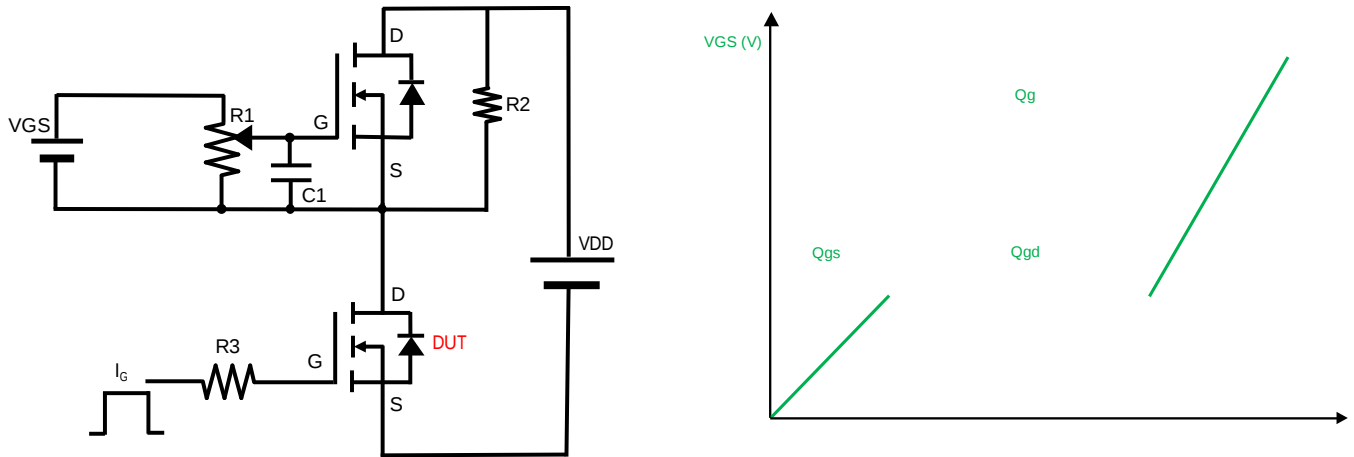


Figure B. Gate Charge Test Circuit & Waveform

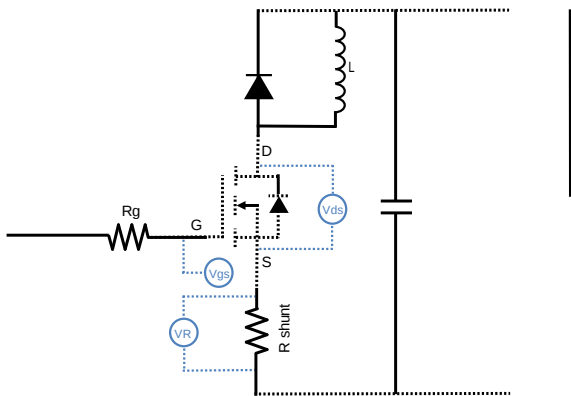


Figure C. Resistive Switching Test Circuit & Waveform

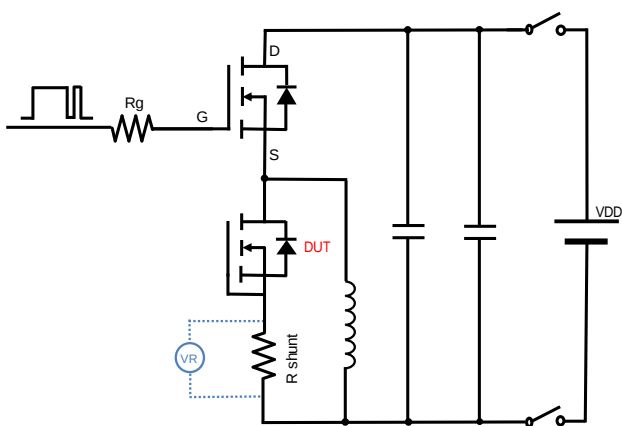
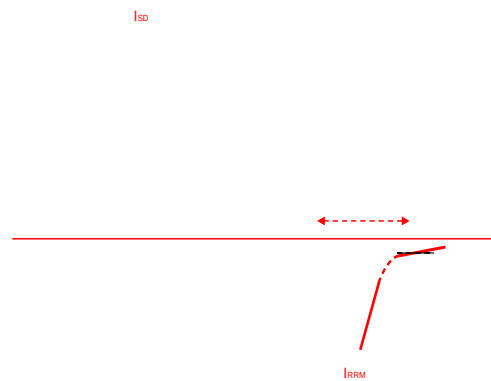


Figure D.





■ SOT-23 Package information



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