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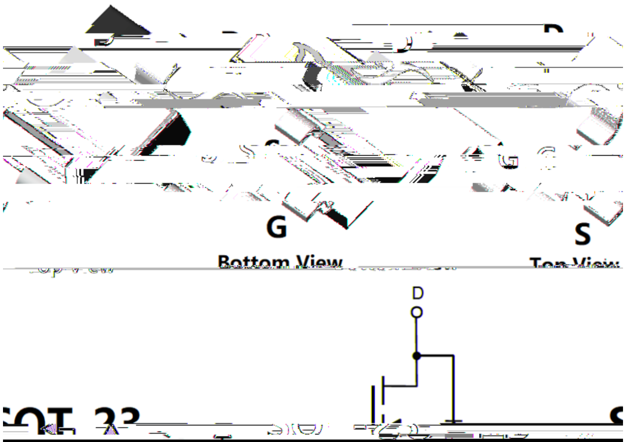
RECOMMEND
YJL2302A
FOR NEW DESIGN

N-Channel Enhancement Mode Field Effect Transistor



Product Summary

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

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	$R_{θJA}$	100	125	/W

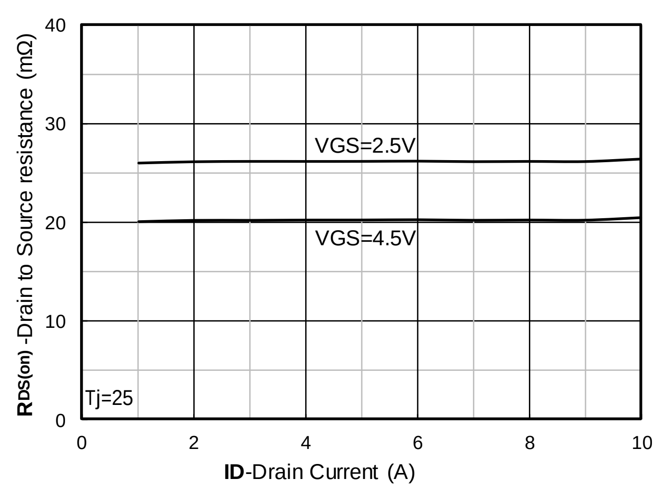
■ Ordering Information (Example)

PREFERED 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

■ **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	-	-	

[redacted]



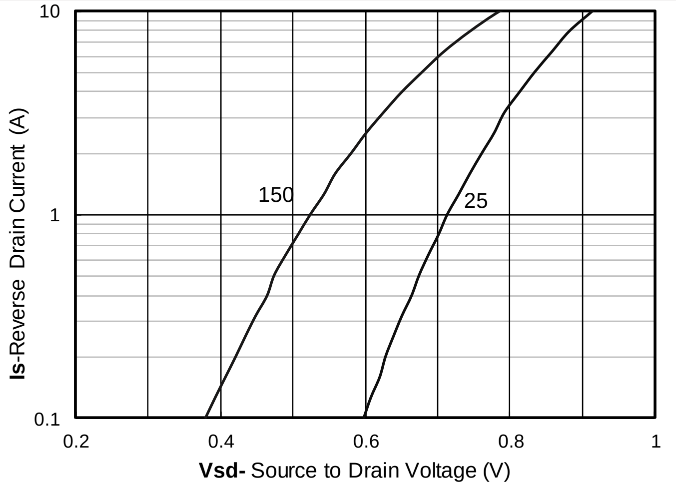
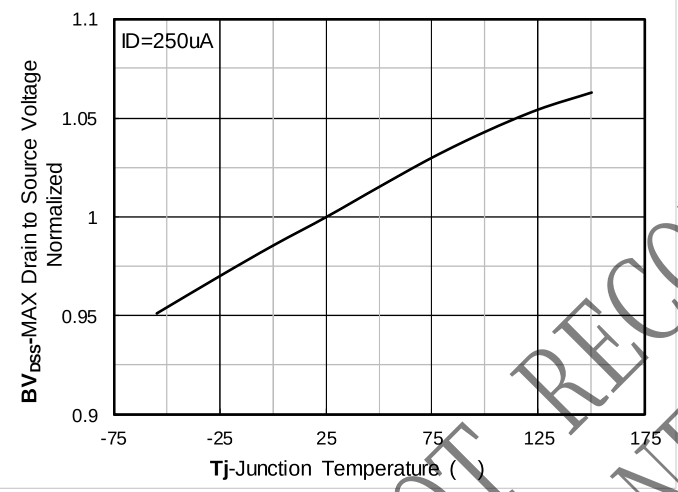


Figure 7. RDS(on) VS Drain Current

Figure 8. Forward characteristics of reverse diode



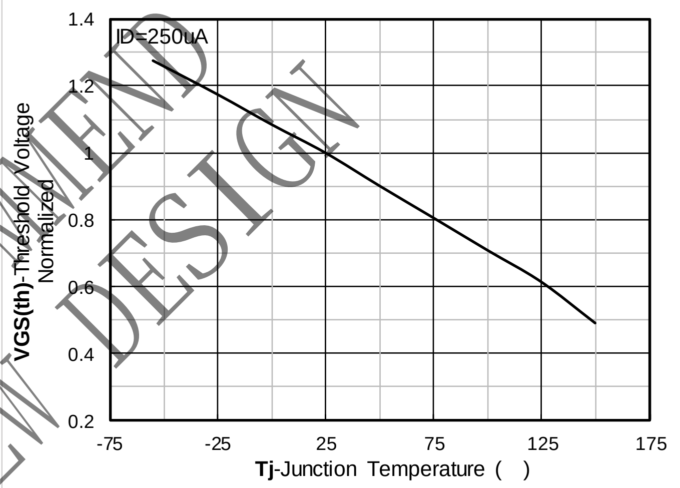
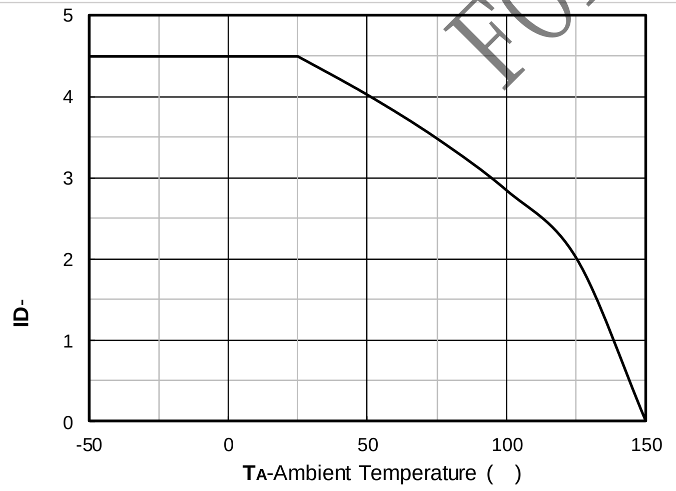


Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage



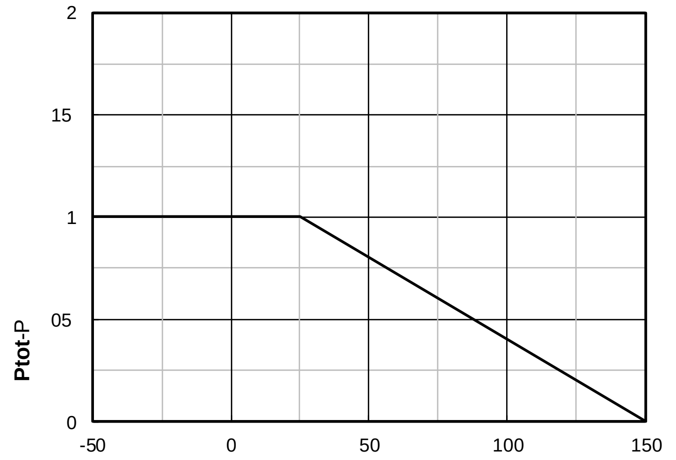


Figure 11. Current dissipation

Figure 12. Power dissipation

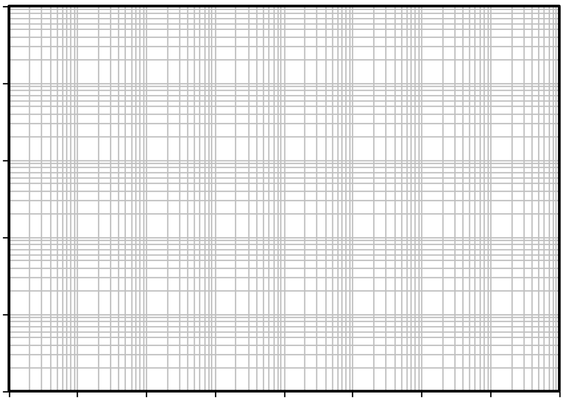


Figure 13. Maximum Transient Thermal Impedance

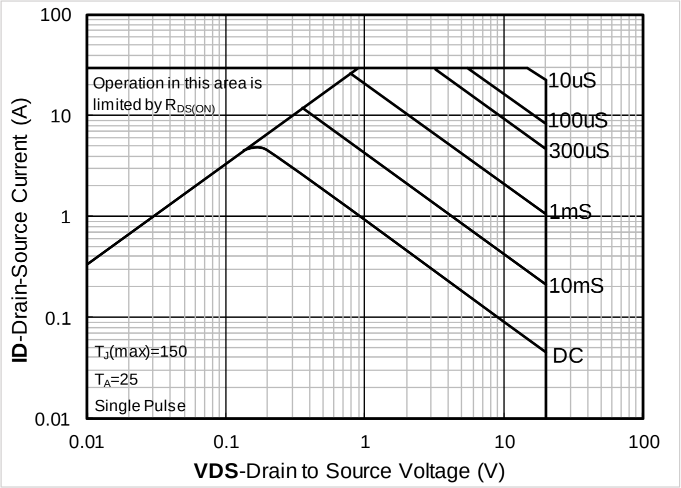


Figure 14. Safe Operation Area

■ Test Circuits & Waveforms

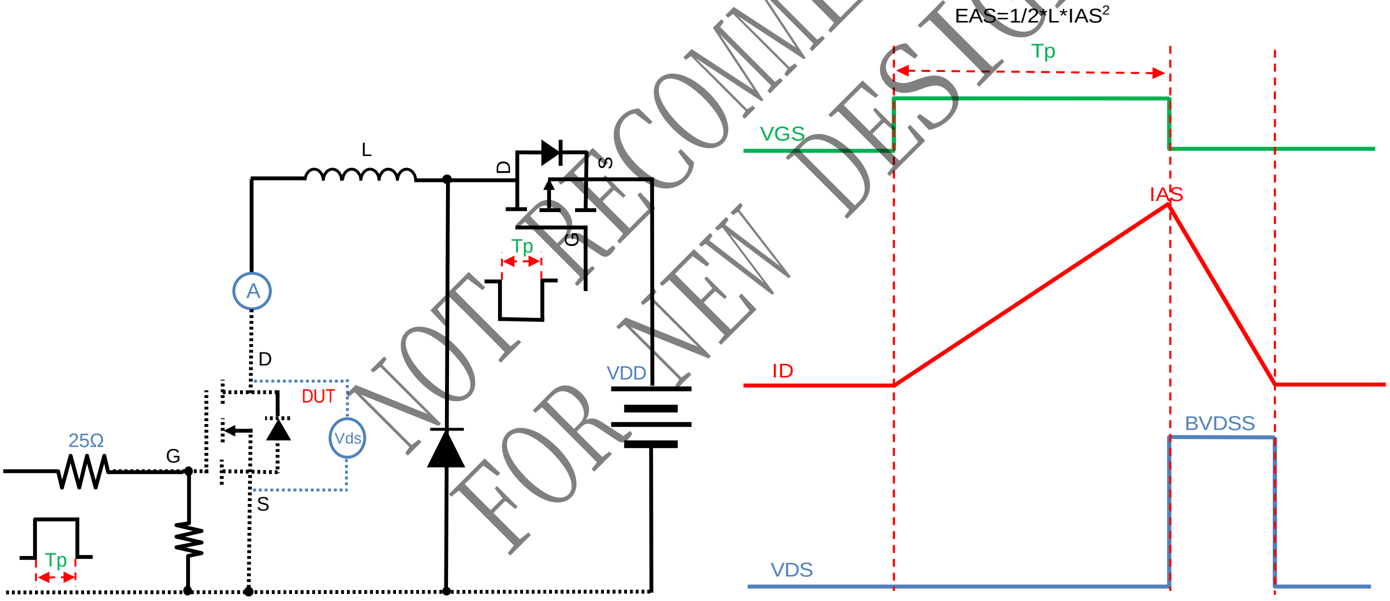


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

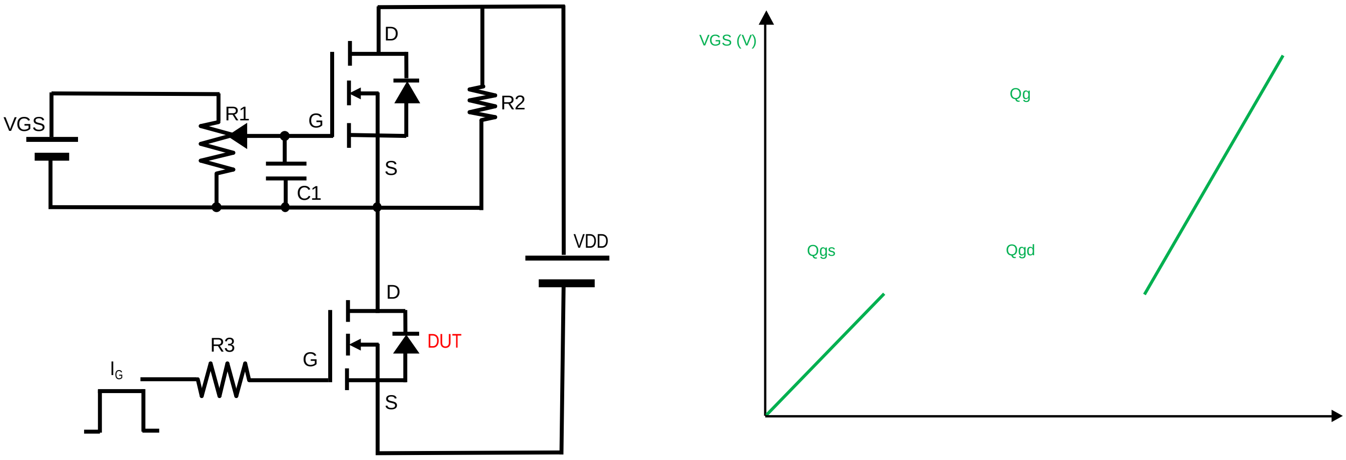


Figure B. Gate Charge Test Circuit & Waveform

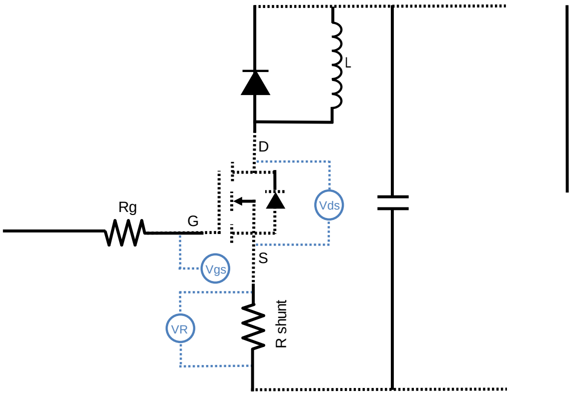


Figure C. Resistive Switching Test Circuit & Waveform

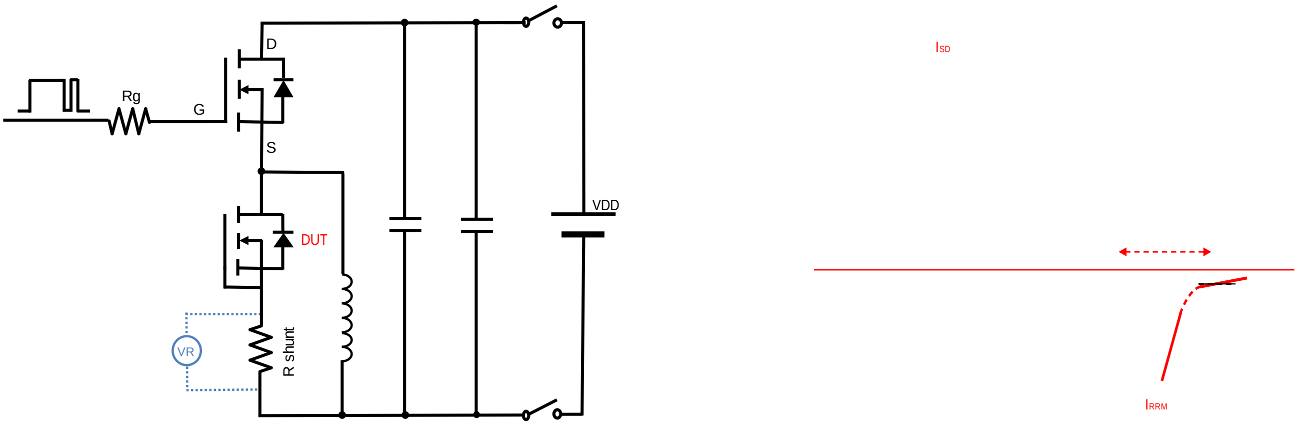


Figure D.

■ SOT-23 Package information

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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 with 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 imprope