



# YJF30G15H

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## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	150V
$I_D$	30A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	24m
$R_{DS(ON)}$ ( at $V_{GS}=6V$ )	26m
100% EAS Tested	
100% $V_{DS}$ Tested	

### General Description

gate trench MOSFET technology

$R_{DS(on)}$



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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D$	150	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=150V, V_{GS}=0V$	-	-	1	
		$V_{DS}=150V, V_{GS}=0V, T_J=150$	-	-	100	
Gate-Body Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D$	2	2.9	4	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=20A$	-	18	24	
		$V_{GS}=6V, I_D=20A$	-	20	26	
Diode Forward Voltage	$V_{SD}$	$I_S=20A, V_{GS}=0V$	-	-	1.2	V
Gate resistance	$R_G$	$f=1MHz$	-	1	-	
	$I_S$		-	-	30	A



**Typical Electrical and Thermal Characteristics Diagrams**



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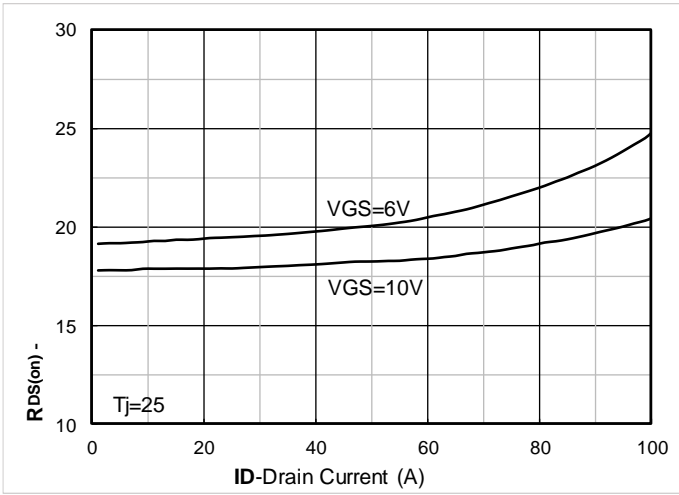


Figure 7. RDS(on) VS Drain Current

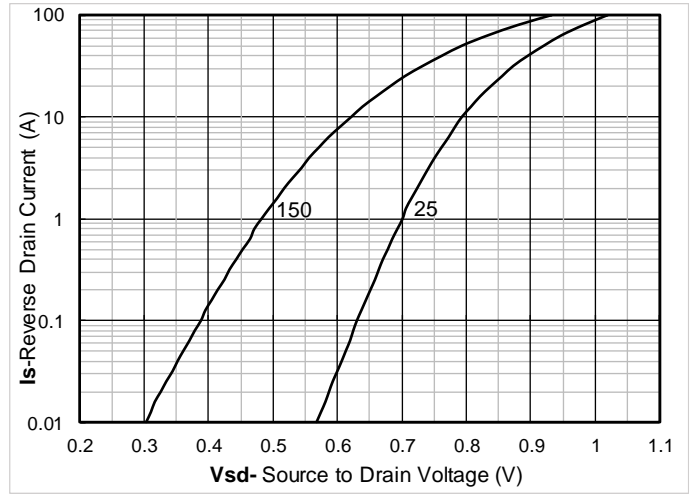


Figure 8. Forward characteristics of reverse diode

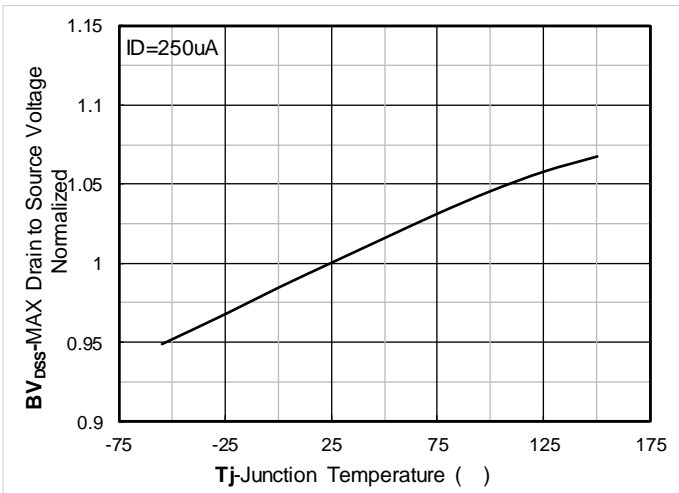


Figure 9. Normalized breakdown voltage

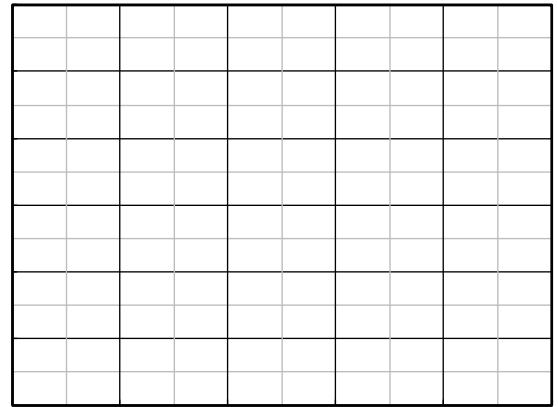


Figure 10. Normalized Threshold voltage

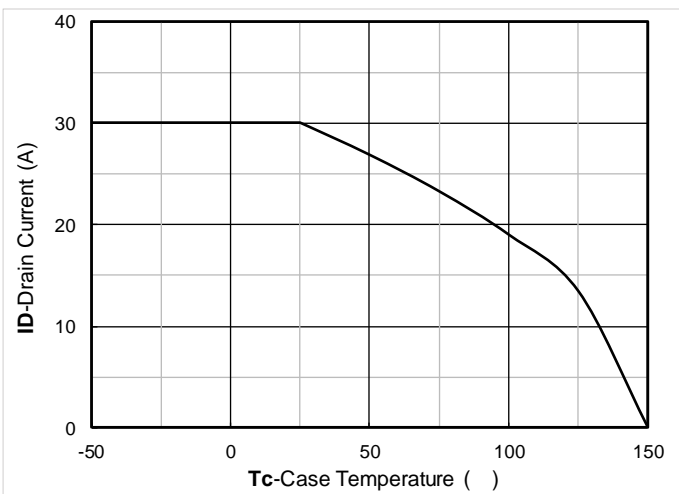


Figure 11. Current dissipation

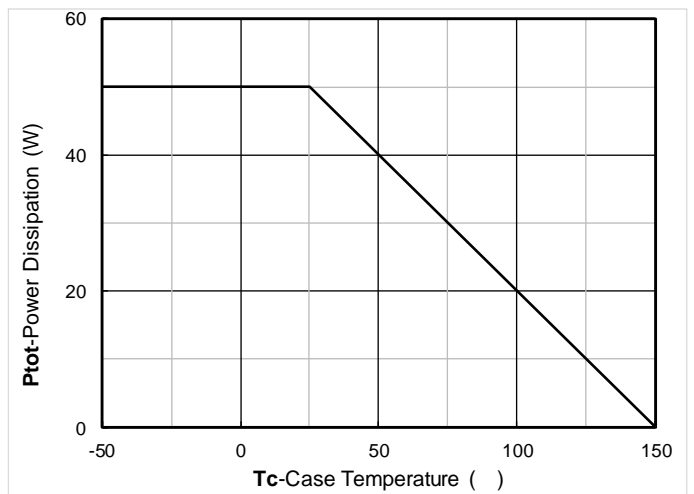


Figure 12. Power dissipation

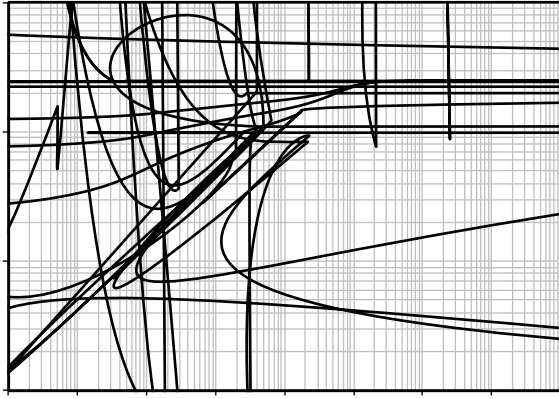


Figure 13. Maximum Transient Thermal Impedance

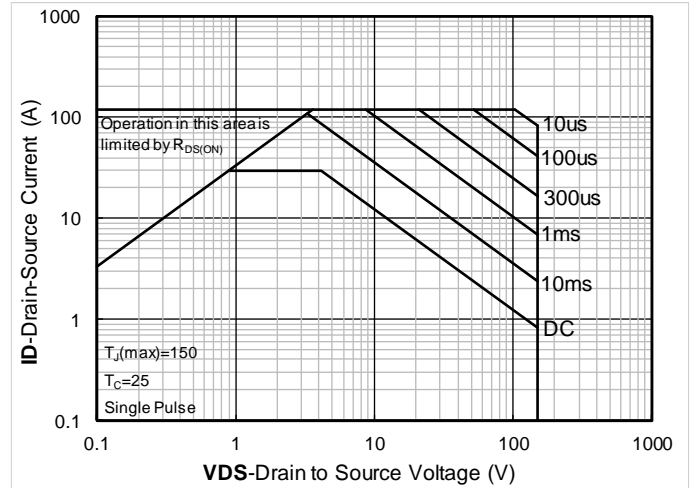


Figure 14. Safe Operation Area

## Test Circuits & Waveforms

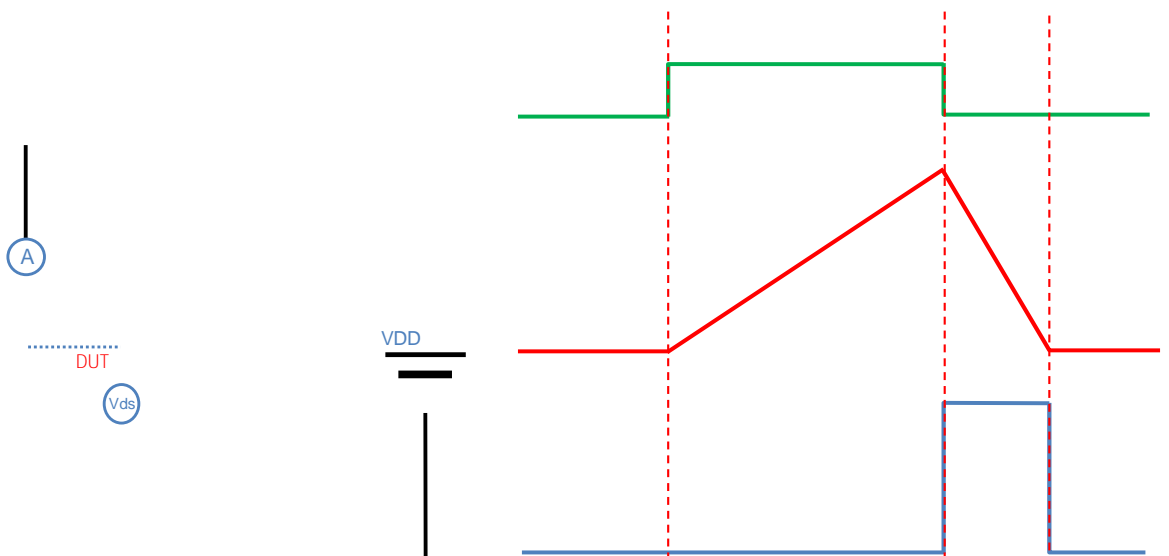


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

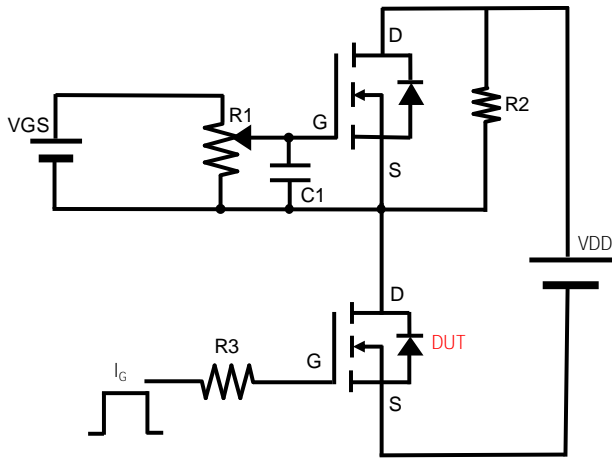


Figure B. Gate Charge Test Circuit & Waveform

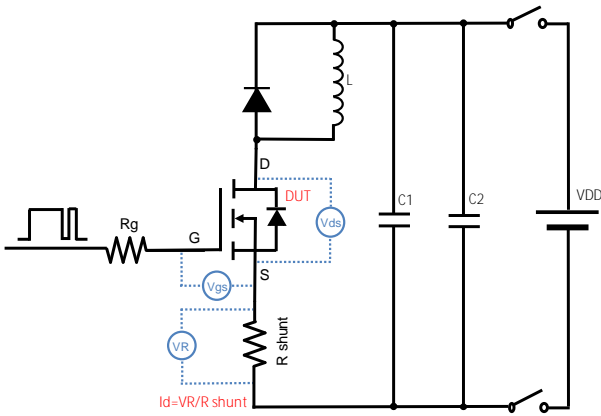


Figure C. Resistive Switching Test Circuit & Waveform

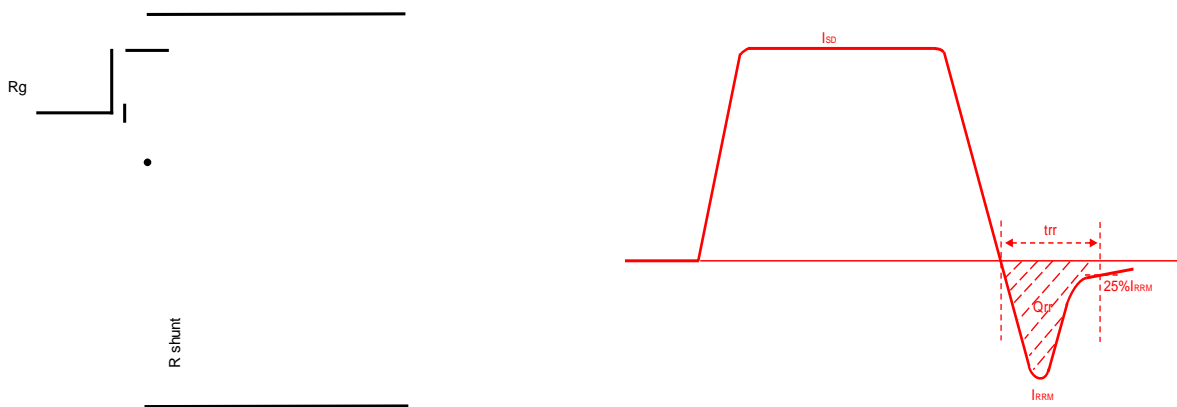
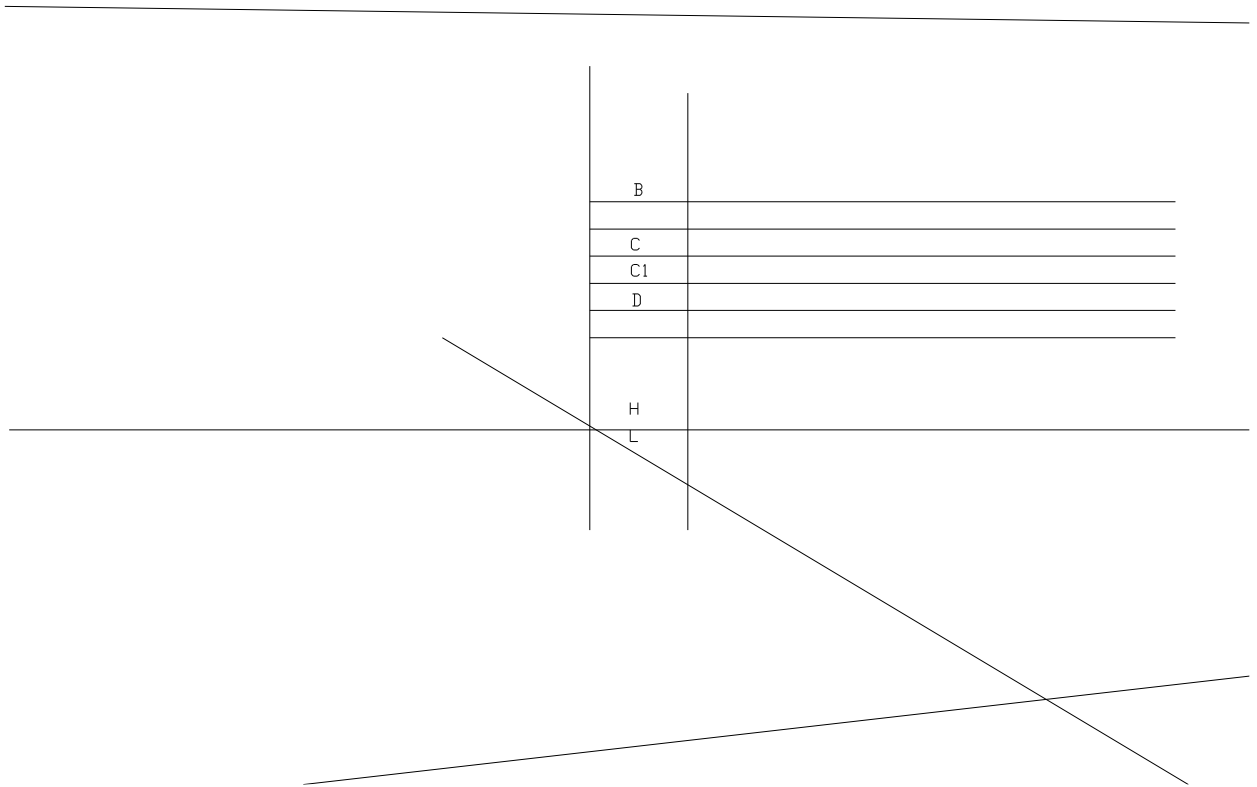


Figure D. Diode Recovery Test Circuit & Waveform



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## ITO-220AB-B Package information





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