



N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	100V
I_D	24A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	33m
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	41m
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 $R_{DS(ON)}$
Moisture Sensitivity Level 1
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Power switching application
Uninterruptible power supply
DC-DC convertor

Limiting Values

Parameter	Conditions	Symbol	Min	Max	Unit
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YJQ033G10A

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A, T_j=25$	100	-	-	V
		$V_{GS}=0V, I_D=1mA, T_j=25$	100	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=80V, V_{GS}=0V, T_j=25$	-			



Typical Electrical and Thermal Characteristics Diagrams

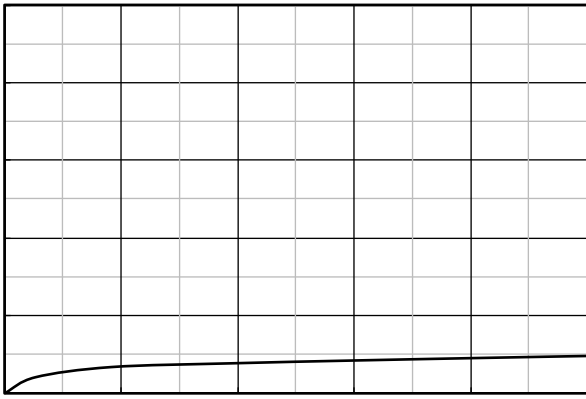


Figure 1. Output Characteristics; typical values

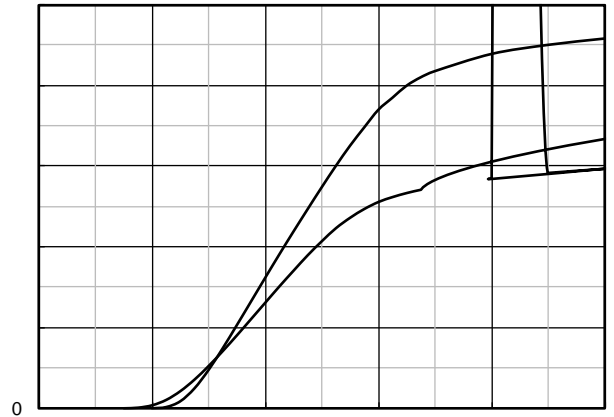


Figure 2. Transfer Characteristics; typical values

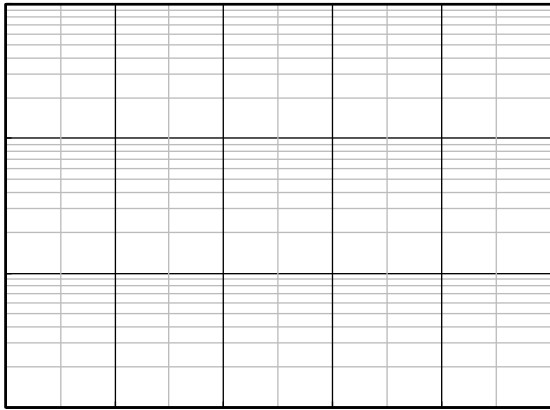


Figure 3. Capacitance Characteristics; typical values

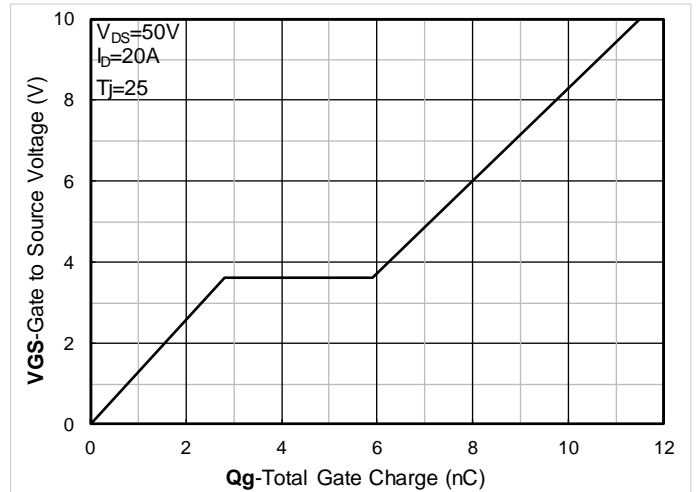


Figure 4. Gate Charge; typical values

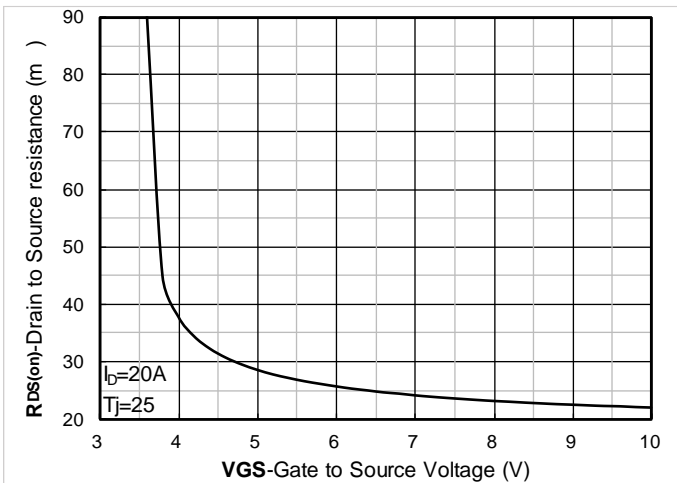


Figure 5. On-Resistance vs. Gate to Source Voltage; typical values

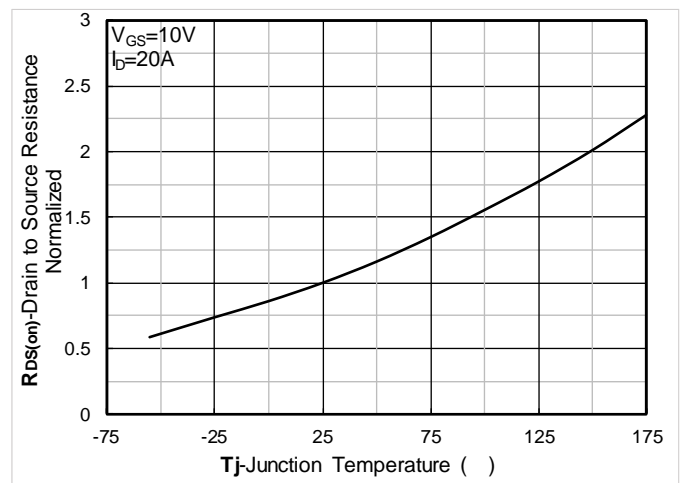


Figure 6. Normalized On-Resistance

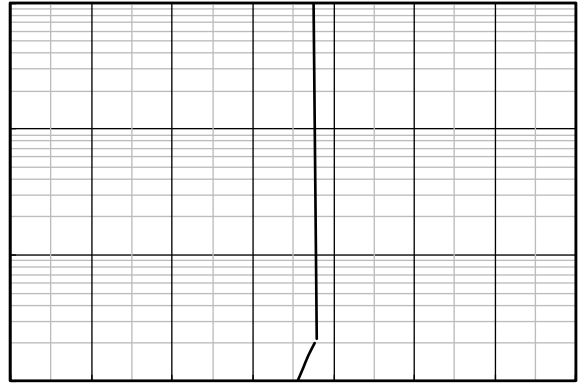


Figure 7. $R_{DS(on)}$ vs. Drain Current; typical values

Figure 8. Forward characteristics of reverse diode; typical values

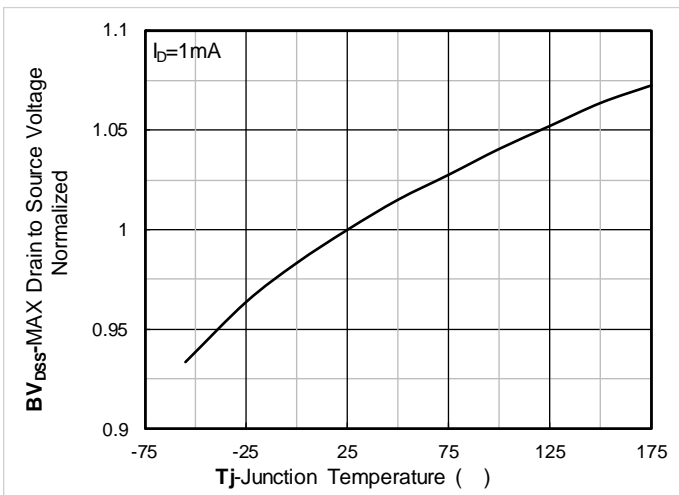


Figure 9. Normalized breakdown voltage

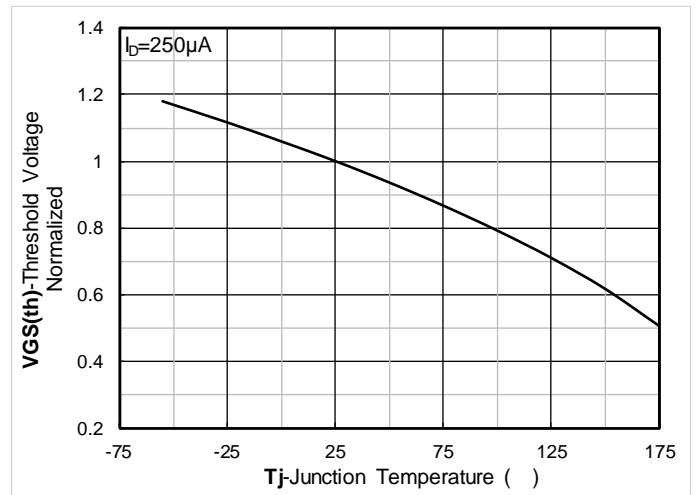


Figure 10. Normalized Threshold voltage

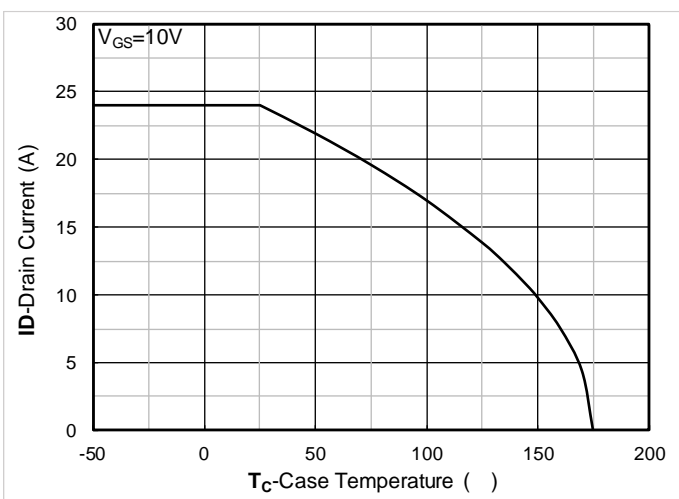


Figure 11. Current dissipation

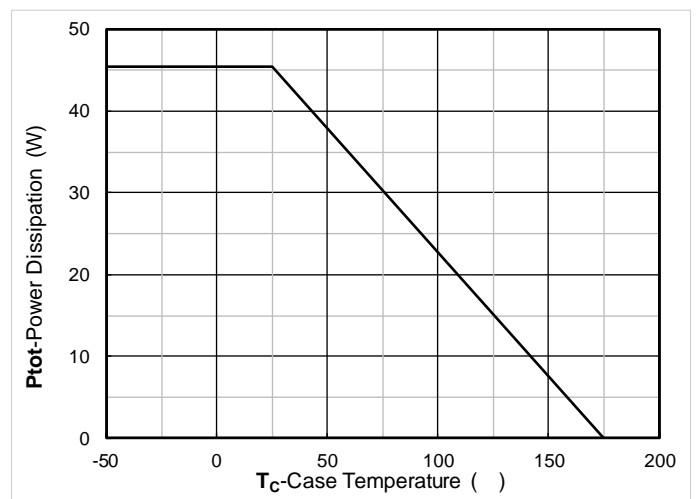


Figure 12. Power dissipation



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Figure 13. Maximum Transient Thermal Impedance

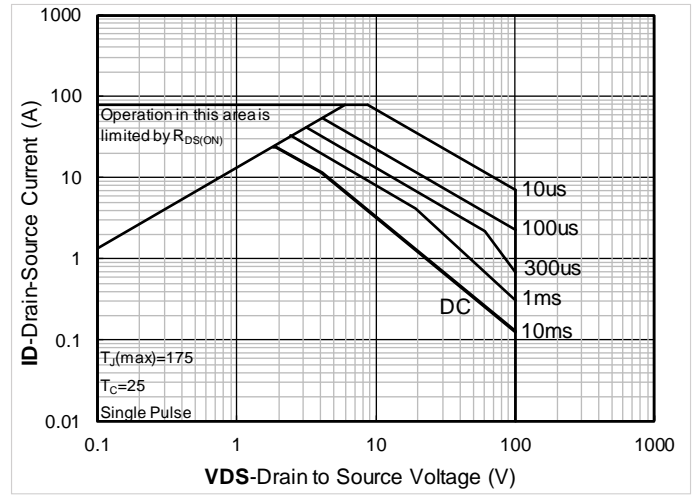


Figure 14. Safe Operation Area

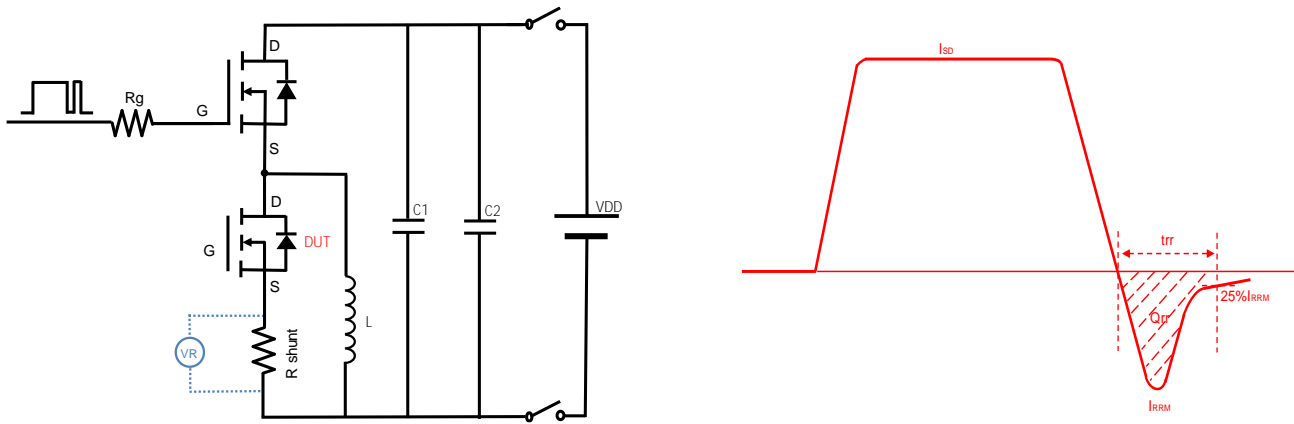
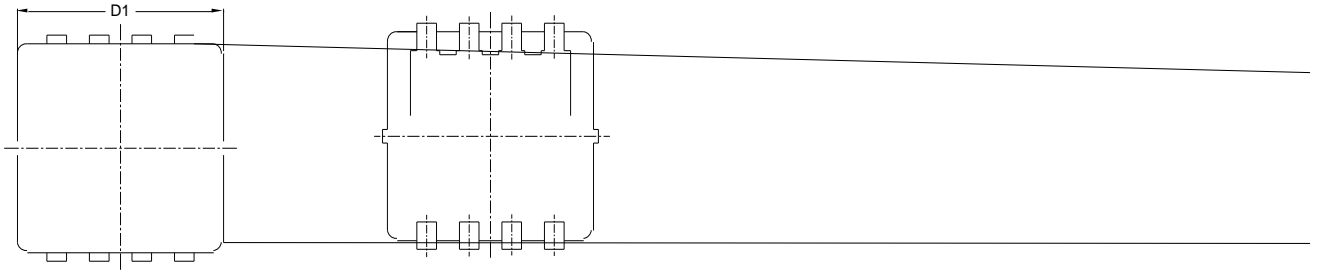


Figure D. Diode Recovery Test Circuit & Waveform



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PDFN3333-8L-B-0.75mm Package information



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.

UNIT mm



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