



YJL3400A

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	30V
I_D	5.6A
$r_{DS(ON)}$ (at $V_{GS}=10V$)	25mohm
$r_{DS(ON)}$ (at $V_{GS}=4.5V$)	



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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	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	
Gate-Body Leakage Current	I _{GSS1}	V _{GS} = 12V, V _{DS} =0V			100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250	0.65	0.9	1.5	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =5.6A		20	25	m
		V _{GS} =4.5V, I _D =5A		23	31	
		V _{GS} =2.5V, I _D =3A		27	45	
Diode Forward Voltage	V _{SD}	I _S =5.6A, V _{GS} =0V			1.2	V
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =15V, V _{GS} =0V, f=1MHZ		630		pF
Output Capacitance	C _{oss}			55		
Reverse Transfer Capacitance	C _{rss}			71		
Switching Parameters						
Total Gate Charge	Q _g					

V



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Typical Performance Characteristics

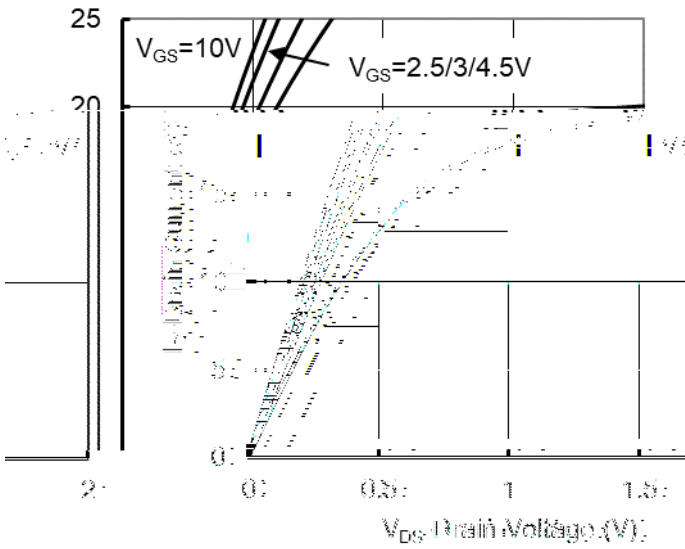


Figure1. Output Characteristics

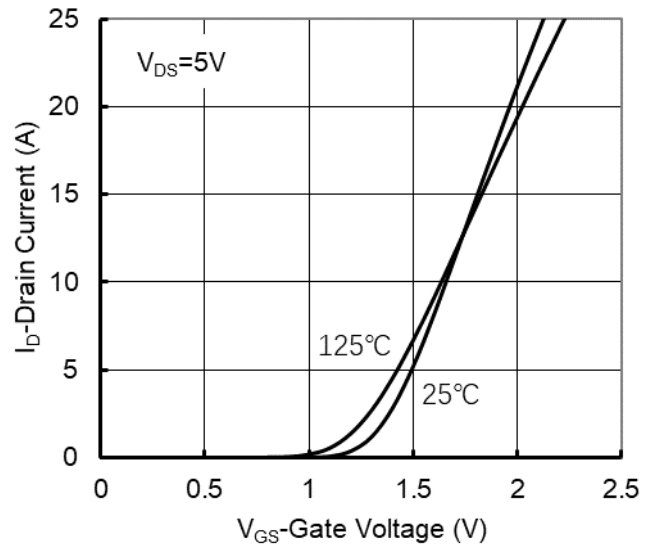


Figure2. Transfer Characteristics

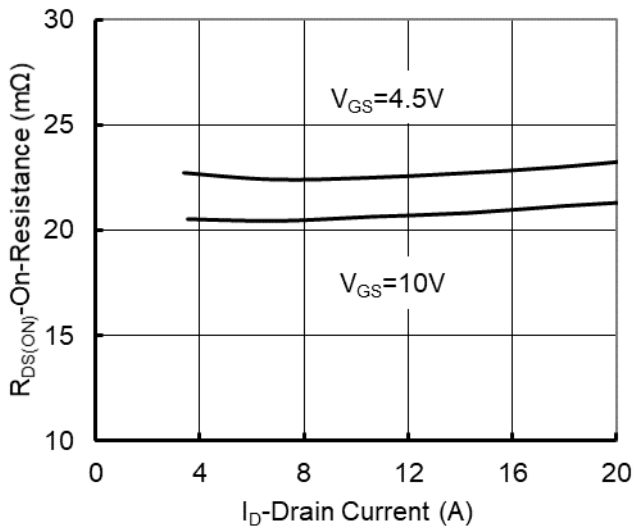


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

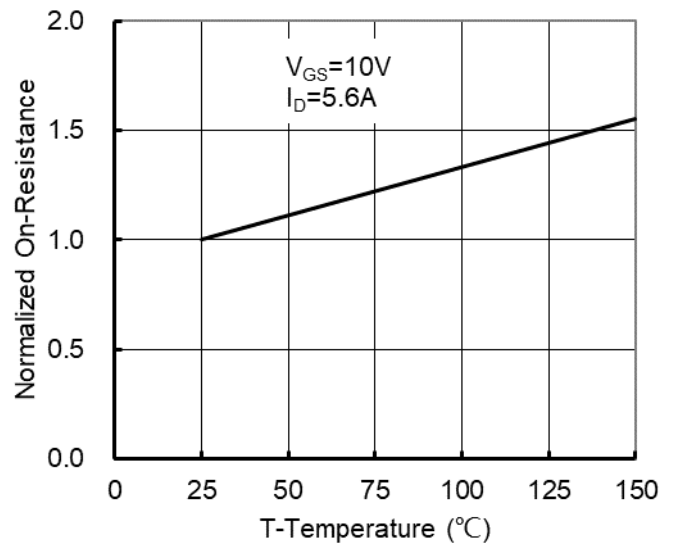


Figure 4: On-Resistance vs. Junction Temperature

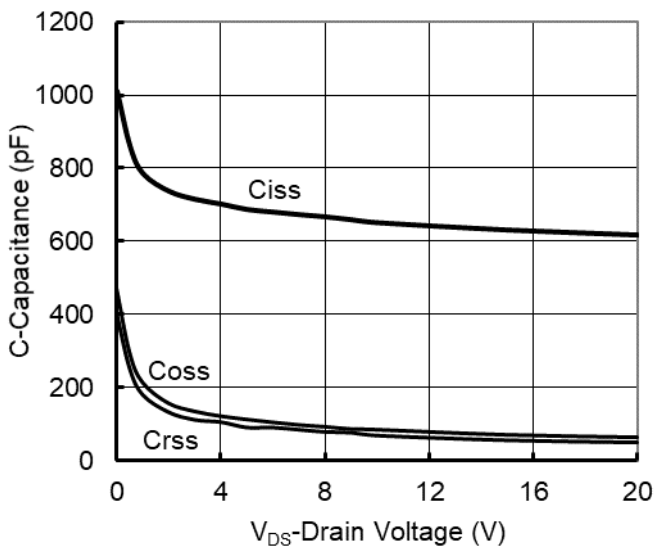


Figure5. Capacitance Characteristics

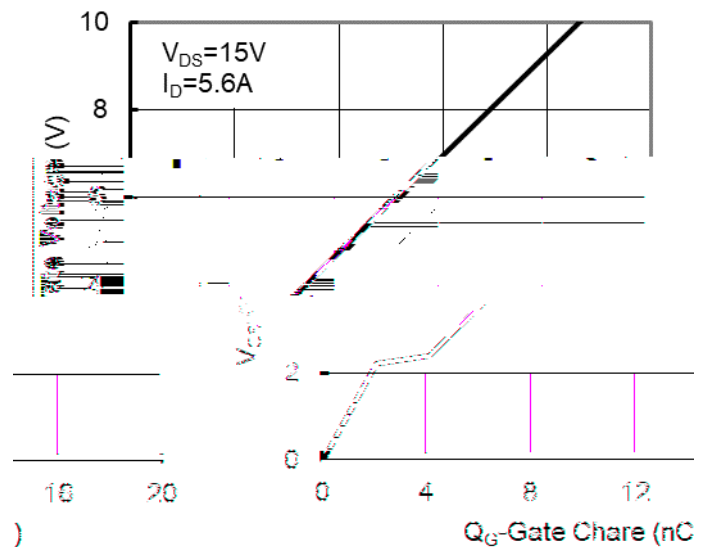


Figure6. Gate Charge



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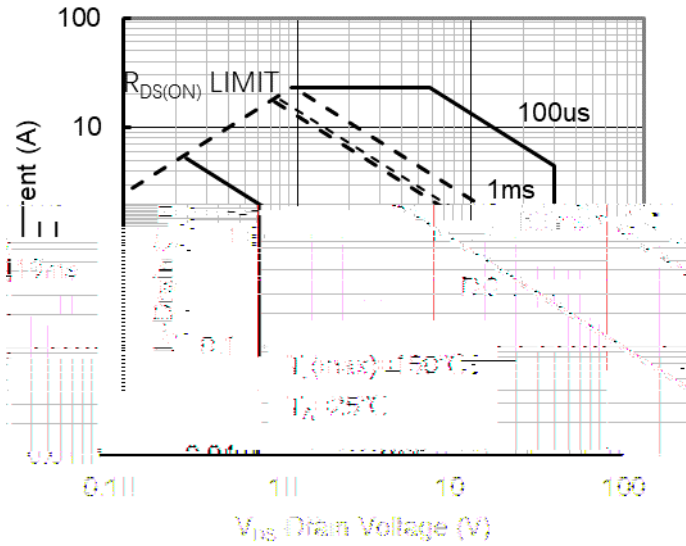


Figure7. Safe Operation Area

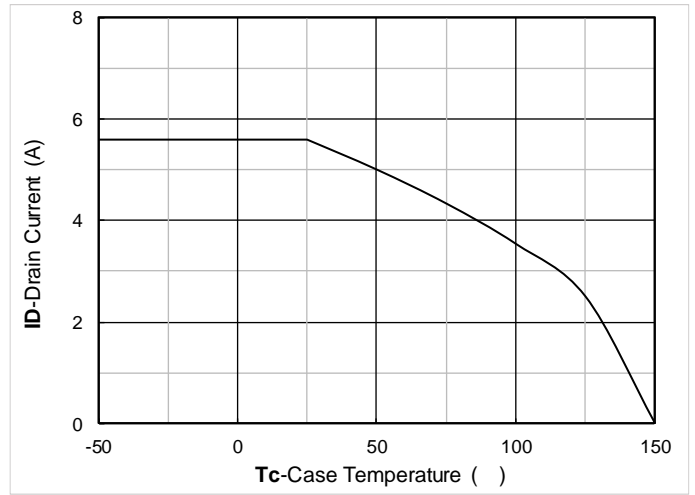


Figure8. Current dissipation

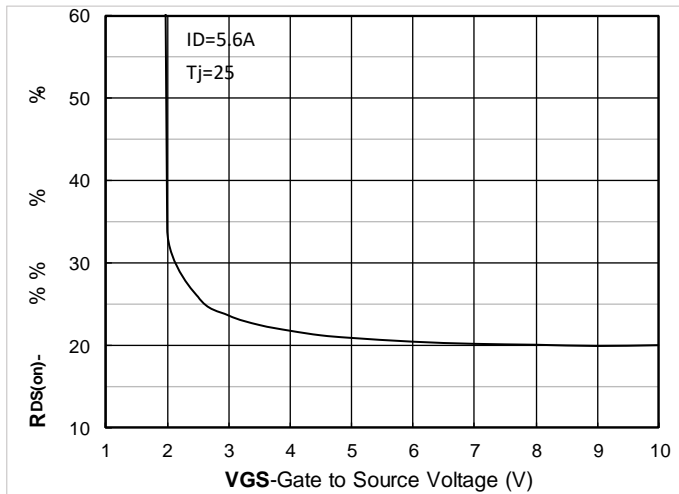


Figure 9. On-Resistance vs Gate to Source Voltage

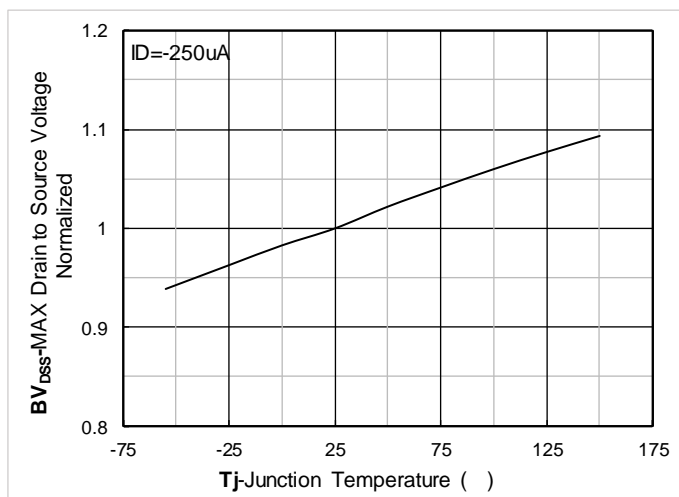
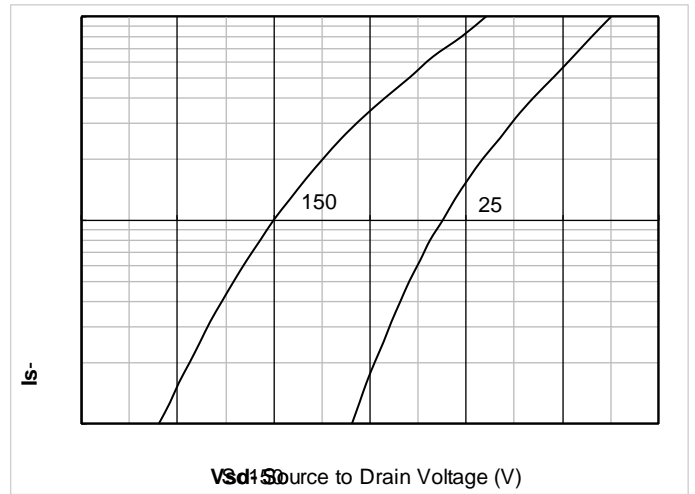


Figure 11. Normalized breakdown voltage



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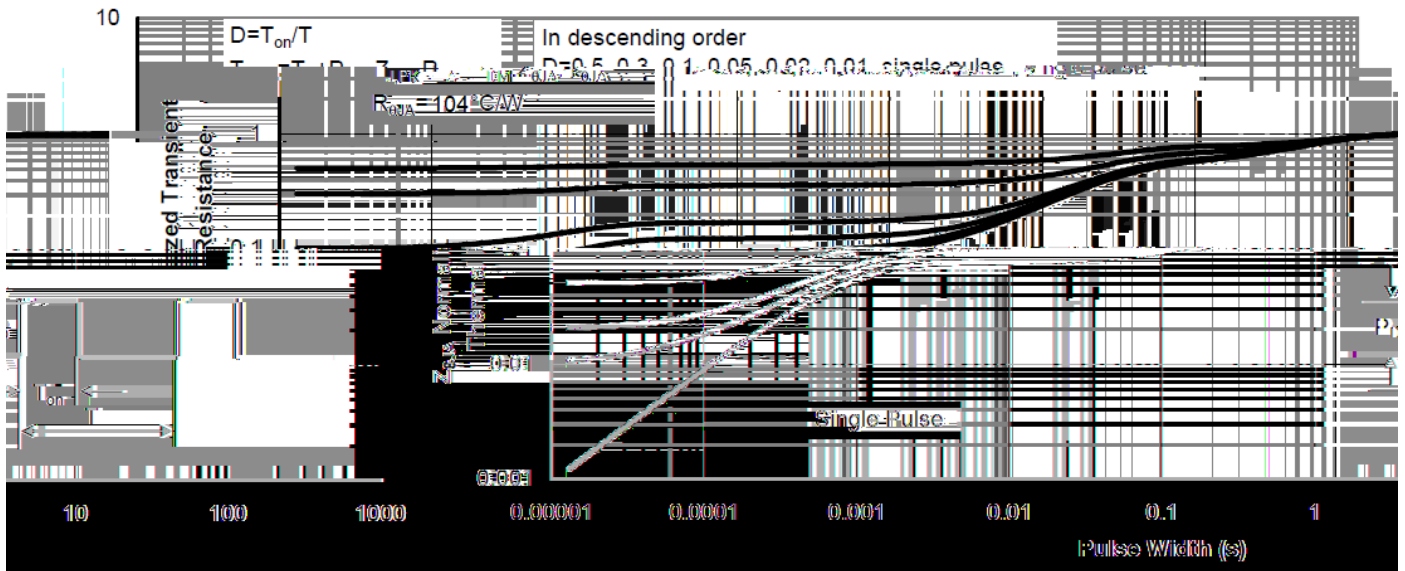
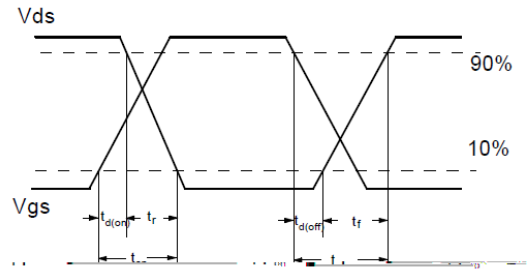
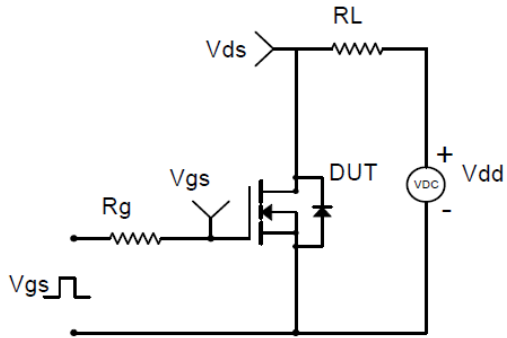
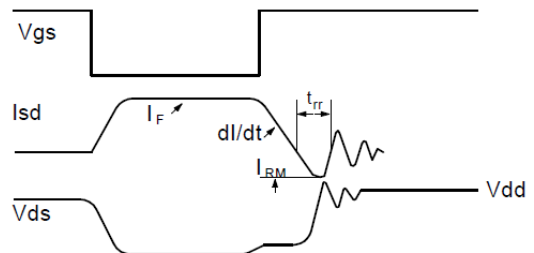
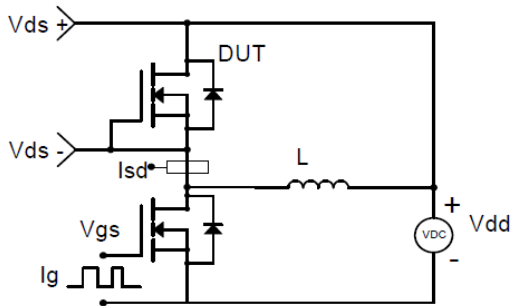


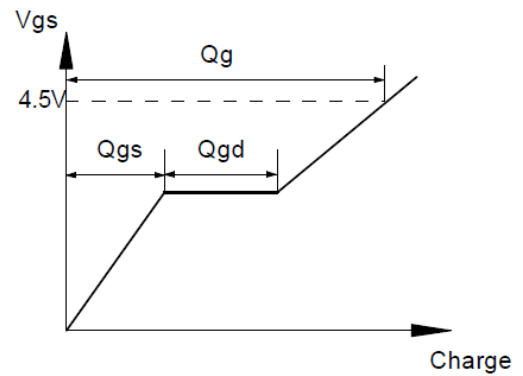
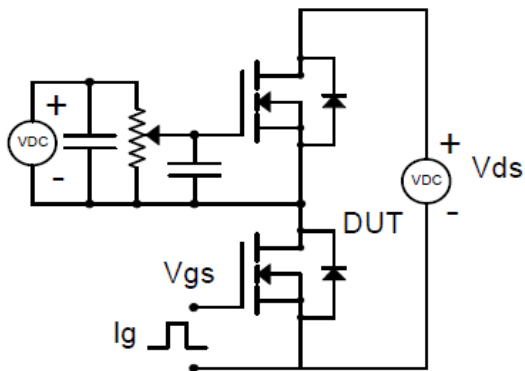
Figure13. Normalized Maximum Transient Thermal Impedance



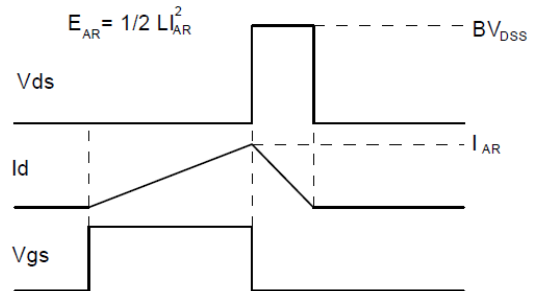
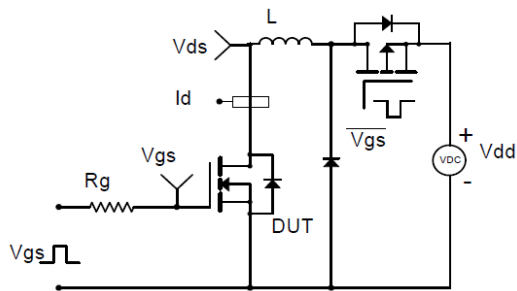
Resistive Switching Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms



Gate Charge Test Circuit & Waveform

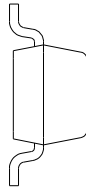
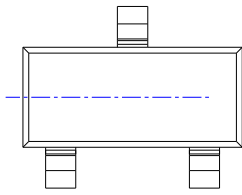


Unclamped Inductive Switching (UIS) Test Circuit & Waveforms

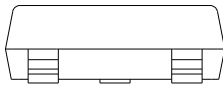


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SOT-23 Package information



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UNIT mm

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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.



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