



YJS03N10A

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	100V
I_D	3.0A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	120mohm
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	140mohm

General Description

MV MOSFET technology
Excellent package for heat dissipation
High density cell design for low $R_{DS(ON)}$
1
-0 Flammability Rating
alogen Free

Applications

DC-DC Converters
Power management functions

Absolute Maximum Ratings ($T_A=25$ unless otherwise noted)

Parameter	Symbol	Limit	Unit	
Drain-source Voltage	V_{DS}	100	V	
Gate-source Voltage	V_{GS}	± 20	V	
Drain Current	I_D	$T_A=25$	3	A
		$T_A=70$	2.4	
Pulsed Drain Current ^A	I_{DM}	12	A	
Single Pulse Avalanche Energy	E_{AS}			



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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}	$V_{GS}=0V, I_D=250$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$			1	
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250$	1.1	1.8	3.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=3A$		95	120	m
		$V_{GS}=4.5V, I_D=2.4A$		100	140	
Diode Forward Voltage	V_{SD}	$I_S=3A, V_{GS}=0V$		0.8	1.2	V

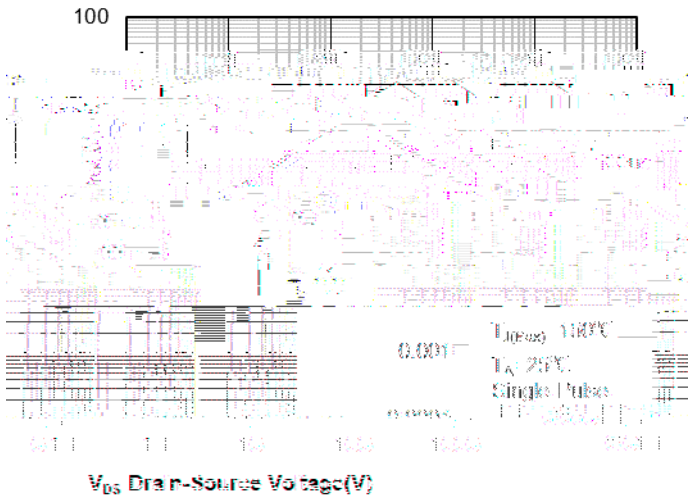


Figure 7. Safe Operation Area

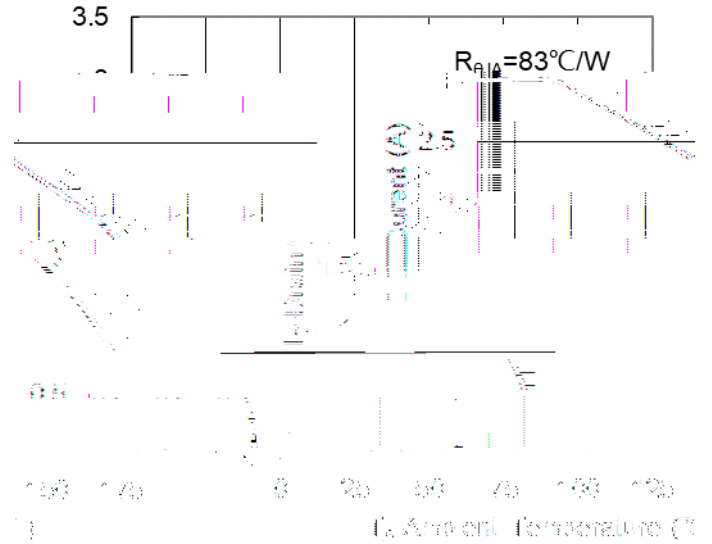


Figure 8. Maximum Continuous Drain Current vs Ambient Temperature

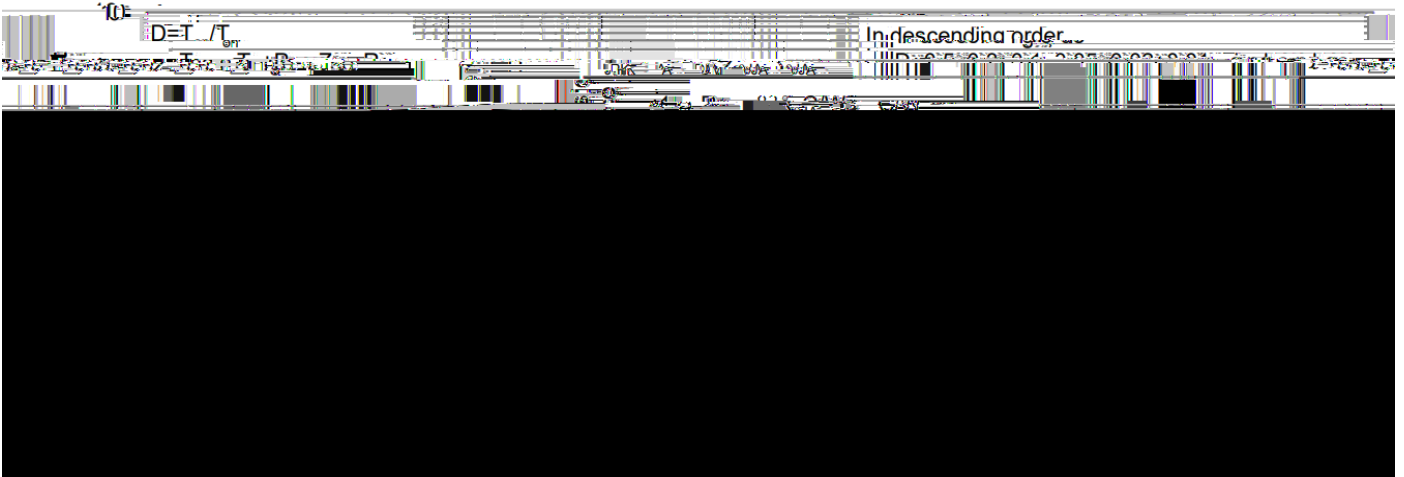


Figure 9. Normalized Maximum Transient Thermal Impedance

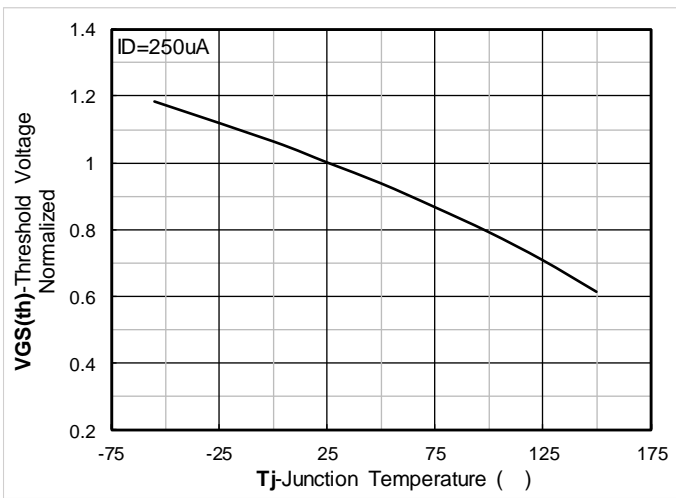
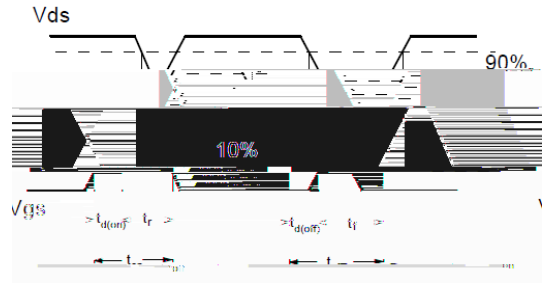
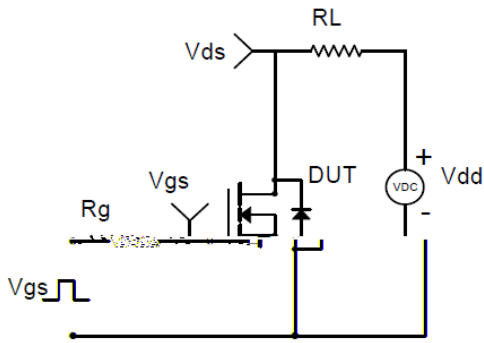
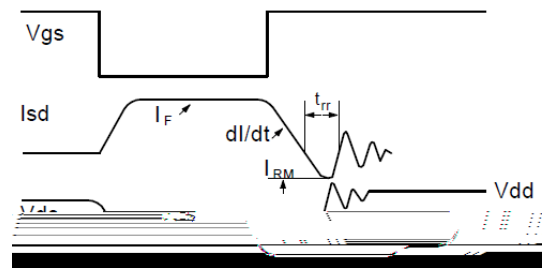
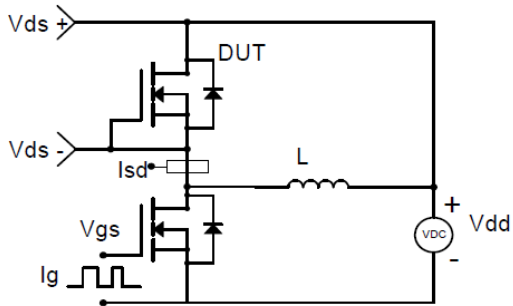


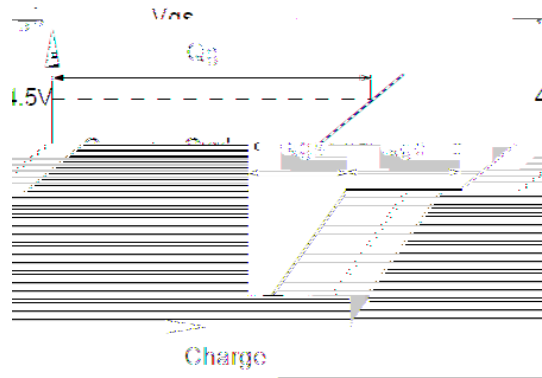
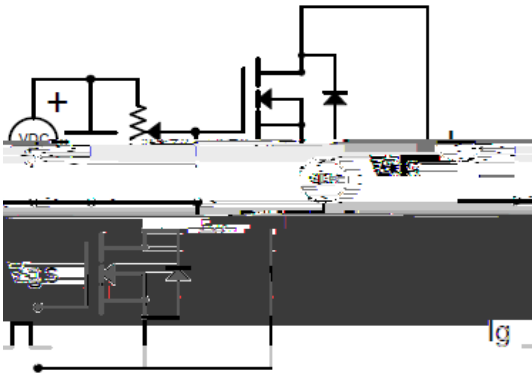
Figure 10. Normalized Threshold voltage



Resistive Switching Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms

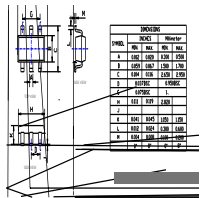
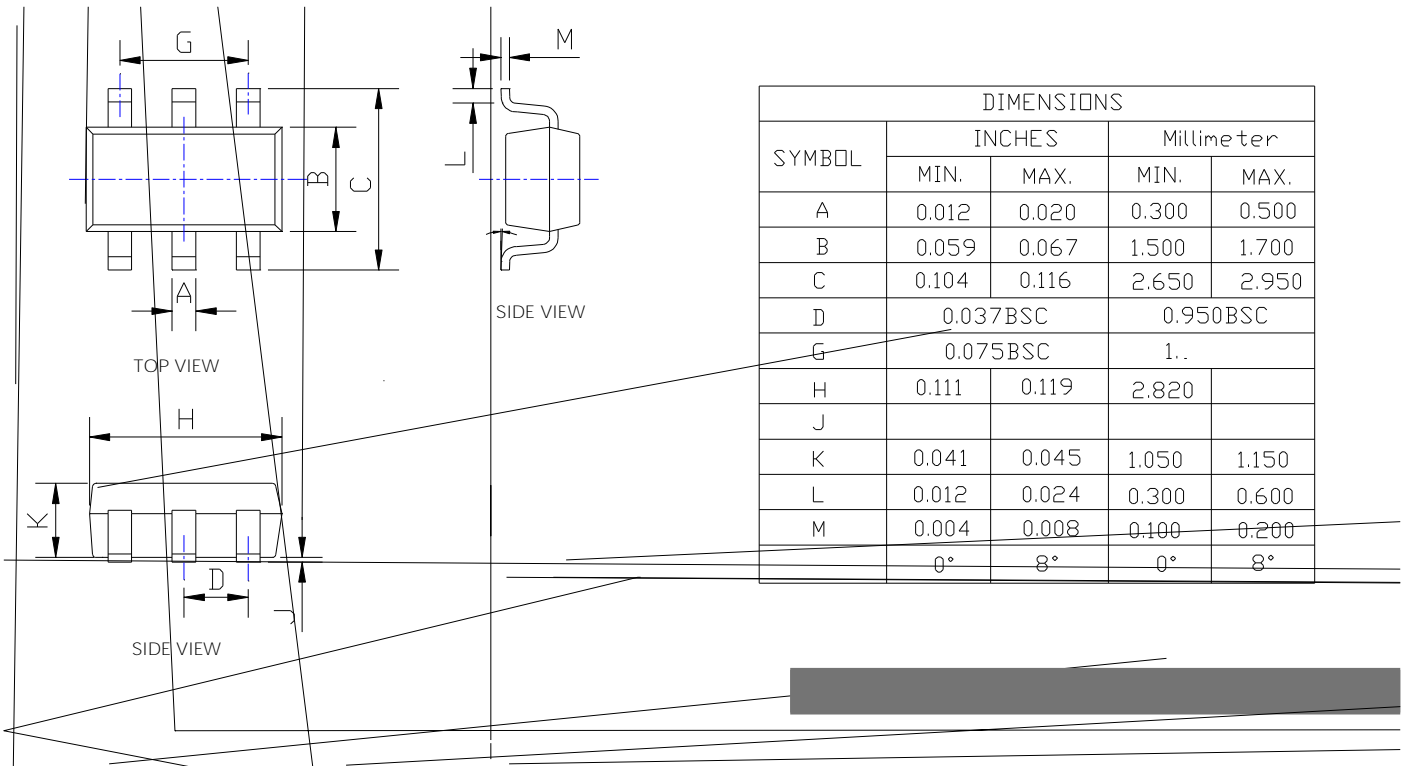


Gate Charge Test Circuit & Waveform



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SOT-23-6L Package information





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Disclaimer

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