



# YJJD05N03A

## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	30V
$I_D$	5.0A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	33mohm
$R_{DS(ON)}$ ( at $V_{GS}=4.5V$ )	55mohm
$V_{GS}$ @ $V_{DS}$ Tested	

### General Description

Trench Power MV MOSFET technology  
High Power and current handing capability

### Applications

PWM application  
S, a, a@

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

Parameter	Symbol	Limit	Unit
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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	$BV_{DSS}$	$V_{GS}=0V, I_D=250 \mu A$	30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30V, V_{GS}=0V$			1	$\mu A$
Gate-Body Leakage Current	$I_{GSS1}$	$V_{GS}=\pm 20V, V_{DS}=0V$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250 \mu A$	1.0	1.5	2.2	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=3.6$				



### Typical Performance Characteristics

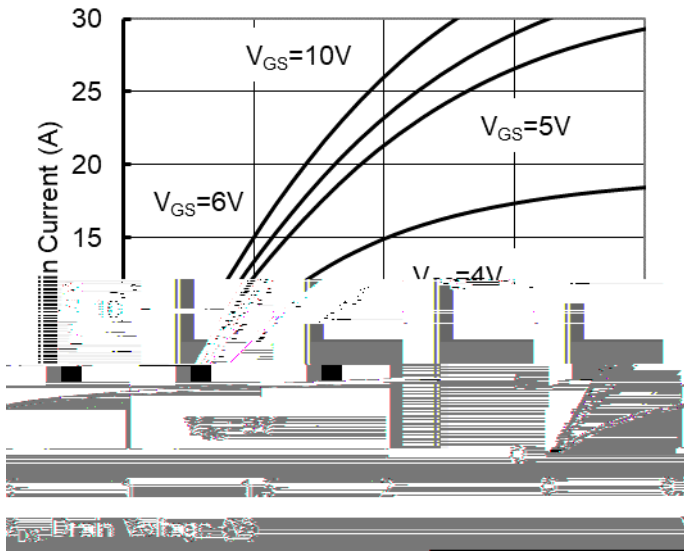


Figure1. Output Characteristics

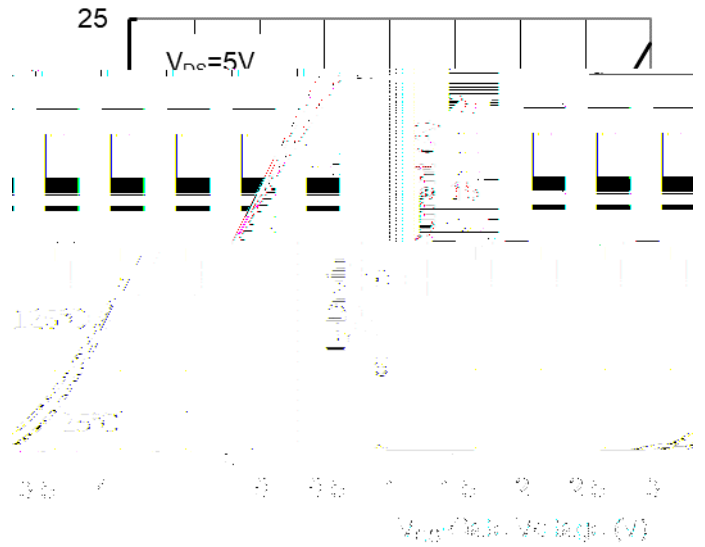


Figure2. Transfer Characteristics

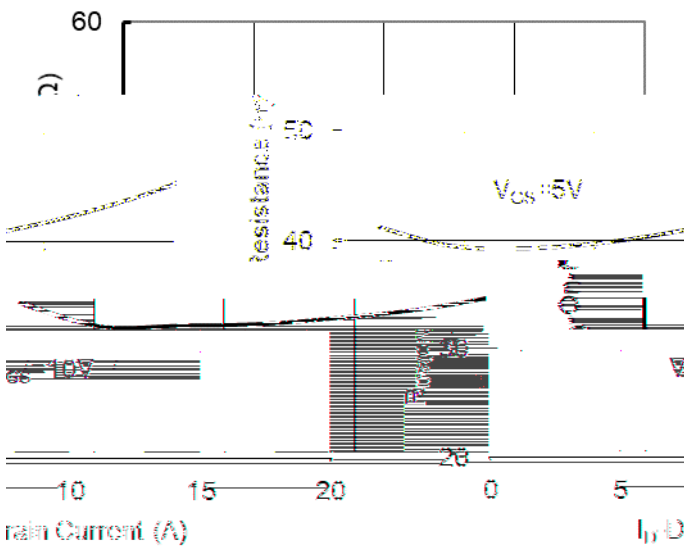


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

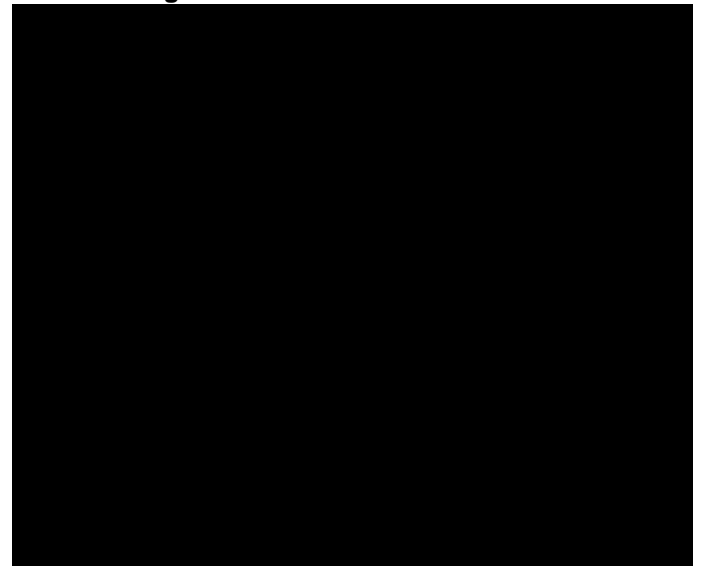


Figure 4: On-Resistance vs. Junction Temperature

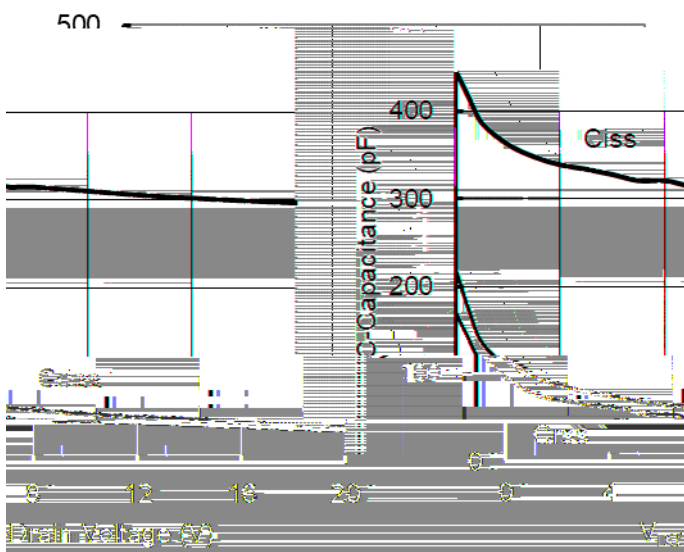


Figure5. Capacitance Characteristics

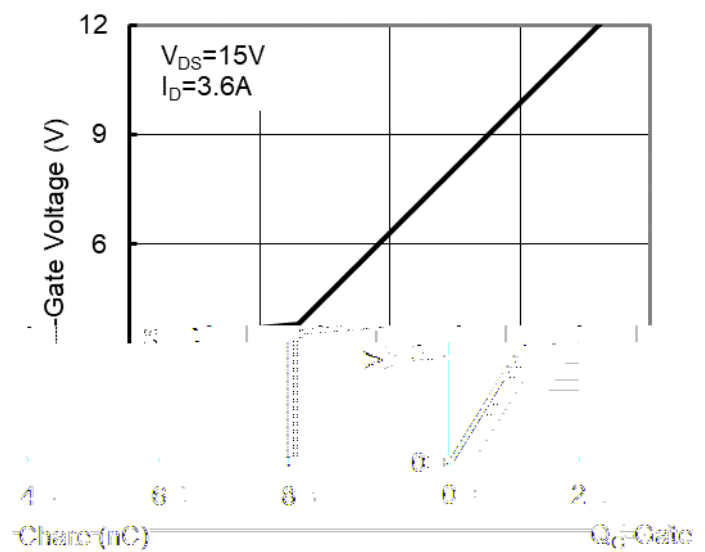


Figure6. Gate Charge

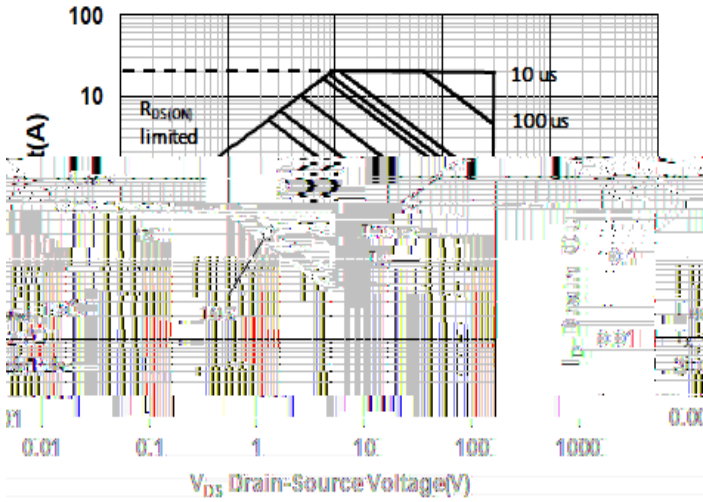


Figure7. Safe Operation Area

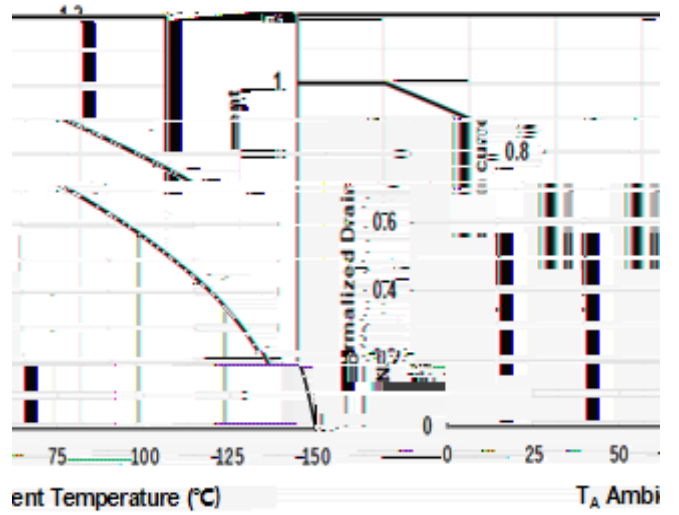


Figure8. Maximum Continuous Drain Current vs Ambient Temperature

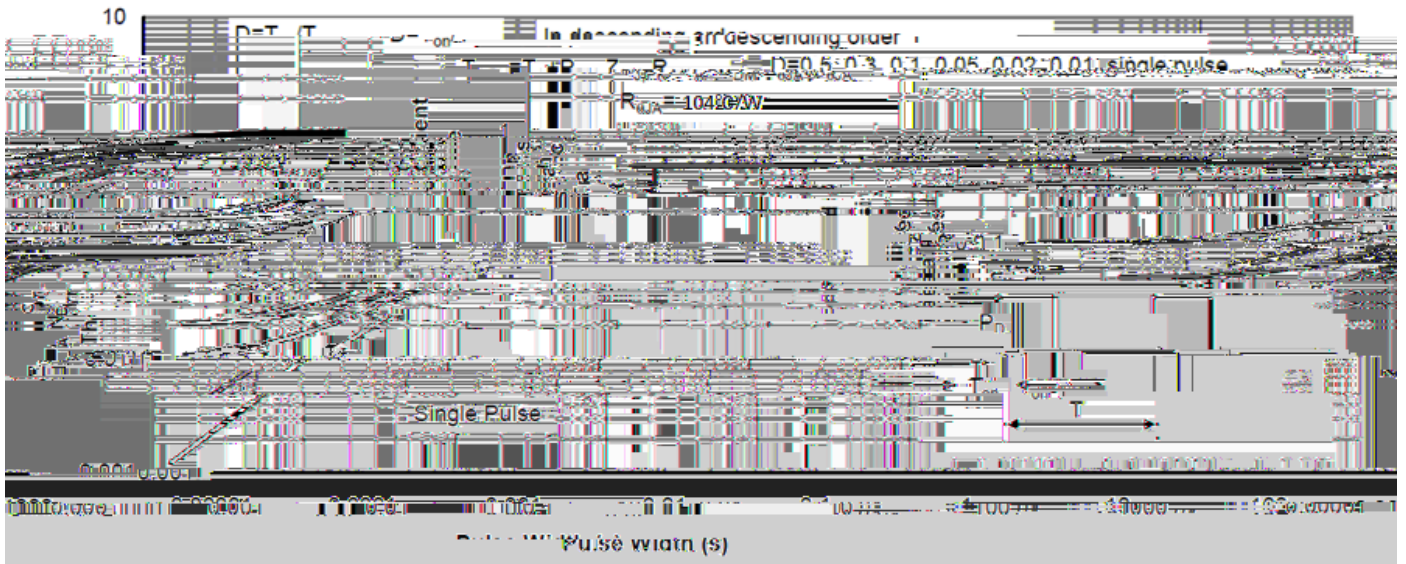
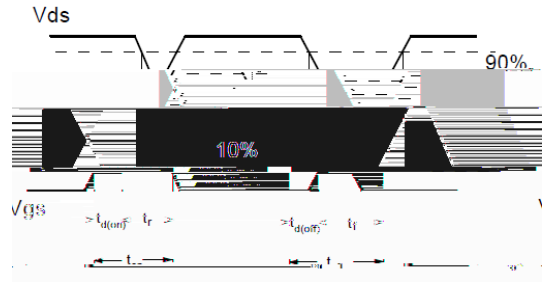
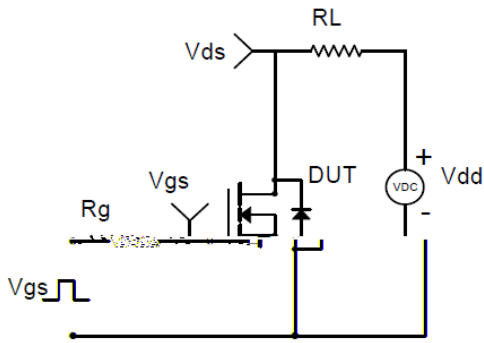
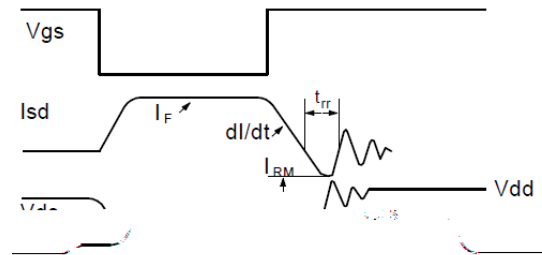
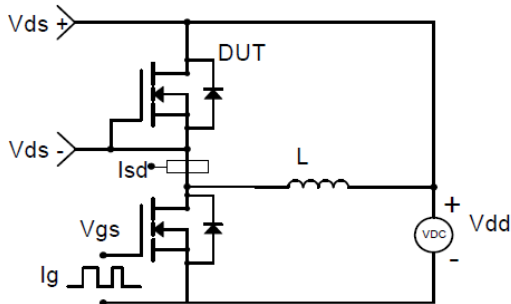


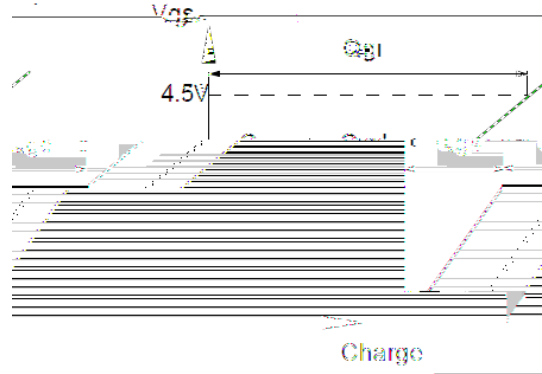
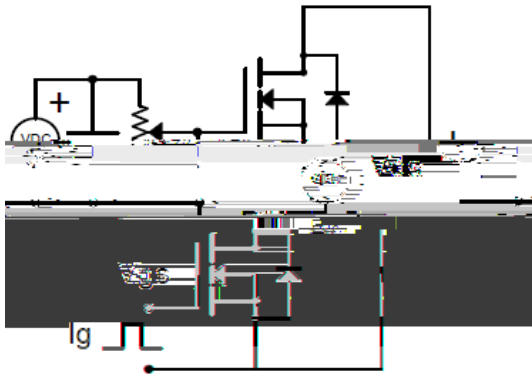
Figure9. Normalized Maximum Transient Thermal Impedance



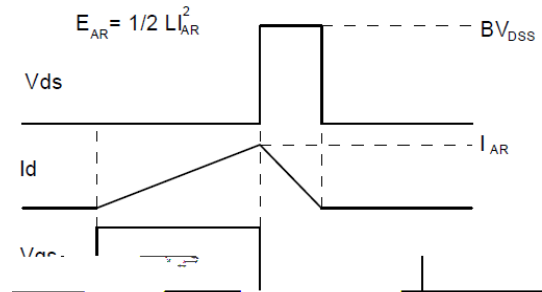
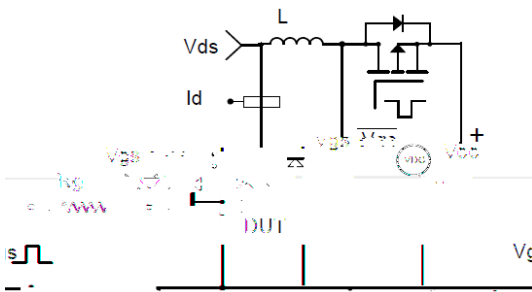
**Resistive Switching Test Circuit & Waveforms**



**Diode Recovery Test Circuit & Waveforms**



**Gate Charge Test Circuit & Waveform**

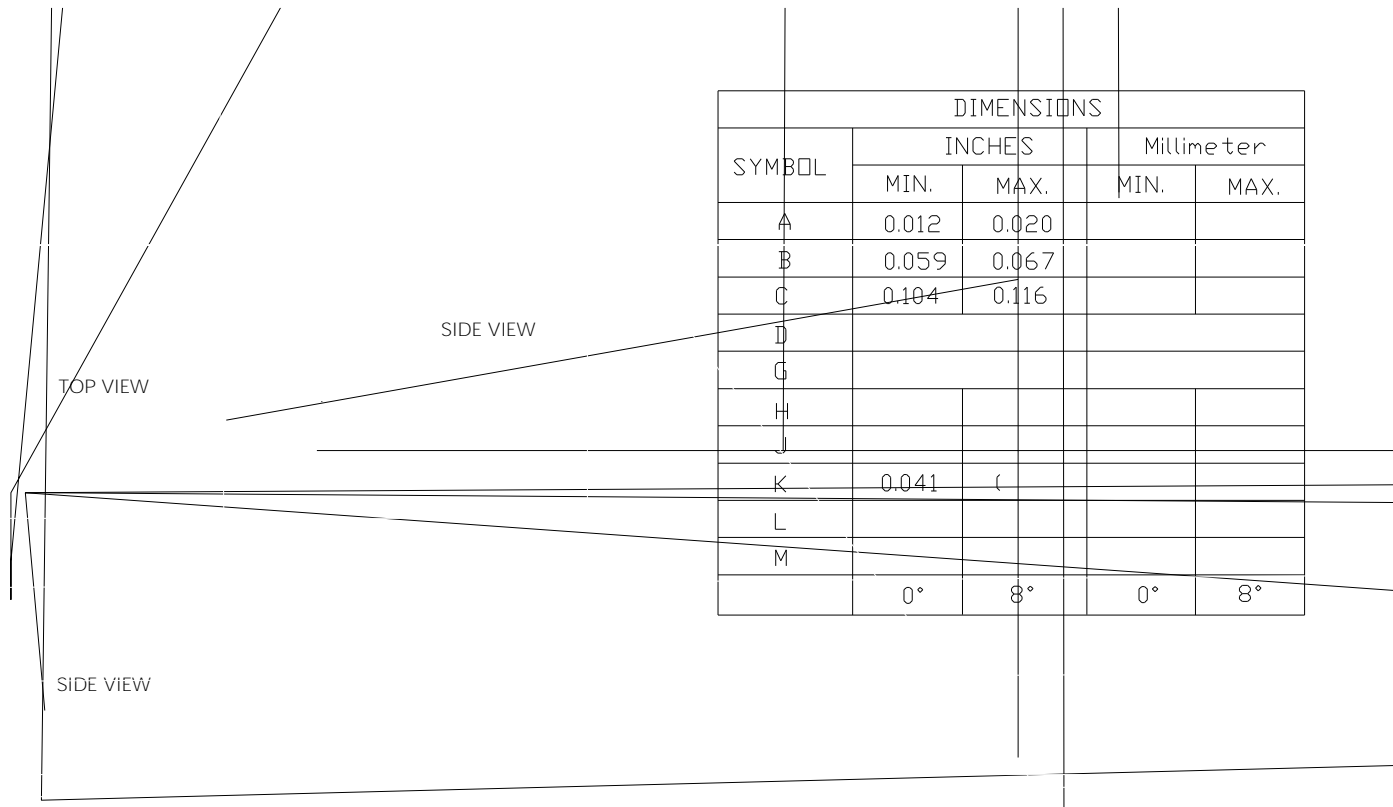


**Unclamped Inductive Switching (UIS) Test Circuit & Waveforms**



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## SOT-23-6L Package information





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