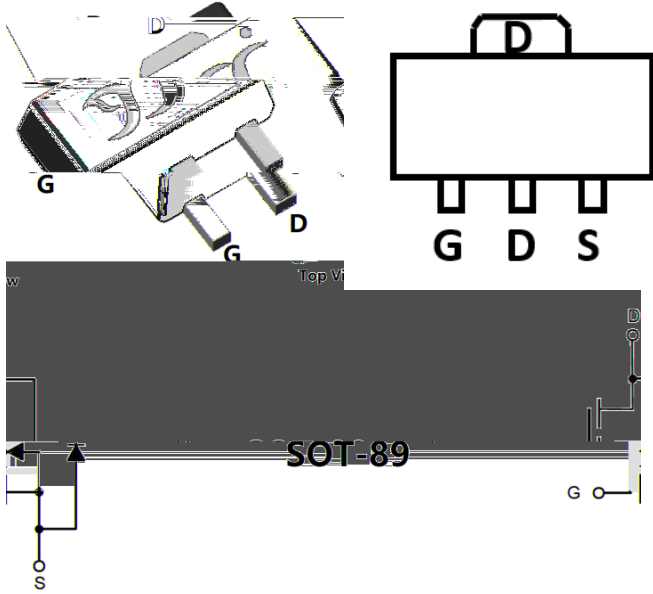




N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	100V
I_D	3.0A
$R_{DS(ON)}$ (at $V_{GS}= 10V$)	110mohm
$R_{DS(ON)}$ (at $V_{GS}= 4.5V$)	120mohm

General Description

Trench Power MV MOSFET technology
 Excellent package for heat dissipation
 High density cell design for low $R_{DS(ON)}$
 Epoxy Meets UL 94 V-0 Flammability Rating
 Halogen 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	$T_A=25$	I_D	3	A
	$T_A=70$		2.4	
Pulsed Drain Current ^A		I_{DM}	12	A
Total Power Dissipation	$T_A=25$	P_D	1.5	W
	$T_C=25$		4.0	W
Thermal Resistance Junction-to-Ambient ^B		R_{JA}	83	/ W
Thermal Resistance Junction-to-Case		R_{JC}	31	/ W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJH03N10A	F1	1003	1000	10000	40000	7" reel
	F2	1003	1000	8000	32000	7" reel



YJH03N10A

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
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Static Parameter



Typical Performance Characteristics

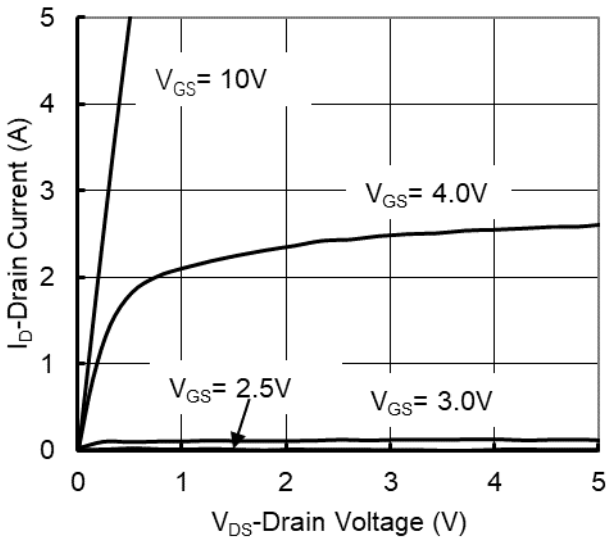


Figure 1. Output Characteristics

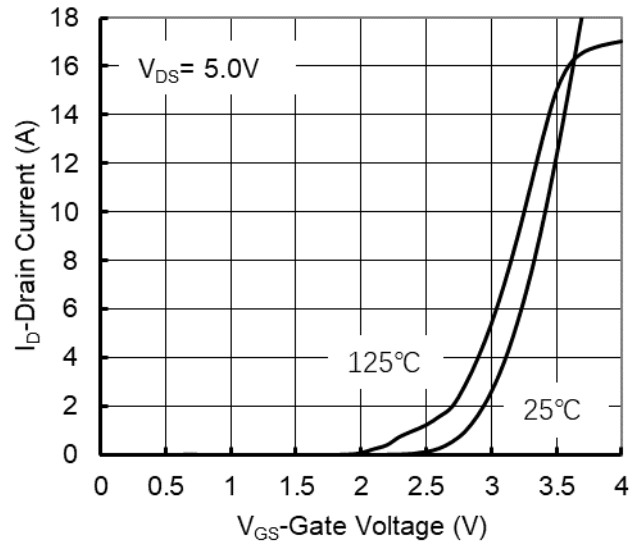


Figure 2. Transfer Characteristics

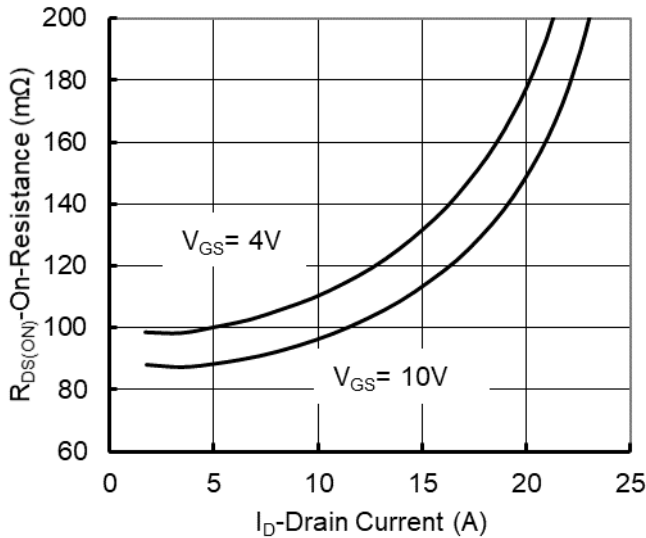


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

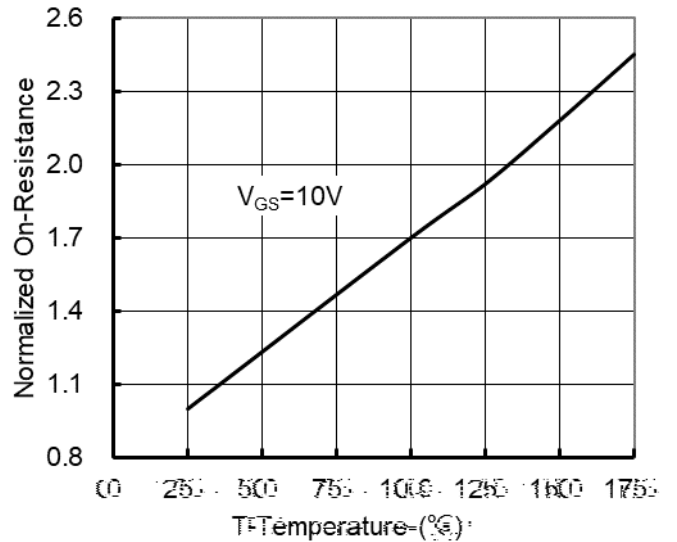


Figure 4. On-Resistance vs. Junction Temperature

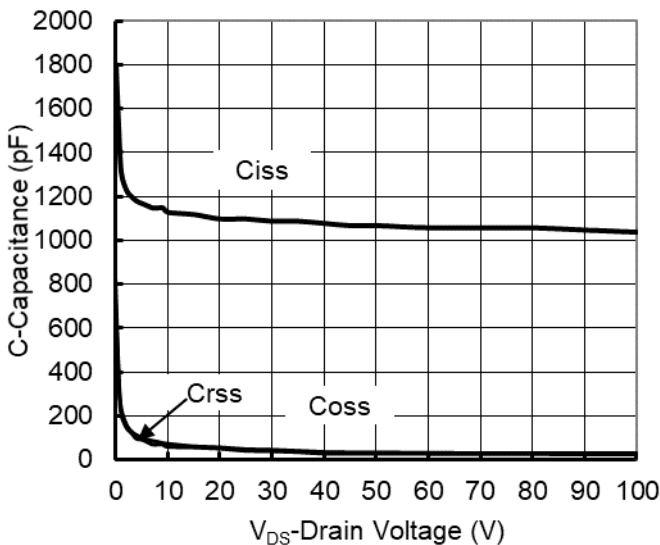


Figure 5. Capacitance Characteristics

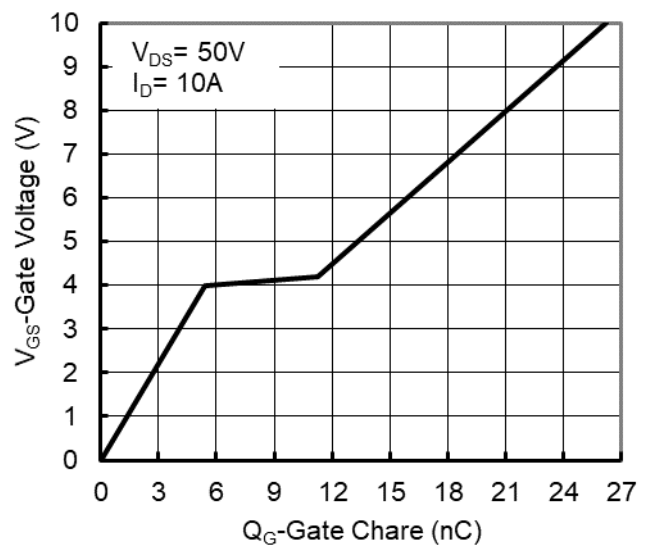


Figure 6. Gate Charge

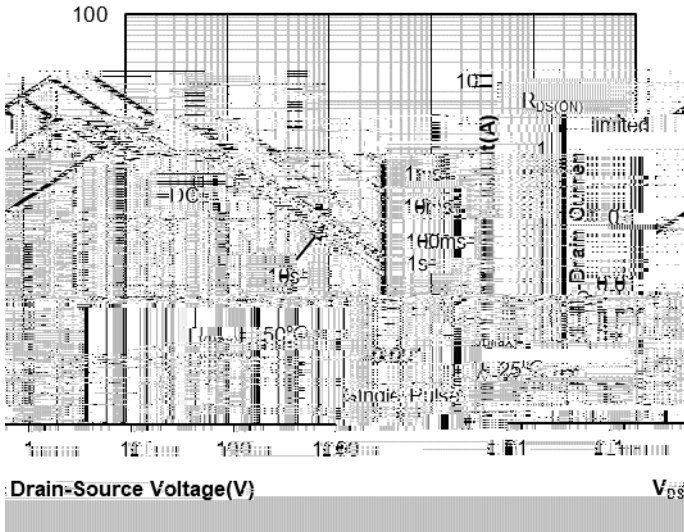


Figure 7. Safe Operation Area

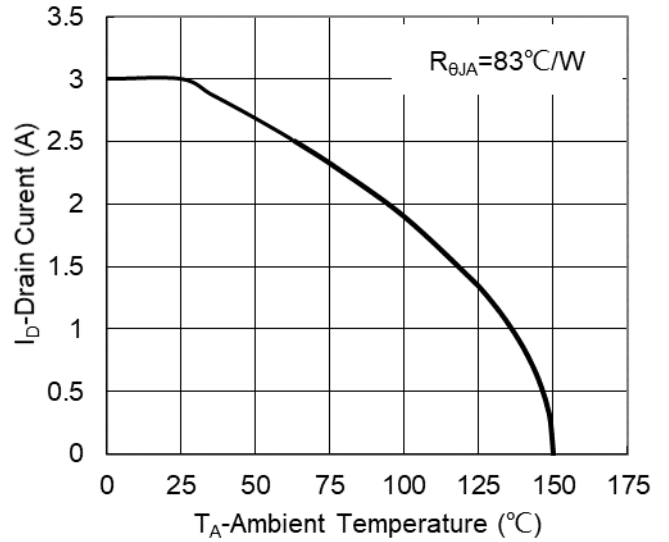


Figure 8. Maximum Continuous Drain Current vs Ambient Temperature

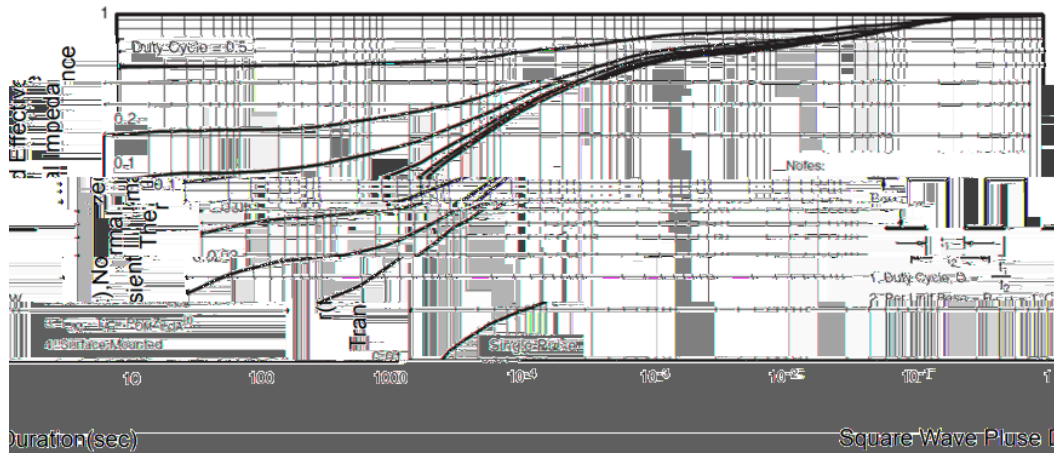
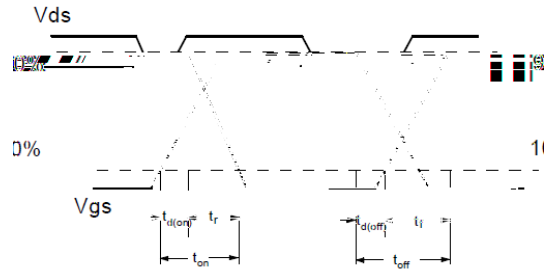
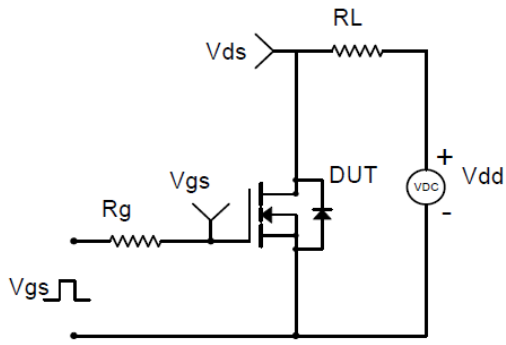
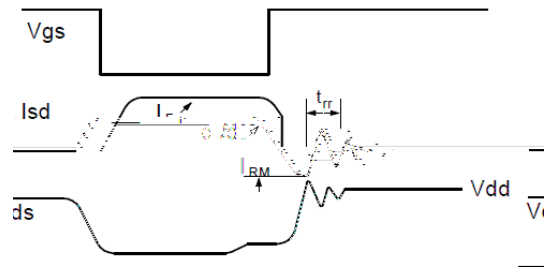
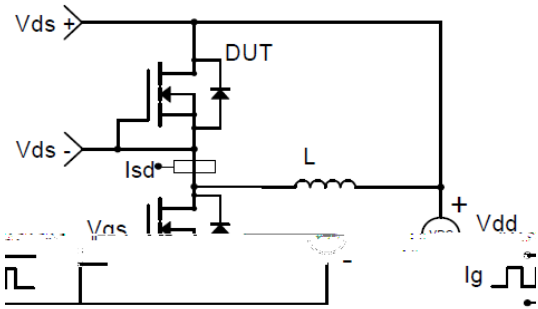


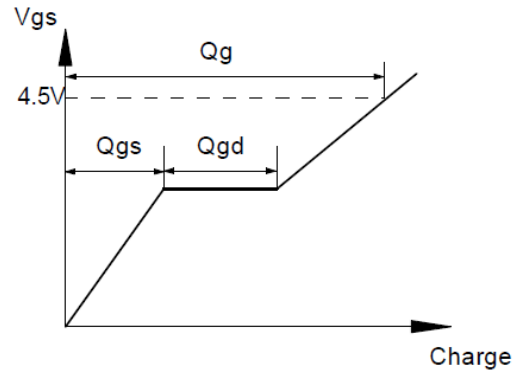
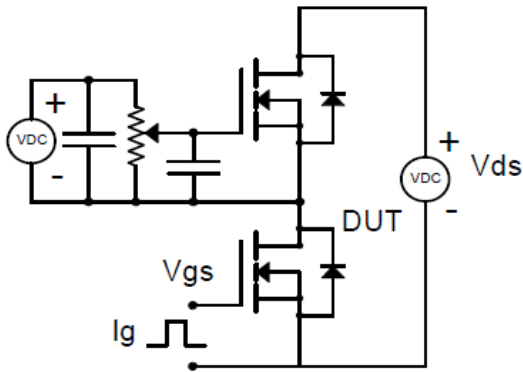
Figure 9. Normalized Maximum Transient Thermal Impedance



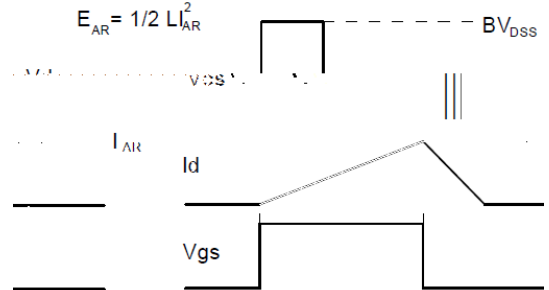
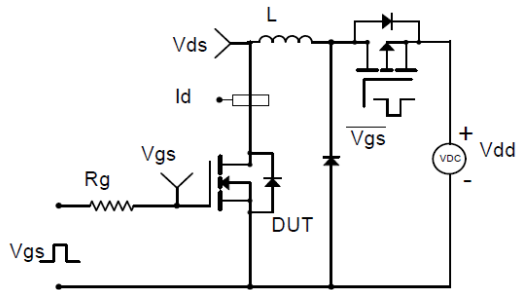
Resistive Switching Test Circuit & Waveforms



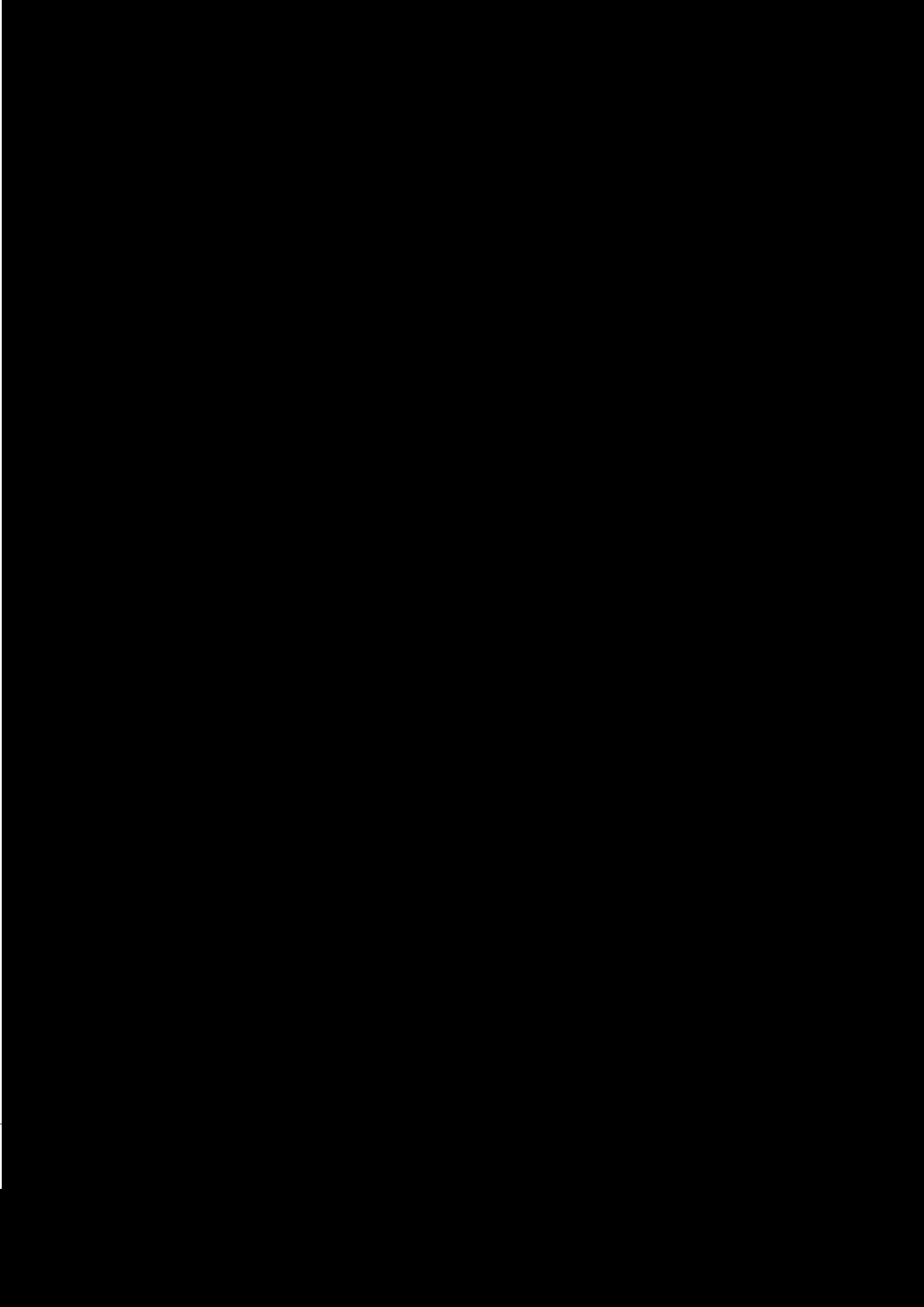
Diode Recovery Test Circuit & Waveforms



Gate Charge Test Circuit & Waveform



Unclamped Inductive Switching (UIS) Test Circuit & Waveforms





YJH03N10A

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