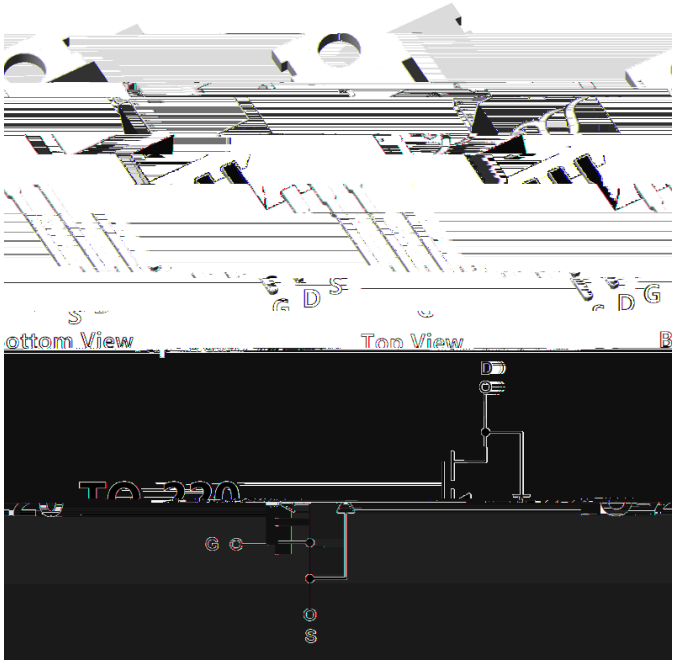
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	650V
I_D	8A
$R_{DS(ON)}$(at V_{GS}=10V)	600m
100% EAS Tested	
100% V_{DS} Tested	

General Description

Super Junction High Voltage MOSFET technology
Low $R_{DS(ON)}$ & FOM
Extremely low switching loss
Excellent stability and uniformity
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Switching Mode Power Supplies (SMPS)
PWM Motor Controls
LED Lighting
Adapter

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	650	V
Gate-source Voltage		V_{GS}	±30	V
Drain Current	T_A=25℃	I_D	1.5	A
	T_A=100℃		0.95	
	T_C=25℃		8	
	T_C =100℃		5	
Pulsed Drain Current [A]		I_{DM}	12	A
Avalanche energy [B]		EAS	90	mJ
Total Power Dissipation [C]	T_A=25℃	P_D	3.5	W
	T_A=100℃		1.4	
	T_C=25℃		104	
	T_C =100℃		41	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	℃

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [D]	Steady-State	R	28	35	℃/W
Thermal Resistance Junction-to-Case	Steady-State	R	1	1.2	

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJP08C65HJ	B1	YJP08C65HJ	50	/	5000	Tube

Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units

■Typical Electrical and Thermal Characteristics Diagrams

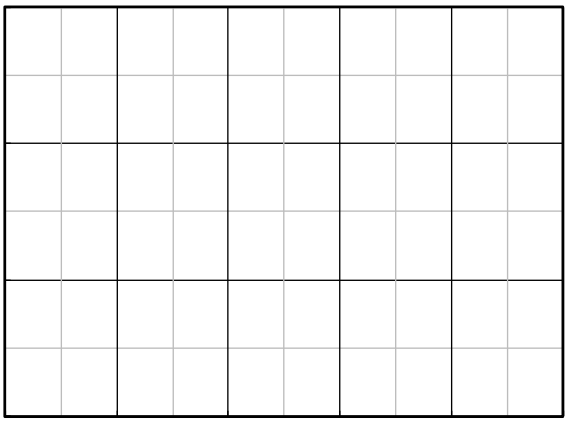


Figure 1. Output Characteristics

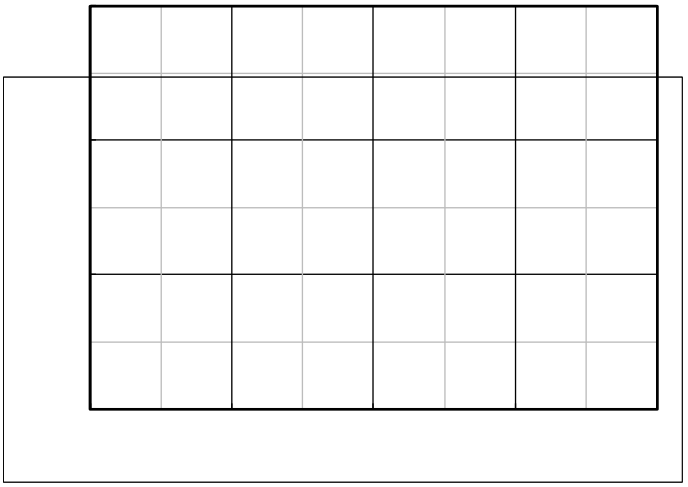


Figure 2. Transfer Characteristics

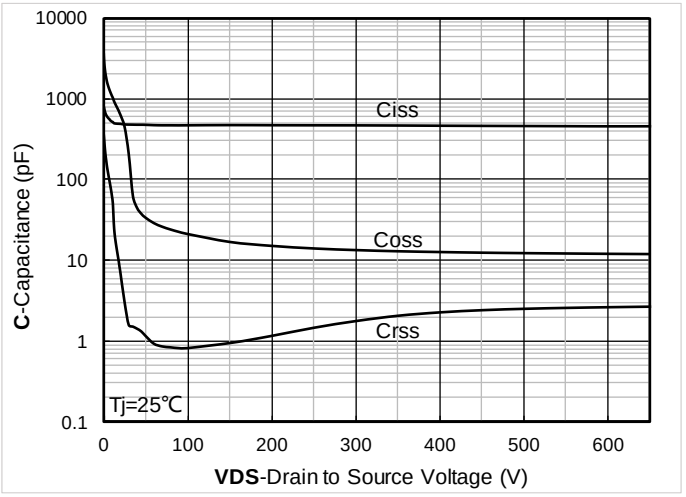


Figure 3. Capacitance Characteristics

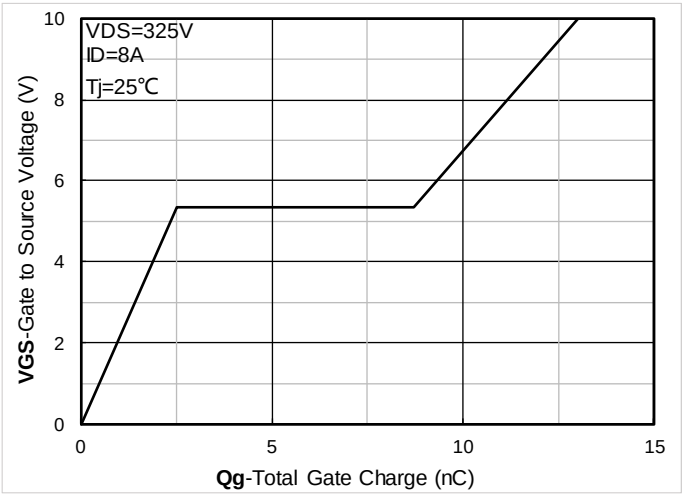


Figure 4. Gate Charge

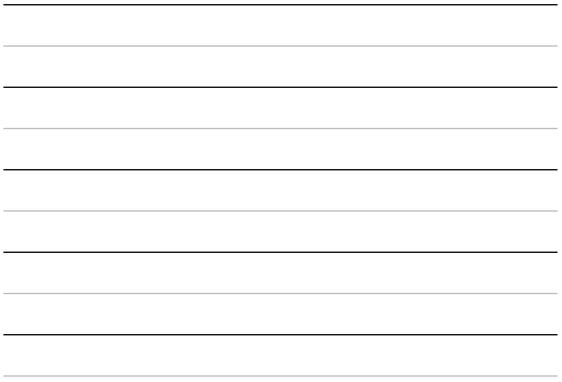


Figure 5. On-Resistance vs Gate to Source Voltage

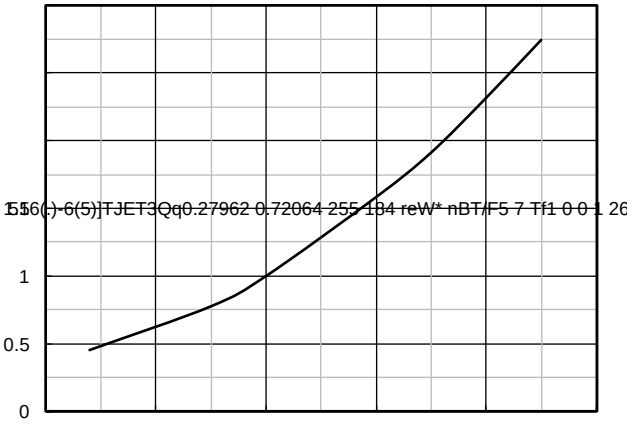


Figure 6. Normalized On-Resistance

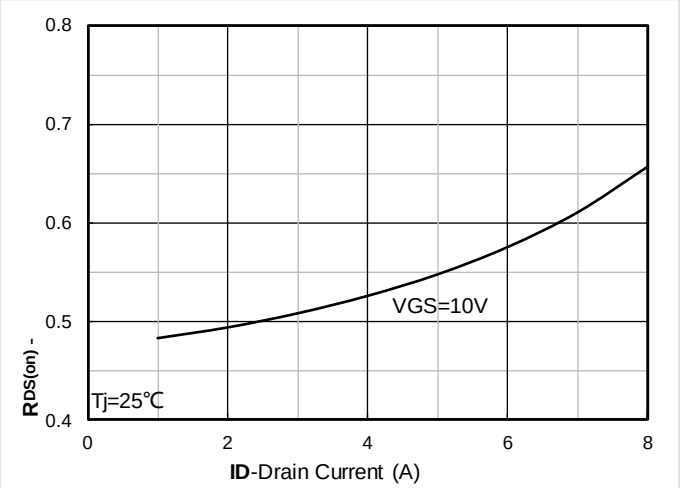


Figure 7. $R_{DS(on)}$ VS Drain Current

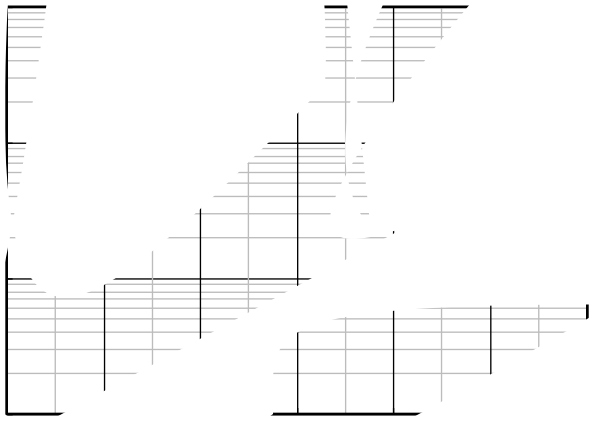


Figure 8. Forward characteristics of reverse diode

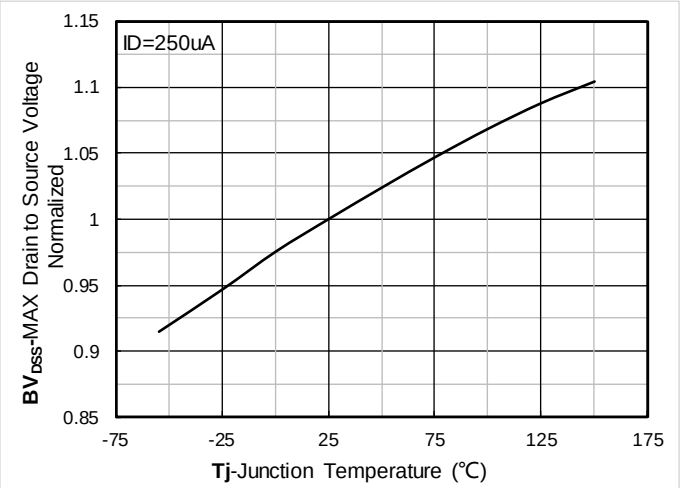


Figure 9. Normalized breakdown voltage

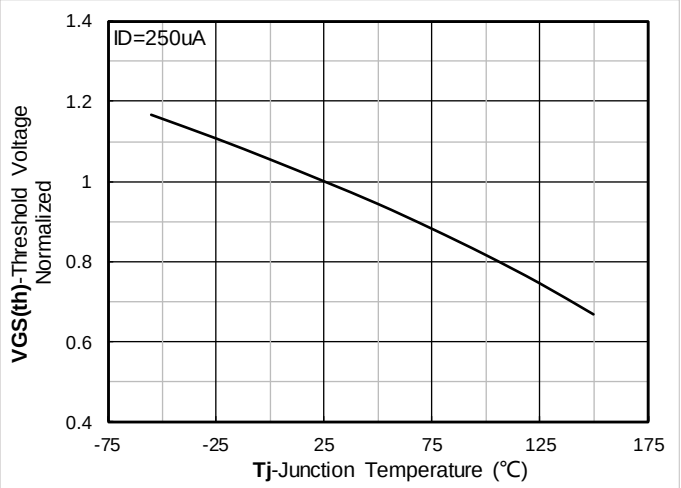


Figure 10. Normalized Threshold voltage

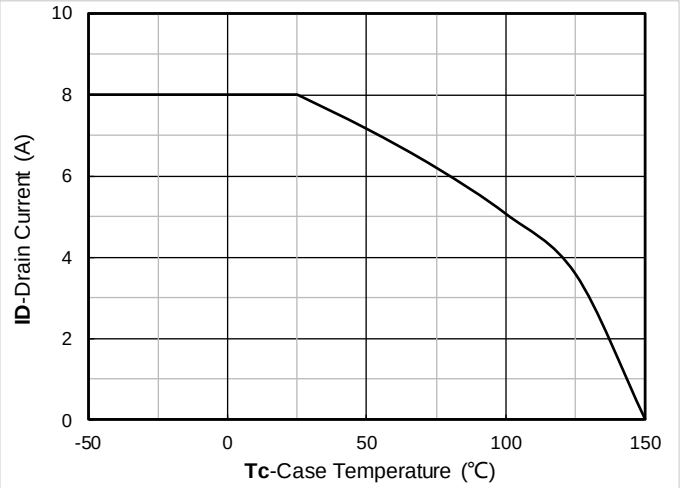


Figure 11. Current dissipation

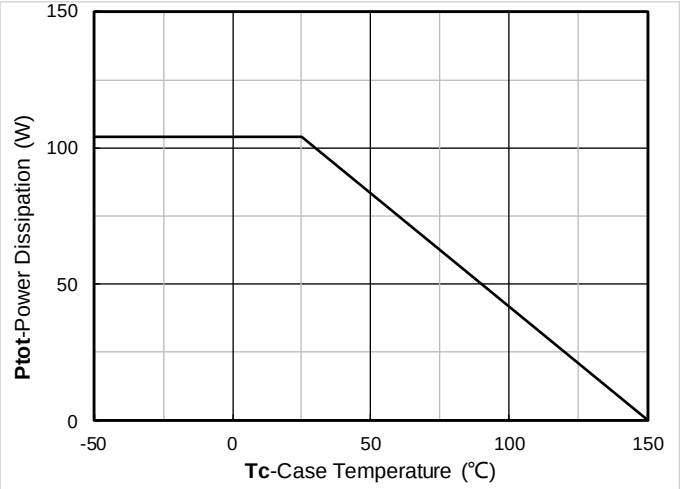


Figure 12. Power dissipation

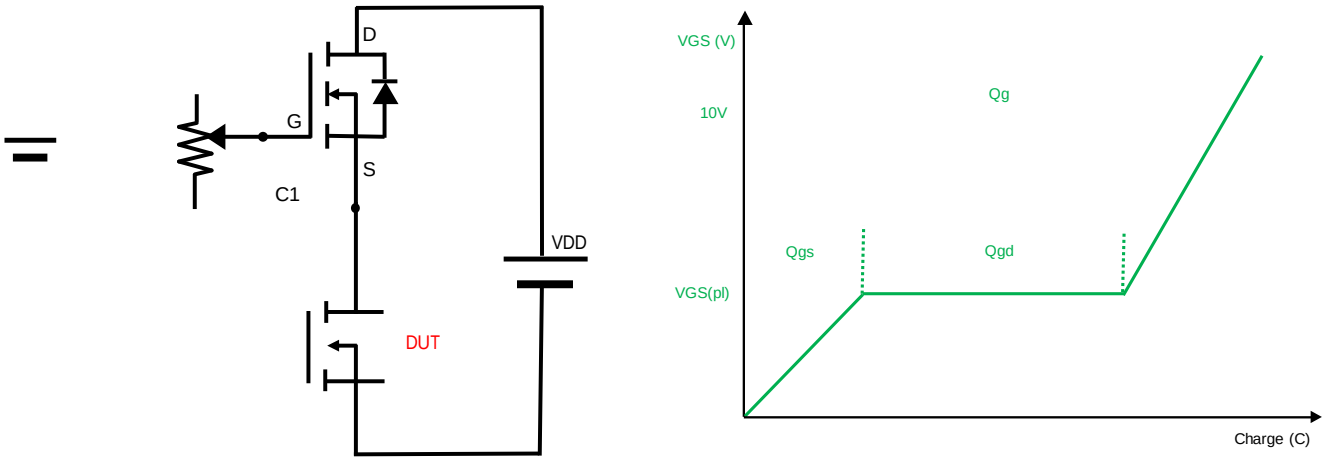


Figure B. Gate Charge Test Circuit & Waveform

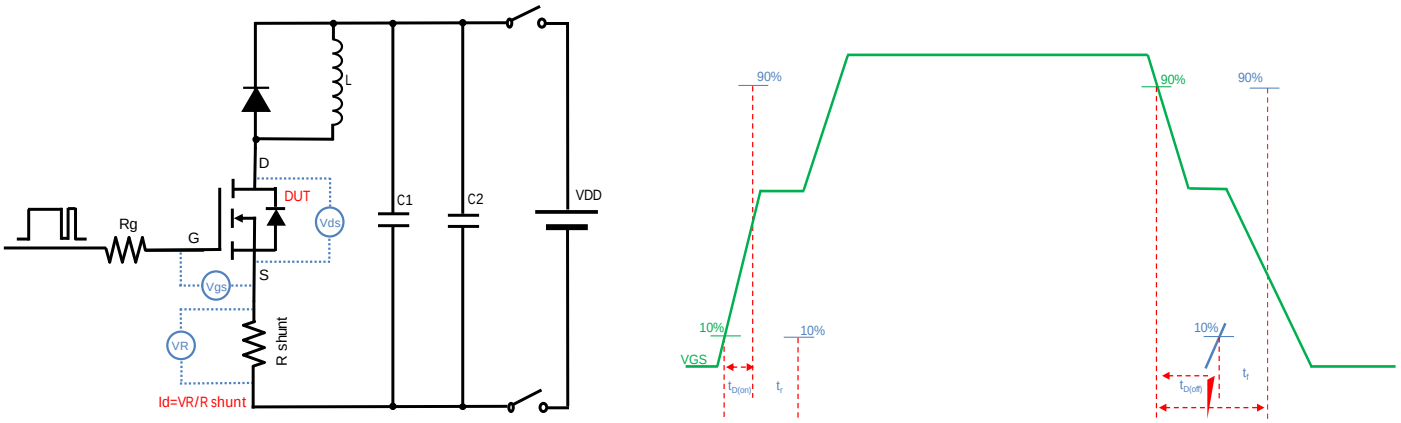


Figure C. Resistive Switching Test Circuit & Waveform

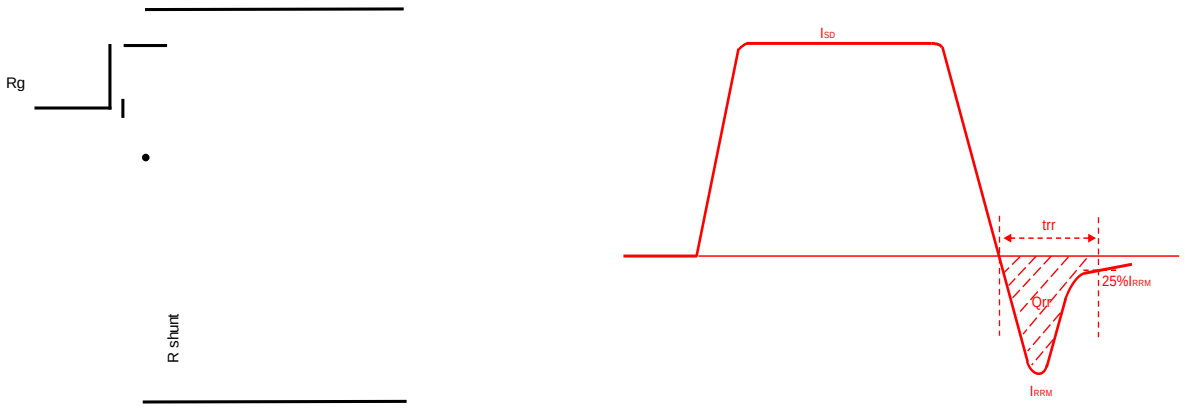


Figure D. Diode Recovery Test Circuit & Waveform

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