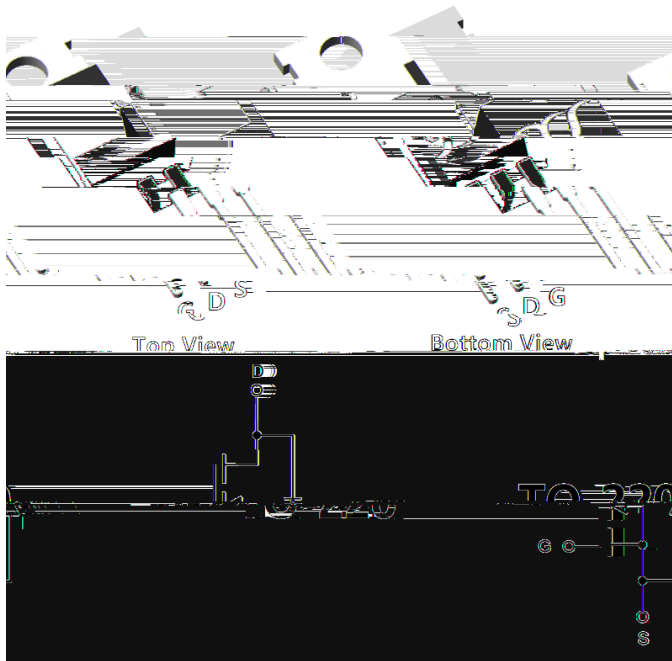




## N-Channel Enhancement Mode Field Effect Transistor



## 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		$V_{GS}$	$\pm 30$	V
Drain Current	$T_A=25^\circ\text{C}$	$I_D$	1.5	A
	$T_A=100^\circ\text{C}$		0.95	
	$T_C=25^\circ\text{C}$		8	
	$T_C=100^\circ\text{C}$		5	
Pulsed Drain Current <sup>A</sup>		$I_{DM}$	12	A
Avalanche energy <sup>B</sup>		EAS	90	mJ
Total Power Dissipation <sup>C</sup>	$T_A=25^\circ\text{C}$	$P_D$	3.5	W
	$T_A=100^\circ\text{C}$		1.4	
	$T_C=25^\circ\text{C}$		104	
	$T_C=100^\circ\text{C}$		41	
Junction and Storage Temperature Range		$T_J, T_{STG}$	-55 +150	$^\circ\text{C}$

## Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient <sup>D</sup>	Steady-State	R	28	35	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case	Steady-State	R	1	1.2	

## Ordering Information (Example)

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



# YJP08C65HJ

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
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Typical Electrical and Thermal Characteristics Diagrams

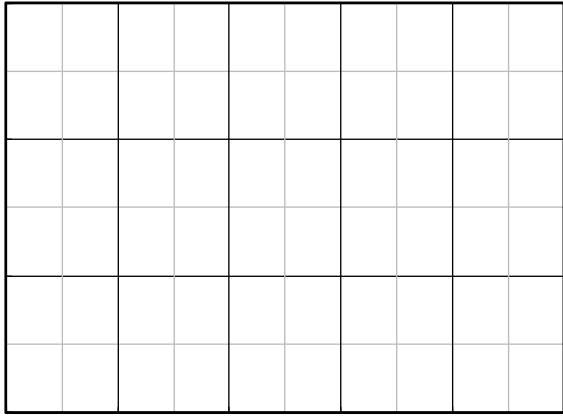


Figure 1. Output Characteristics

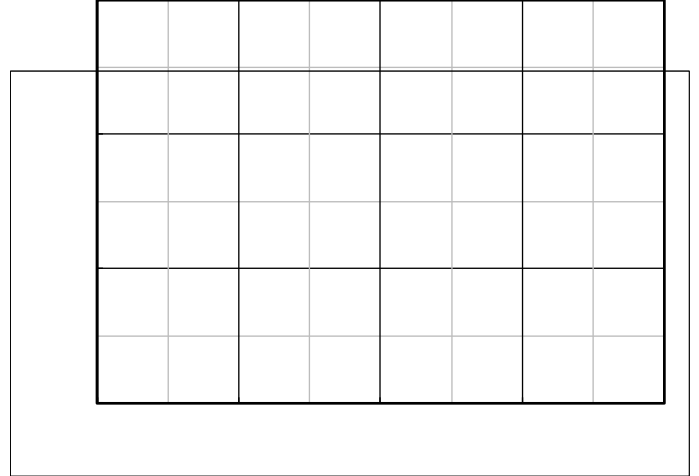


Figure 2. Transfer Characteristics

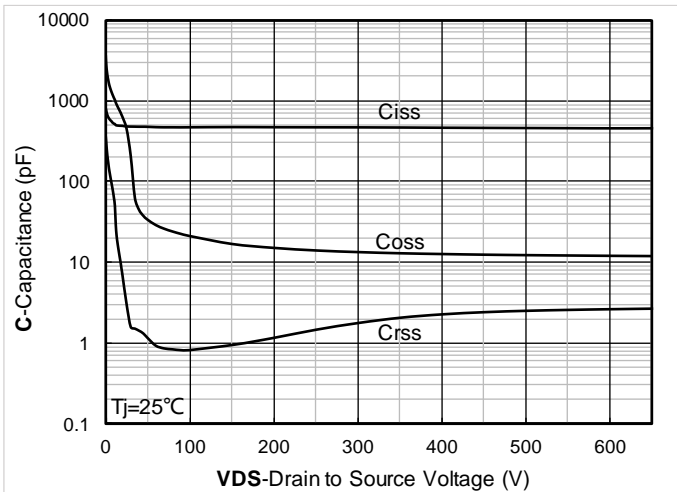


Figure 3. Capacitance Characteristics

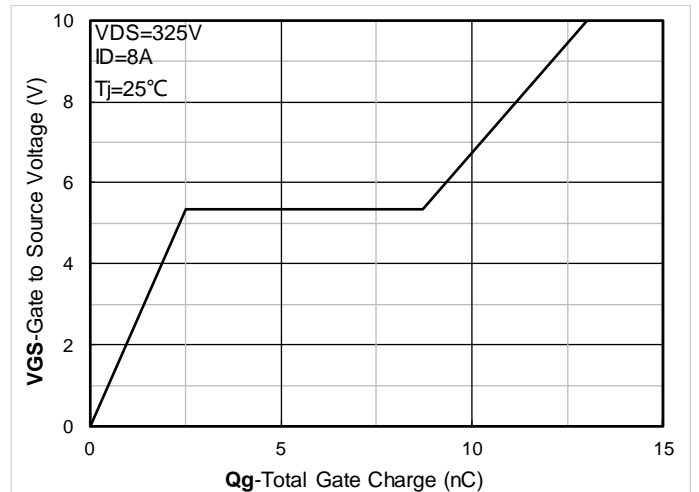


Figure 4. Gate Charge



Figure 5. On-Resistance vs Gate to Source Voltage

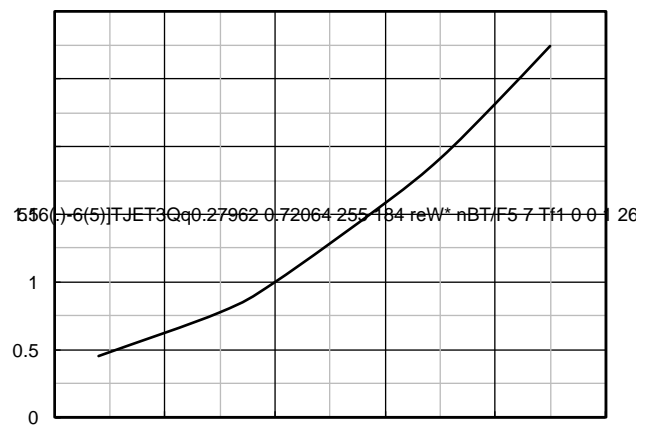


Figure 6. Normalized On-Resistance



# YJP08C65HJ

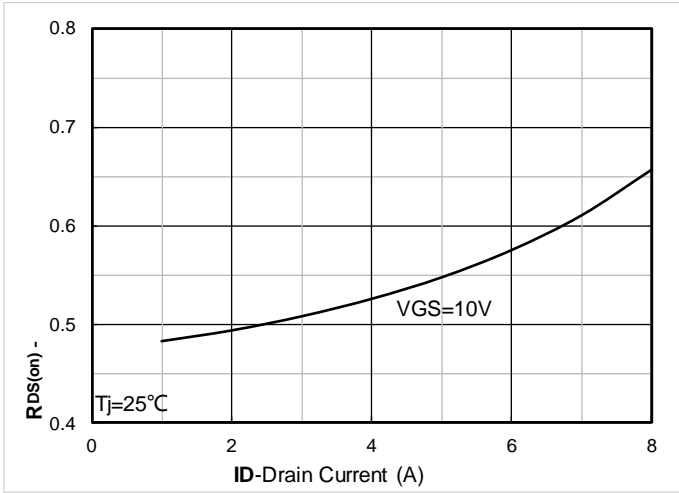


Figure 7. RDS(on) VS Drain Current

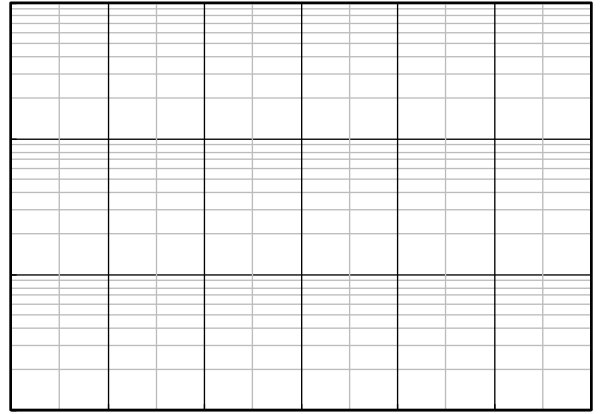


Figure 8. Forward characteristics of reverse diode

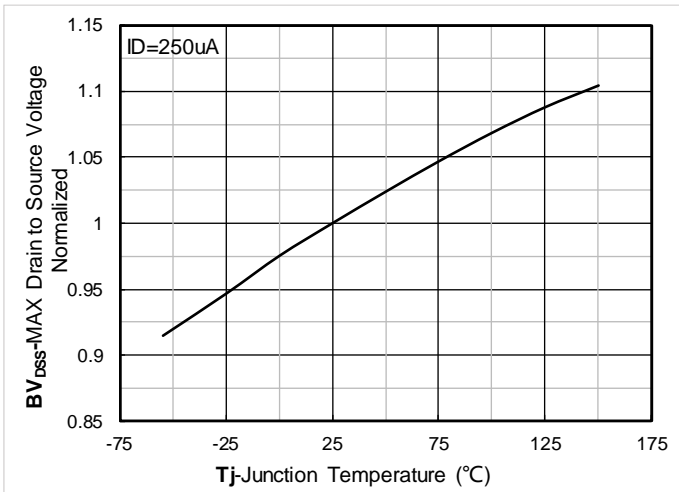


Figure 9. Normalized breakdown voltage

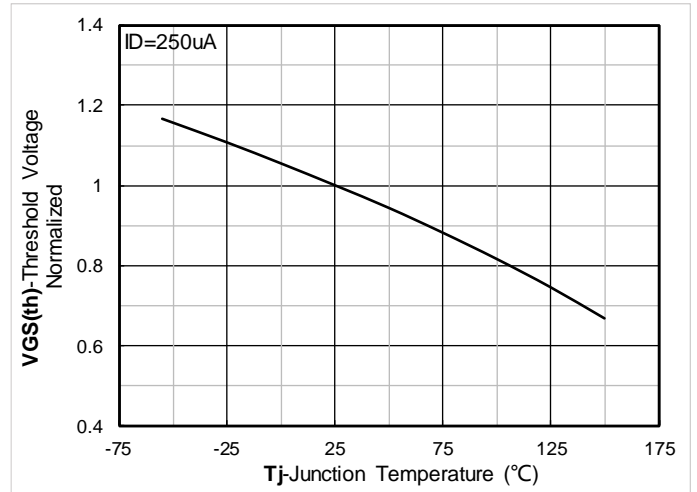


Figure 10. Normalized Threshold voltage

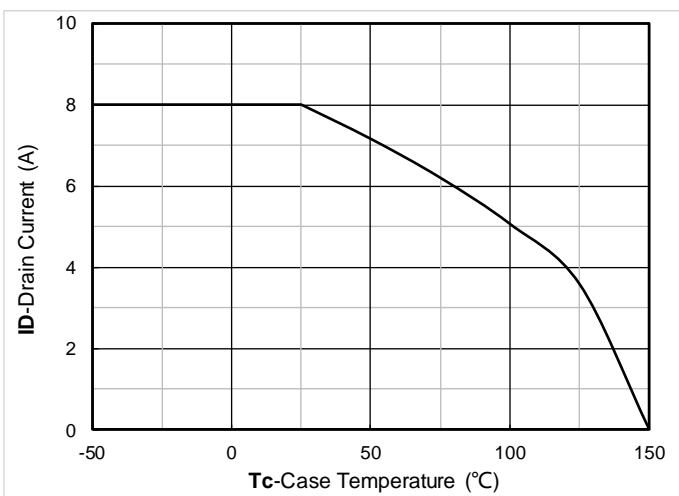


Figure 11. Current dissipation

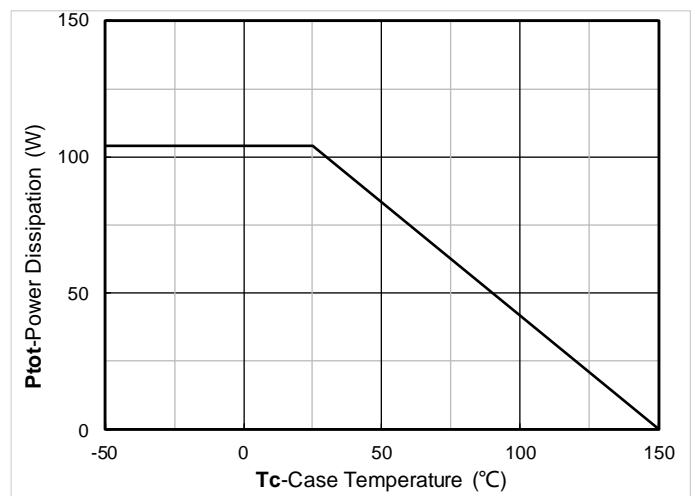


Figure 12. Power dissipation



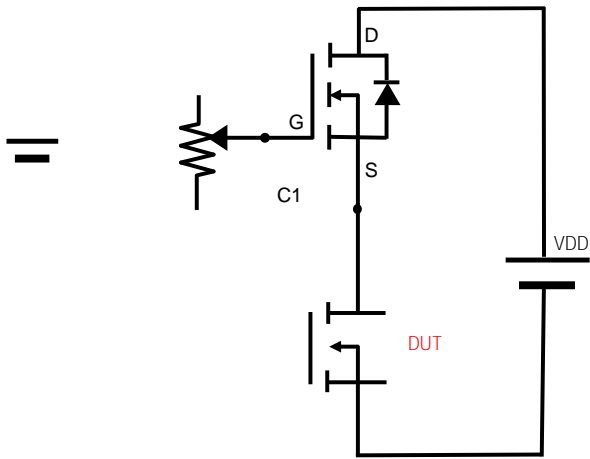


Figure B. Gate Charge Test Circuit & Waveform

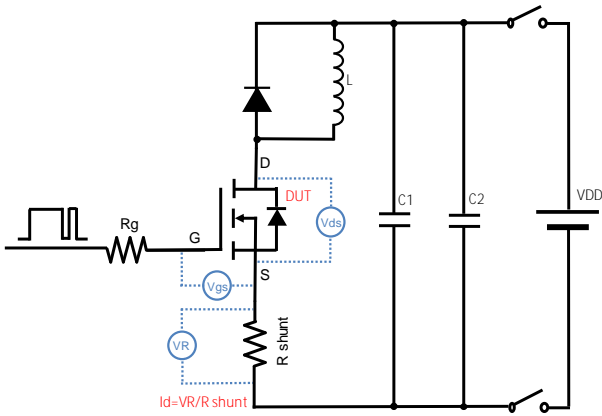


Figure C. Resistive Switching Test Circuit & Waveform

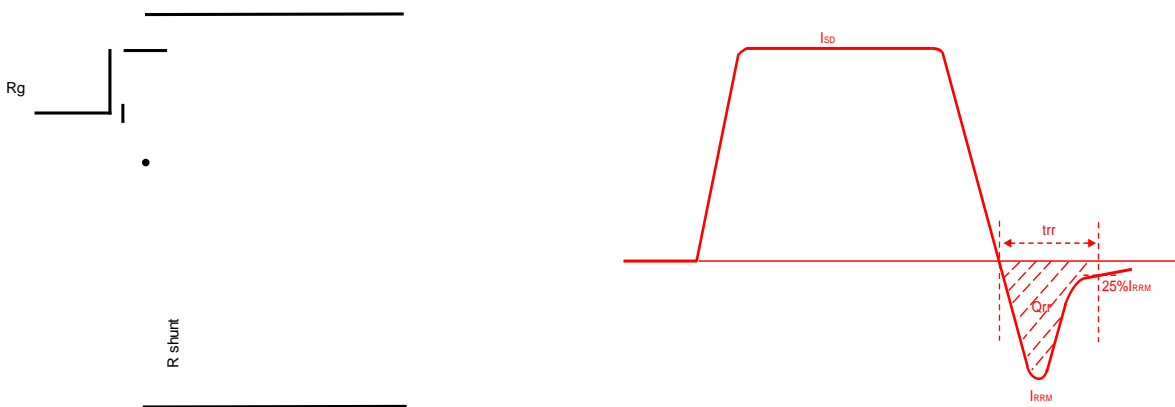


Figure D. Diode Recovery Test Circuit & Waveform





## Disclaimer

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