

DC



YJQ16N025A

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D$	25	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=25V, V_{GS}=0V$	-	-	1	
		$V_{DS}=25V, V_{GS}=0V, T_J=150$	-	-	100	
Gate-Body Leakage Current	I_{GSS}	$V_{GS}= \pm 20V, V_{DS}=0V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}= V_{GS}, I_D$	1	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=10A$	-	4.5	6	
		$V_{GS}=4.5V, I_D=6A$		7.5	10	
Diode Forward Voltage	V_{SD}	$I_S=10A, V_{GS}=0V$	-	-	1.2	V
Gate resistance	R_G	$f=1MHz$	-	2.5	-	
Maximum Body-Diode Continuous Current	I_S		-	-	16	A



Typical Electrical and Thermal Characteristics Diagrams

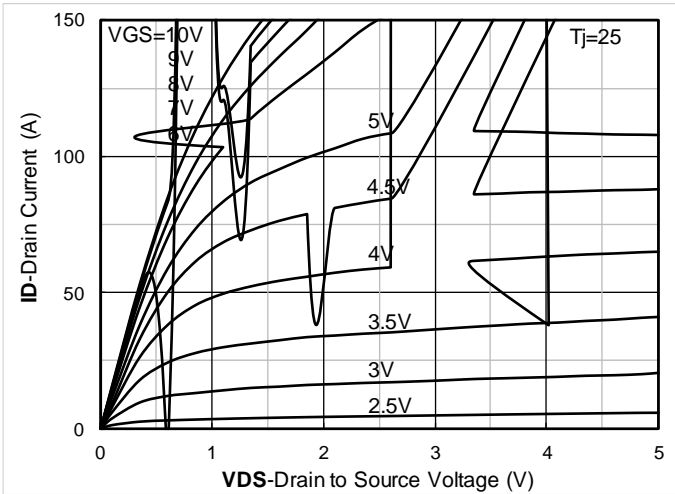


Figure 1. Output Characteristics



Figure 2. Transfer Characteristics

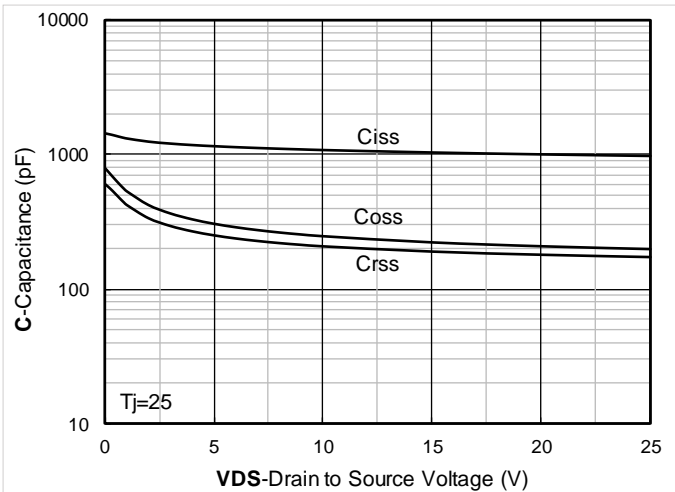


Figure 3. Capacitance Characteristics

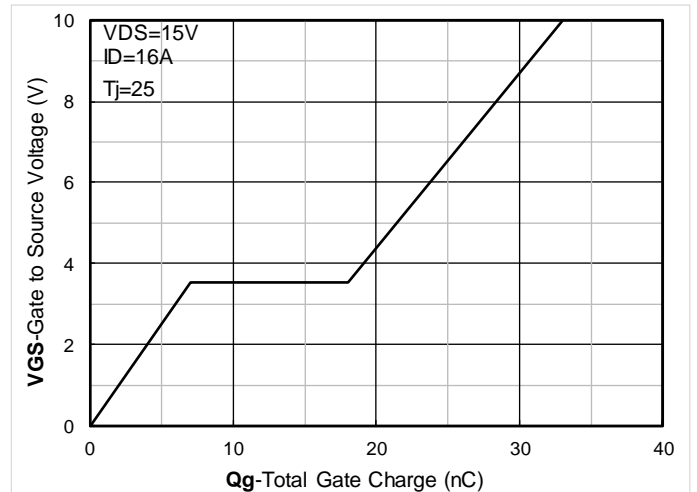


Figure 4. Gate Charge

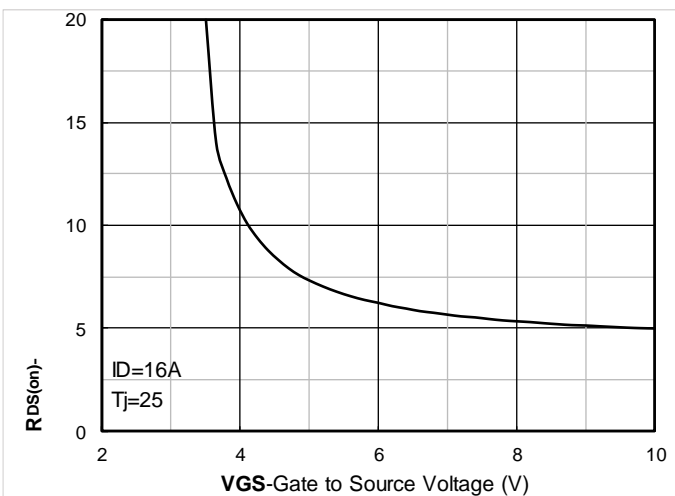


Figure 5. On-Resistance vs Gate to Source Voltage

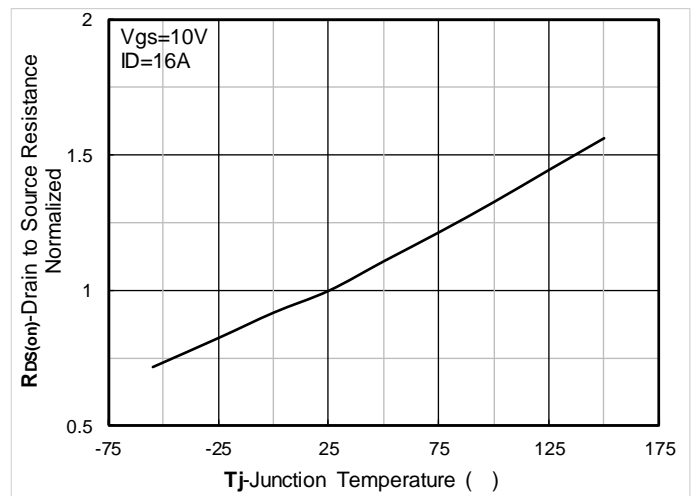


Figure 6. Normalized On-Resistance



YJQ16N025A

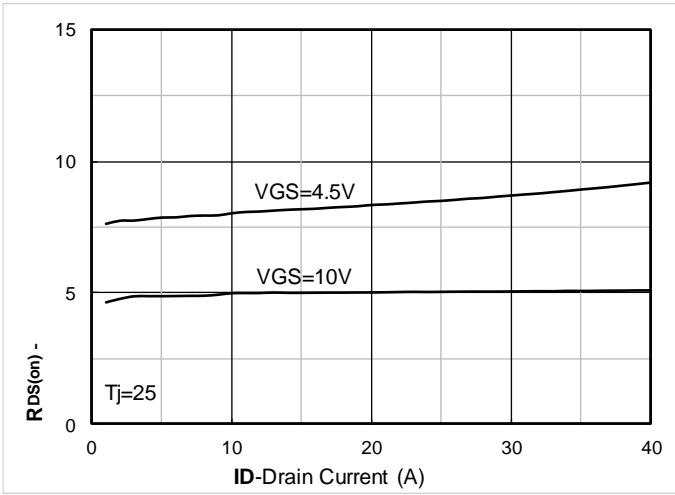


Figure 7. $R_{DS(on)}$ VS Drain Current

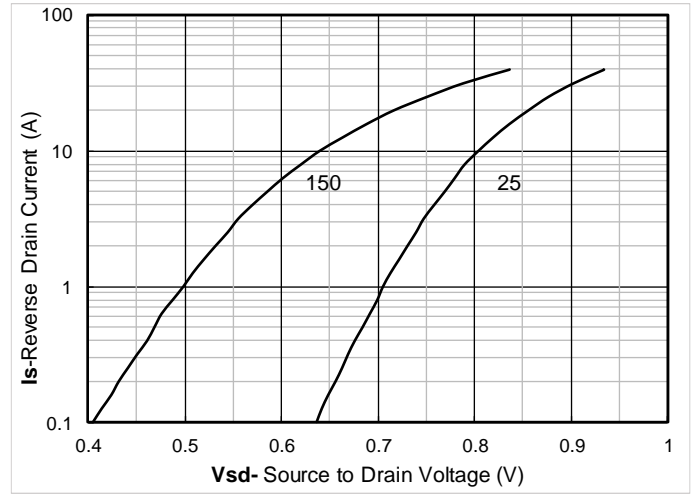


Figure 8. Forward characteristics of reverse diode

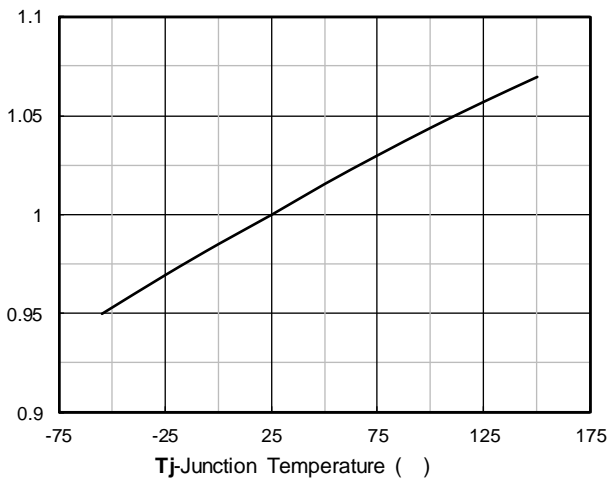


Figure 9. Normalized breakdown voltage

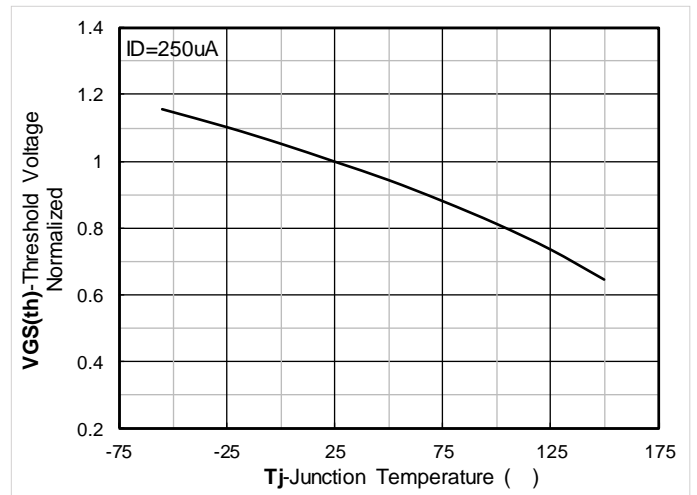


Figure 10. Normalized Threshold voltage

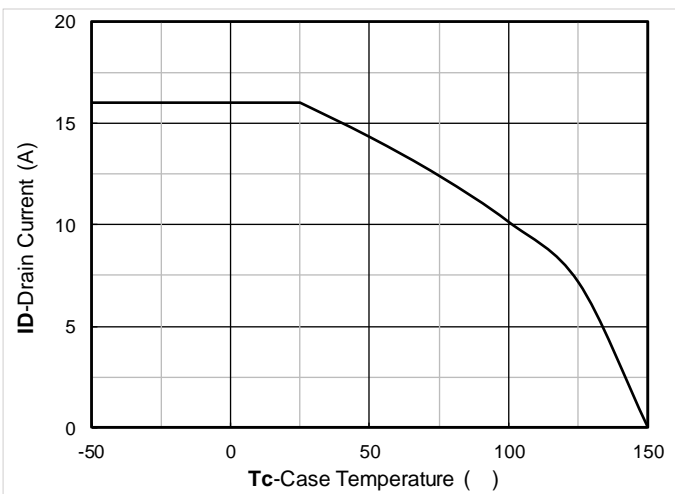


Figure 11. Current dissipation

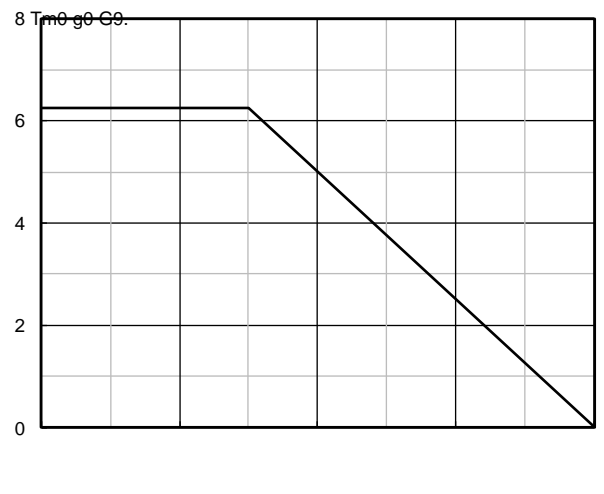
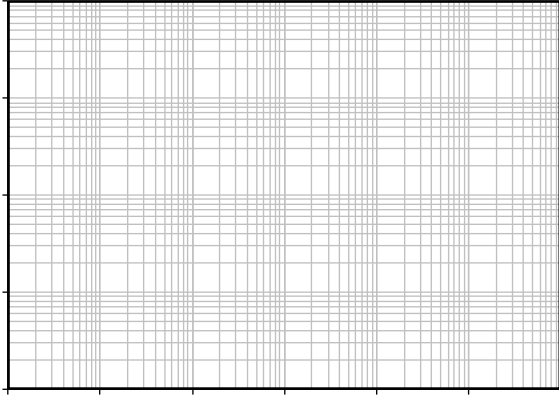


Figure 12. Power dissipation





YJQ16N025A



Figure B. Gate Charge Test Circuit & Waveform

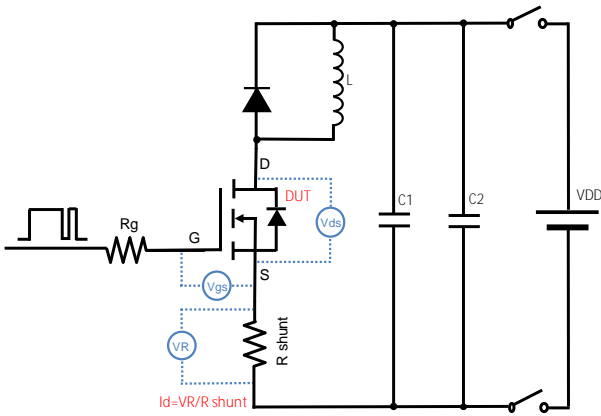


Figure C. Resistive Switching Test Circuit & Waveform

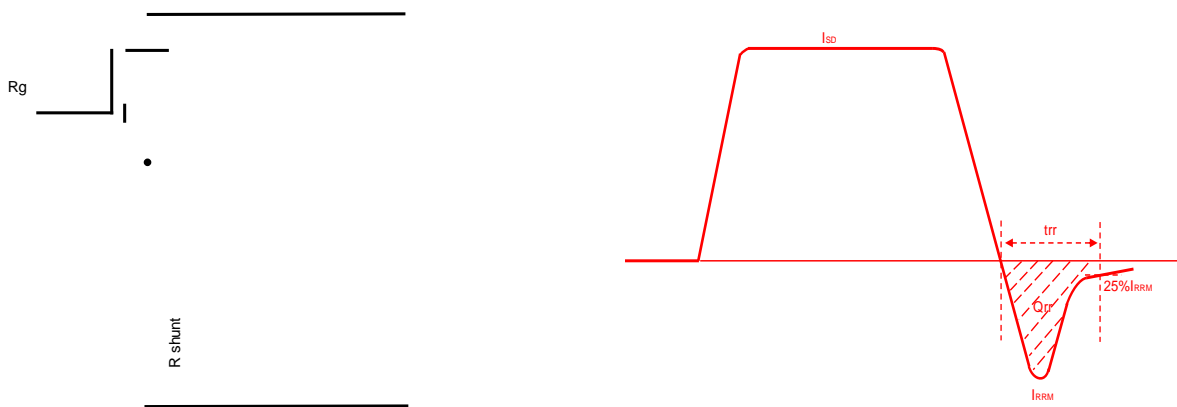


Figure D. Diode Recovery Test Circuit & Waveform

YJQ16N025A



YJQ16N025A

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.21yangjie.com>