

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

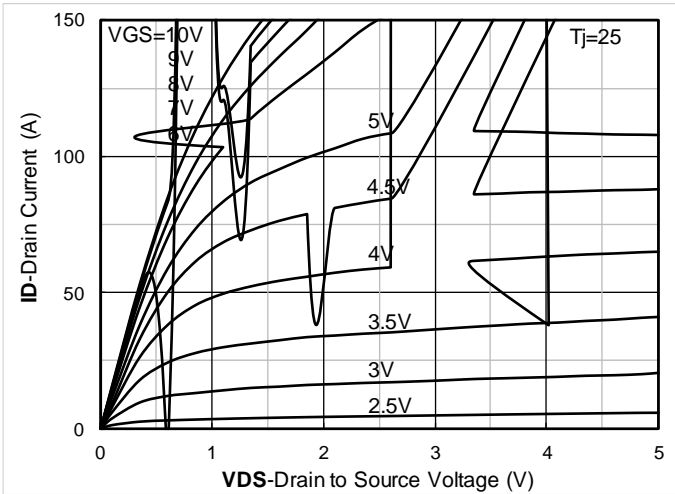


Figure 1. Output Characteristics



Figure 2. Transfer Characteristics

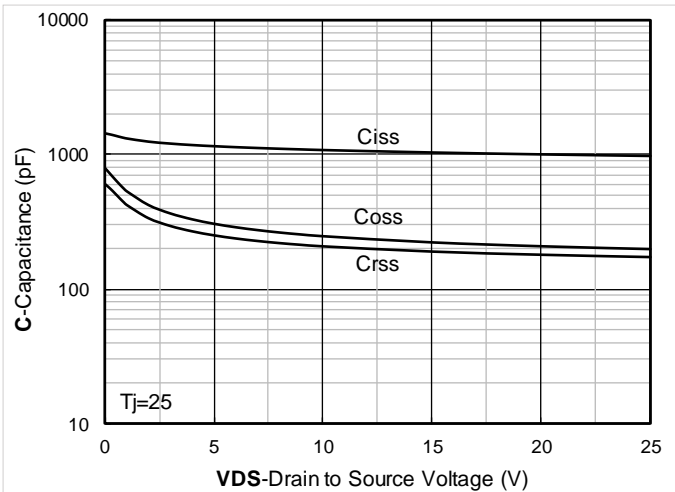


Figure 3. Capacitance Characteristics

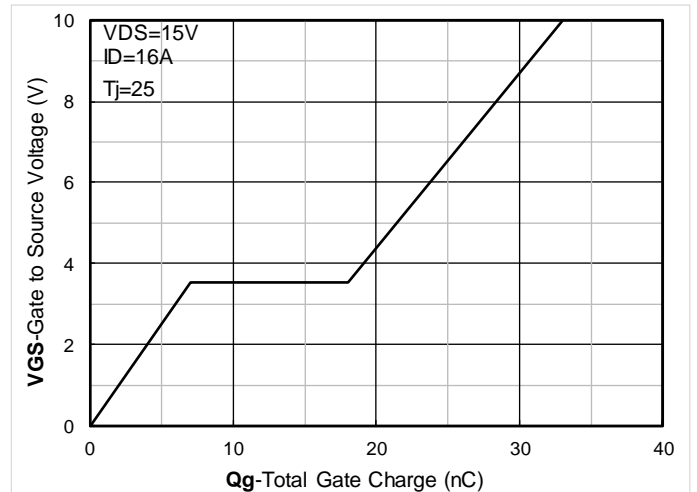


Figure 4. Gate Charge

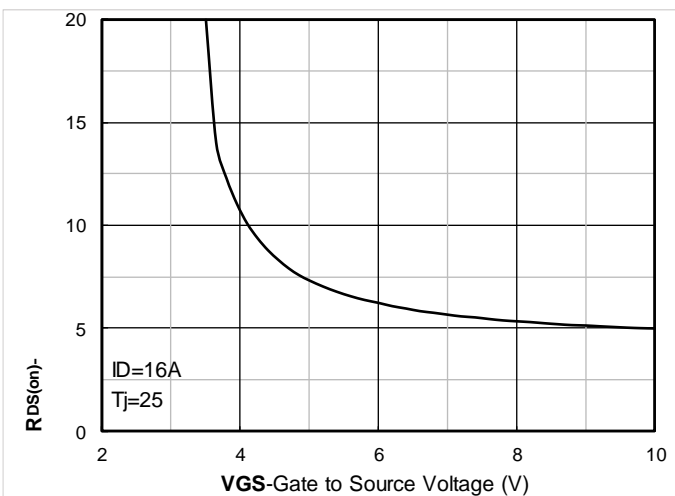


Figure 5. On-Resistance vs Gate to Source Voltage

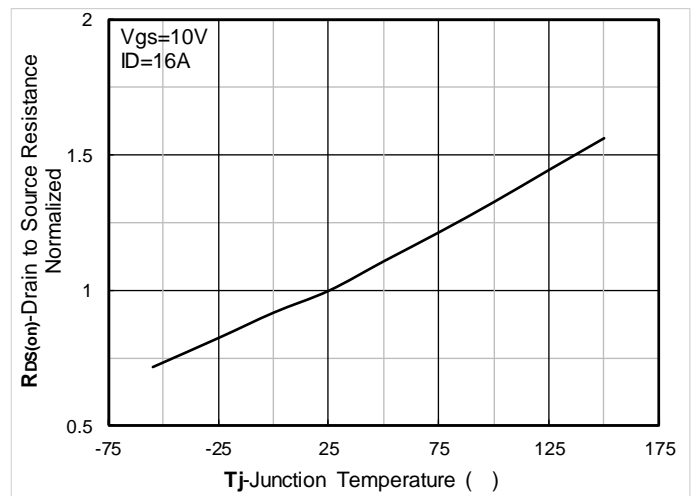


Figure 6. Normalized On-Resistance



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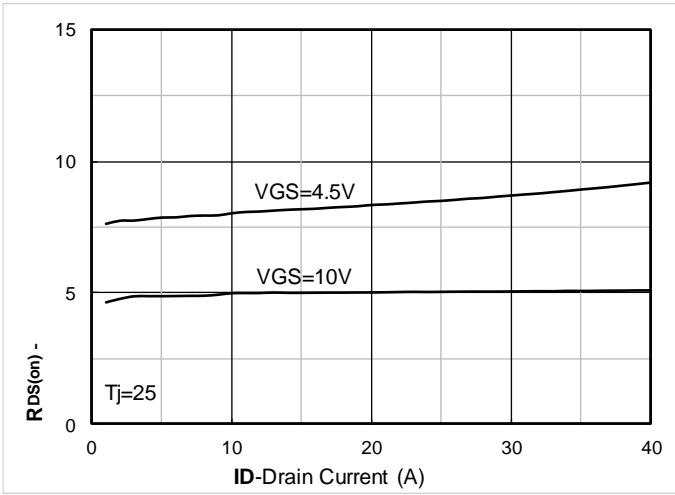


Figure 7. RDS(on) VS Drain Current

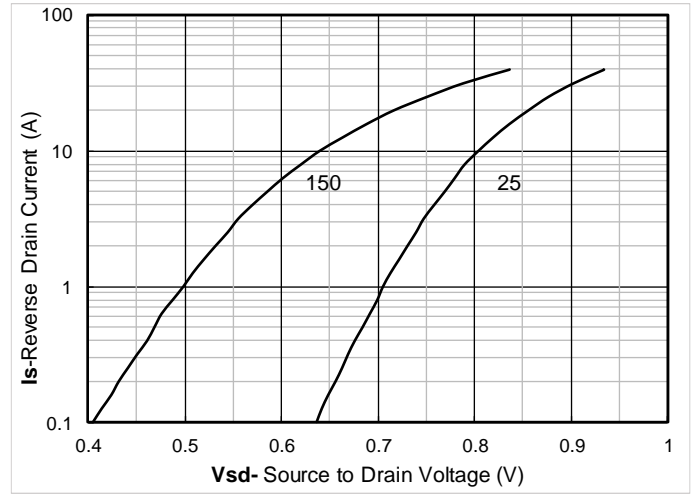


Figure 8. Forward characteristics of reverse diode

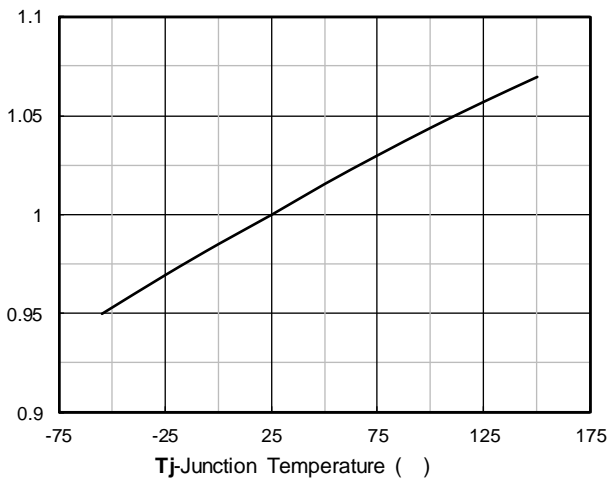


Figure 9. Normalized breakdown voltage

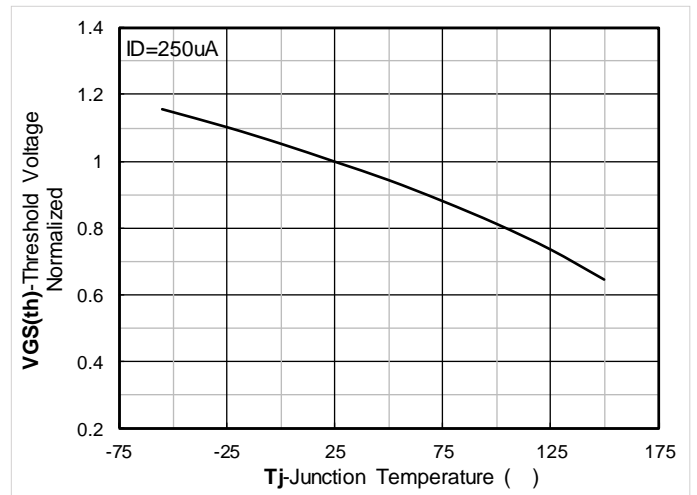


Figure 10. Normalized Threshold voltage

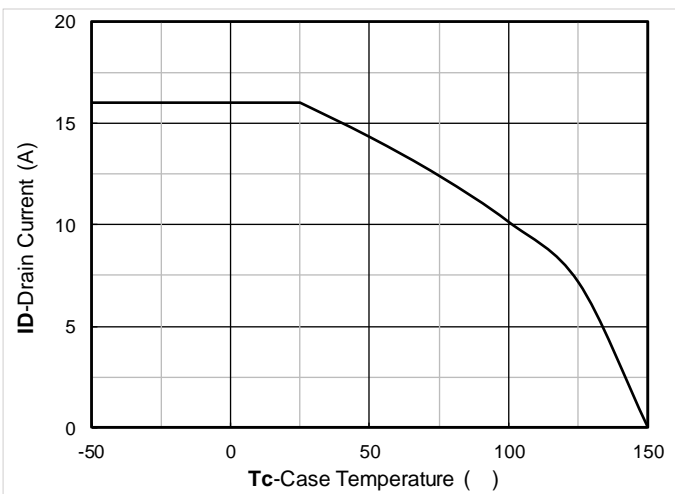


Figure 11. Current dissipation

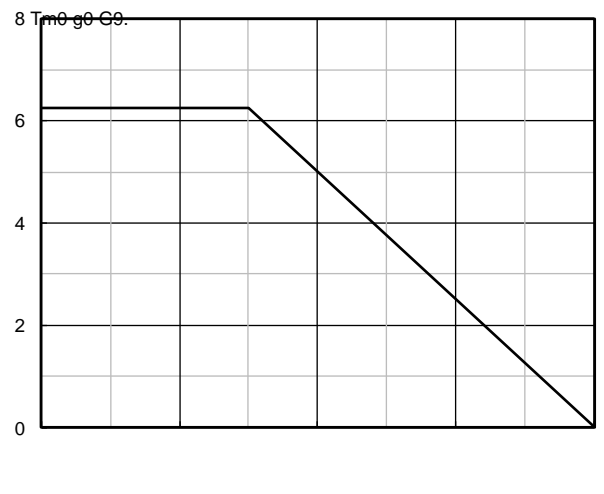
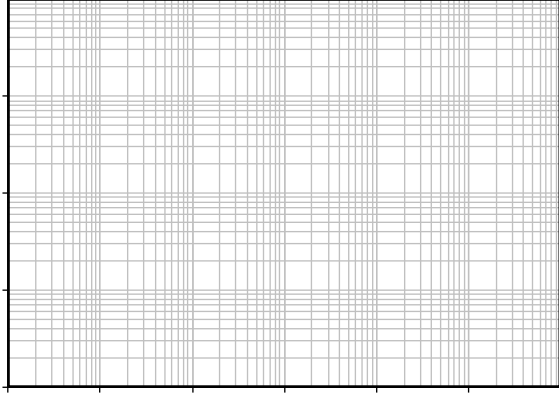


Figure 12. Power dissipation





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Figure B. Gate Charge Test Circuit & Waveform



Figure C. Resistive Switching Test Circuit & Waveform

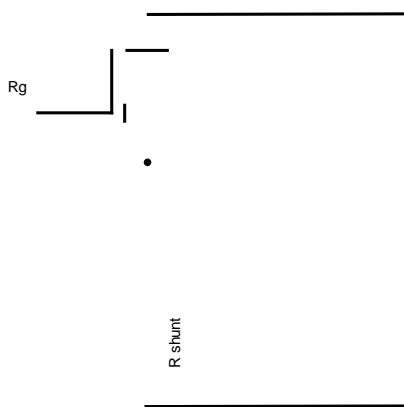


Figure D. Diode Recovery Test Circuit & Waveform

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