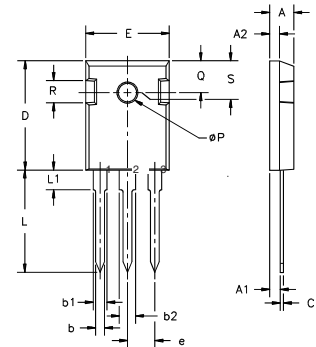


Symbol	Test Conditions	Characteristic Values		
		Min.	Typ.	Max.
(T _J = 25°C unless otherwise specified)				
g_{fs}	V _{DS} = 10V, I _D = 60A, Note 1	65	105	S
C_{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1 MHz		8800	pF
C_{oss}			1170	pF
C_{rss}			150	pF
t_{d(on)}	Resistive Switching Times V _{GS} = 10V, V _{DS} = 0.5 • V _{DSS} , I _D = 0.5 • I _{D25} R _G = 2Ω (External)		21	ns
t_r			21	ns
t_{d(off)}			52	ns
t_f			29	ns
Q_{g(on)}	V _{GS} = 10V, V _{DS} = 0.5 • V _{DSS} , I _D = 25A		160	nC
Q_{gs}			43	nC
Q_{gd}			46	nC
R_{thJC}			0.18	°C/W
R_{thCS}				0.25

Source-Drain Diode		Characteristic Values		
		Min.	Typ.	Max.
(T _J = 25°C, unless otherwise specified)				
I_S	V _{GS} = 0V			160 A
I_{SM}	Repetitive, pulse width limited by T _{JM}			430 A
V_{SD}	I _F = I _S , V _{GS} = 0V, Note 1			1.2 V
t_{rr}	I _F = 80A, -di/dt = 200A/μs V _R = 75V, V _{GS} = 0V		90	μs
Q_{RM}			12	A
I_{RM}			0.55	μC

Notes: 1. Pulse test, t ≤ 300μs; duty cycle, d ≤ 2%.

TO-247AD Outline



Terminals: 1 - Gate
2 - Drain
3 - Source
Tab - Drain

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.7	5.3	.185	.209
A ₁	2.2	2.54	.087	.102
A ₂	2.2	2.6	.059	.098
b	1.0	1.4	.040	.055
b ₁	1.65	2.13	.065	.084
b ₂	2.87	3.12	.113	.123
C	.4	.8	.016	.031
D	20.80	21.46	.819	.845
E	15.75	16.26	.610	.640
e	5.20	5.72	0.205	0.225
L	19.81	20.32	.780	.800
L1		4.50		.177
ÆP	3.55	3.65	.140	.144
Q	5.89	6.40	0.232	0.252
R	4.32	5.49	.170	.216
S	6.15	BSC	242	BSC

PRELIMINARY TECHNICAL INFORMATION

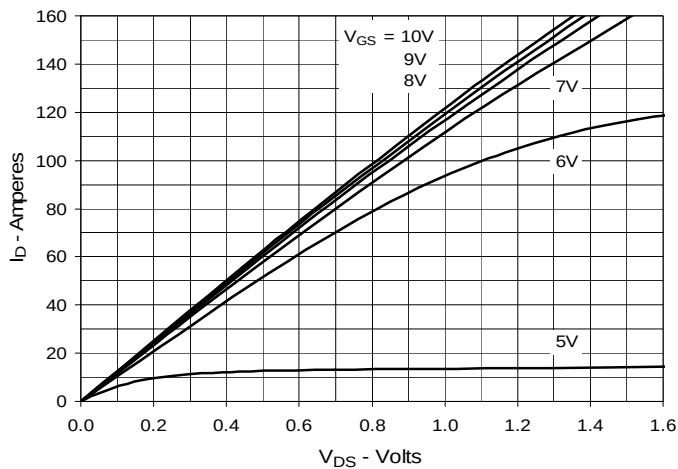
The product presented herein is under development. The Technical Specifications offered are derived from data gathered during objective characterizations of preliminary engineering lots; but also may yet contain some information supplied during a pre-production design evaluation. IXYS reserves the right to change limits, test conditions, and dimensions without notice.

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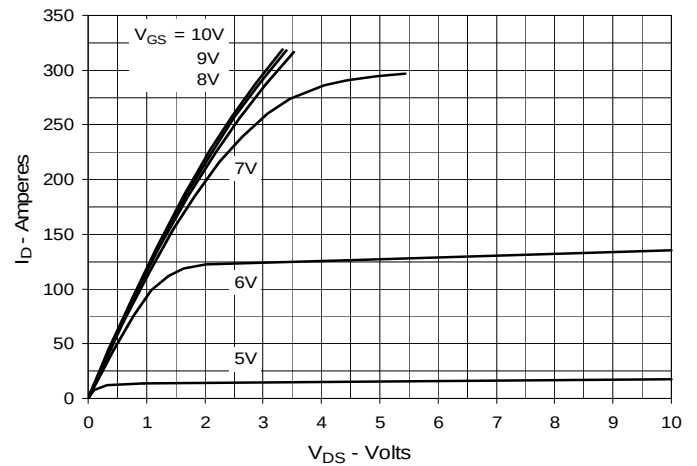
IXYS MOSFETs and IGBTs are covered by one or more of the following U.S. patents:

4,835,592	4,931,844	5,049,961	5,237,481	6,162,665	6,404,065 B1	6,683,344	6,727,585	7,005,734 B2	7,157,338B2
4,850,072	5,017,508	5,063,307	5,381,025	6,259,123 B1	6,534,343	6,710,405 B2	6,759,692	7,063,975 B2	
4,881,106	5,034,796	5,187,117	5,486,715	6,306,728 B1	6,583,505	6,710,463	6,771,478 B2	7,071,537	

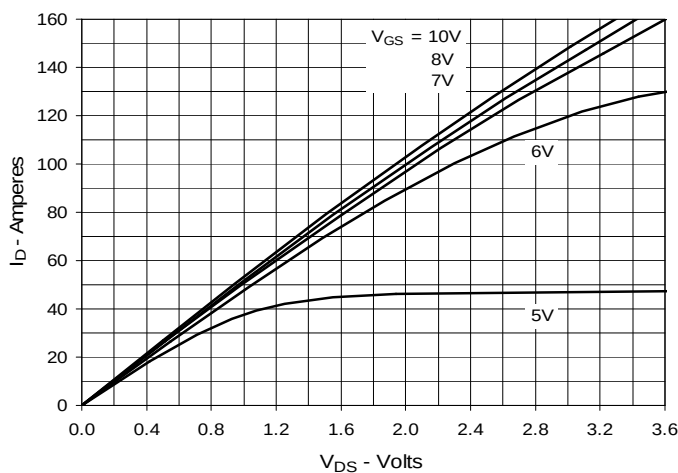
**Fig. 1. Output Characteristics
@ 25°C**



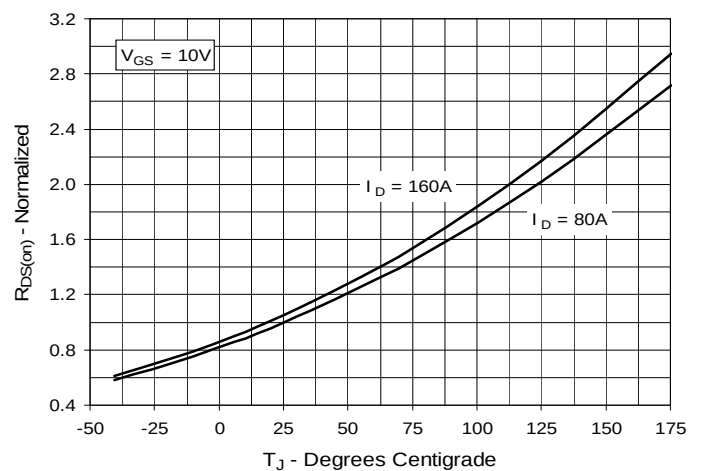
**Fig. 2. Extended Output Characteristics
@ 25°C**



**Fig. 3. Output Characteristics
@ 150°C**



**Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 80A$ Value
vs. Junction Temperature**



**Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 80A$ Value
vs. Drain Current**

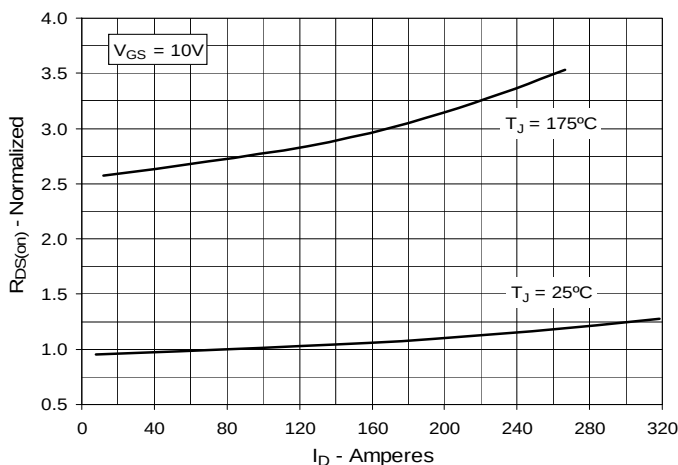


Fig. 6. Drain Current vs. Case Temperature

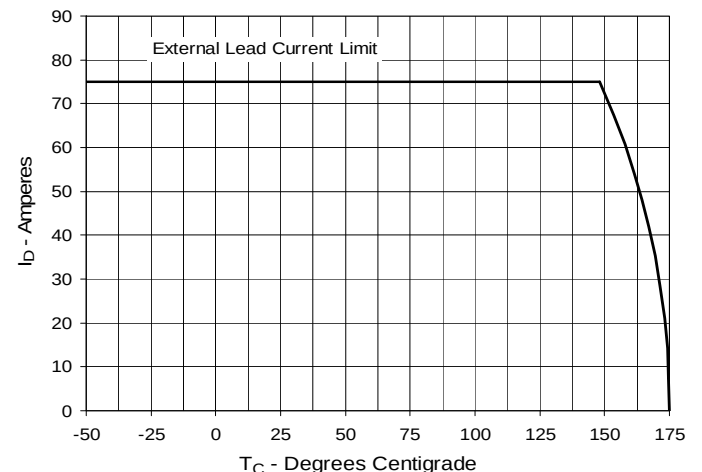


Fig. 7. Input Admittance

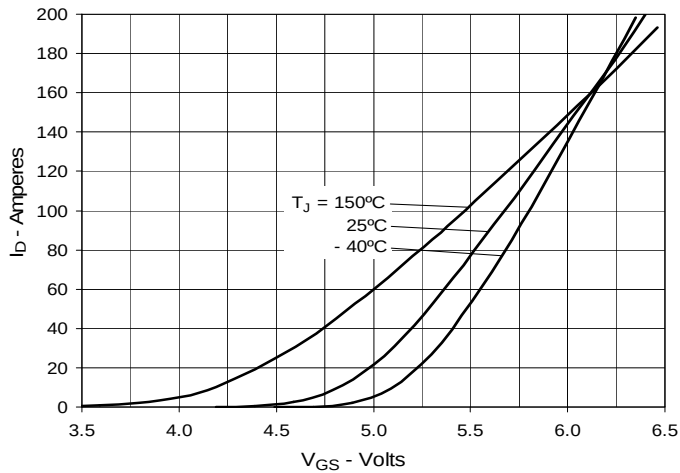


Fig. 8. Transconductance

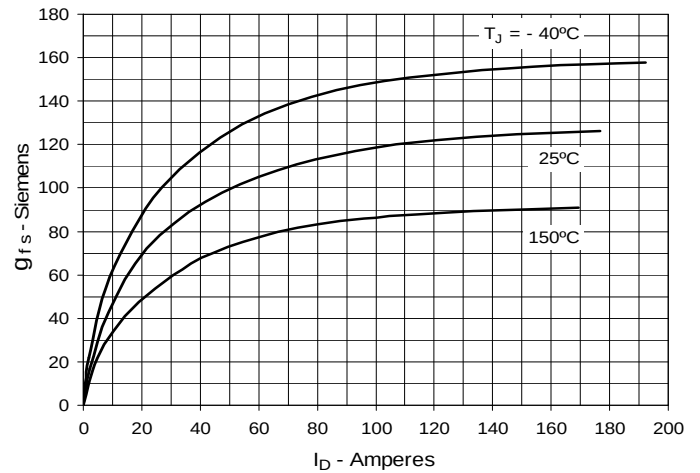


Fig. 9. Forward Voltage Drop of Intrinsic Diode

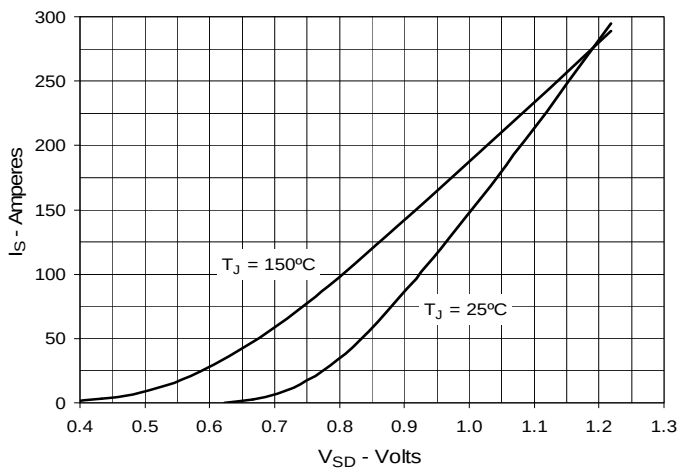


Fig. 10. Gate Charge

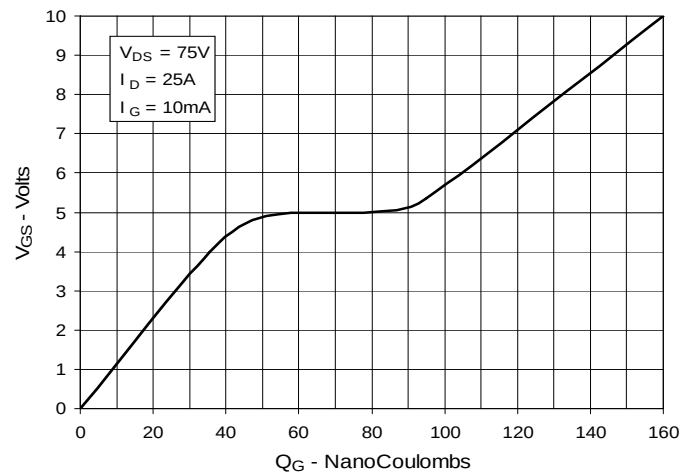


Fig. 11. Capacitance

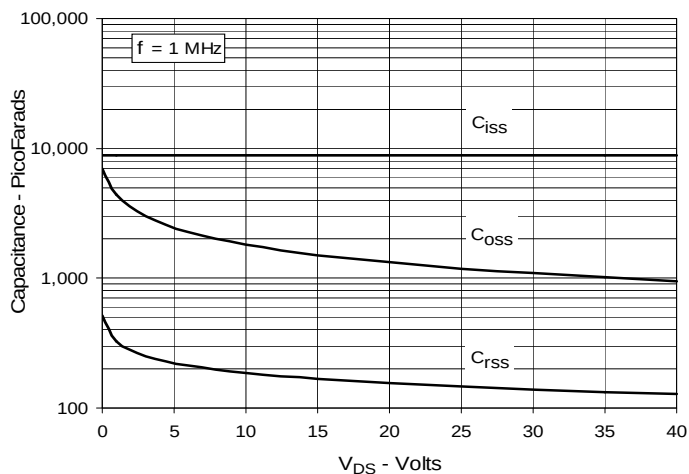
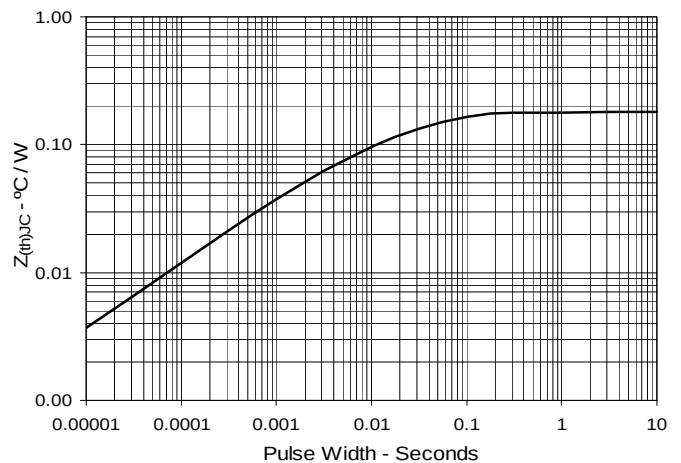
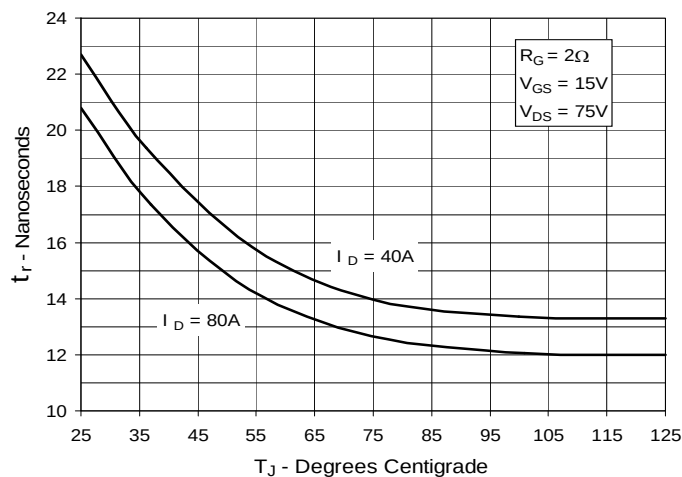


Fig. 12. Maximum Transient Thermal Impedance

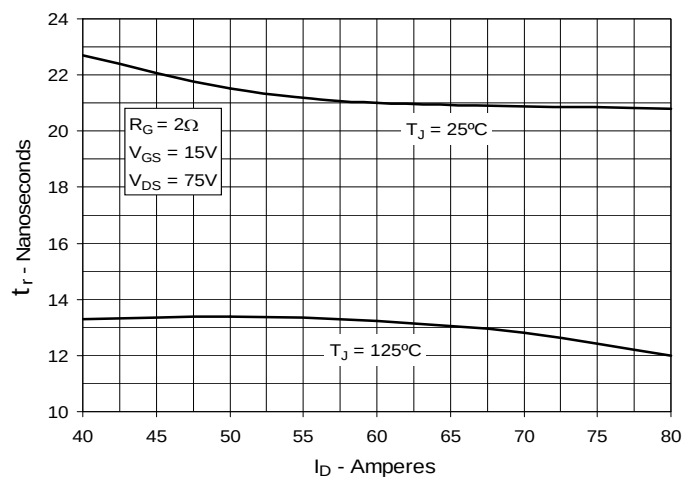


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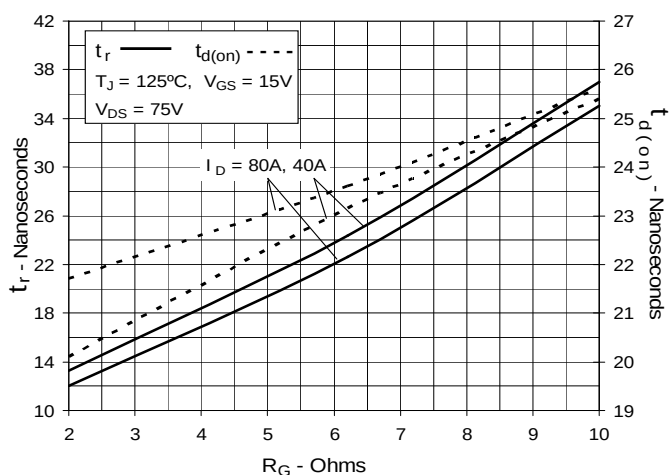
**Fig. 13. Resistive Turn-on
Rise Time vs. Junction Temperature**



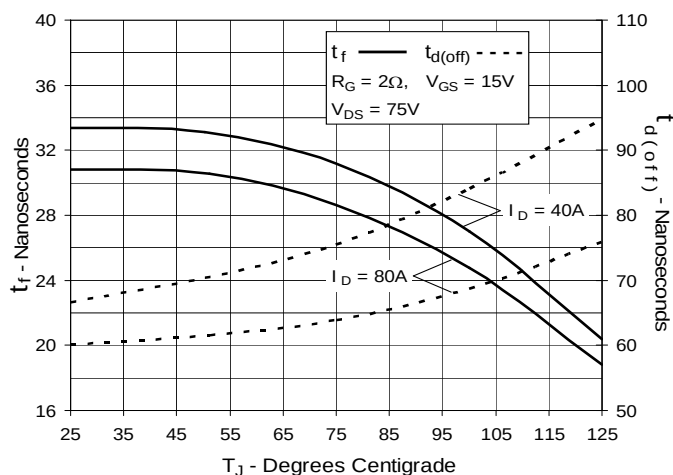
**Fig. 14. Resistive Turn-on
Rise Time vs. Drain Current**



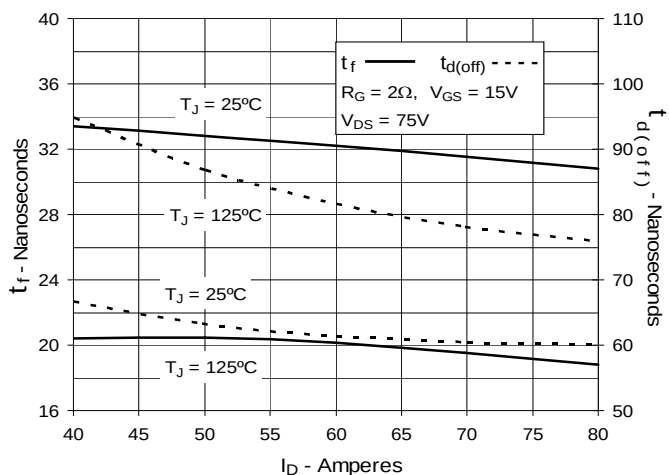
**Fig. 15. Resistive Turn-on
Switching Times vs. Gate Resistance**



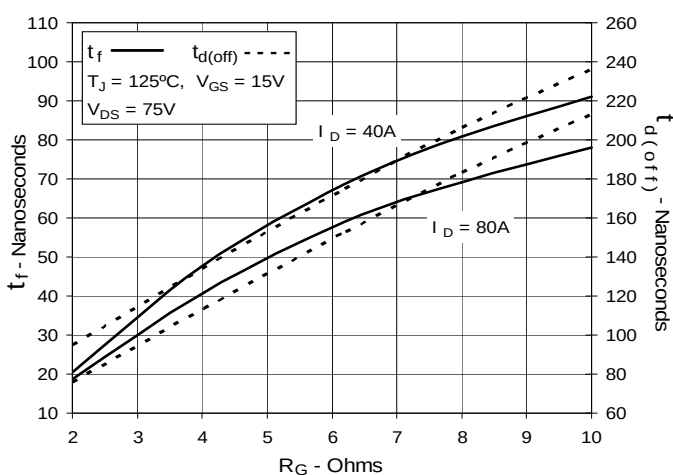
**Fig. 16. Resistive Turn-off
Switching Times vs. Junction Temperature**



**Fig. 17. Resistive Turn-off
Switching Times vs. Drain Current**



**Fig. 18. Resistive Turn-off
Switching Times vs. Gate Resistance**





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