

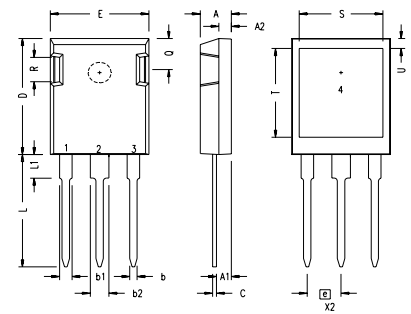
Symbol	Test Conditions	Characteristic Values ($T_j = 25^\circ\text{C}$ unless otherwise specified)		
		Min.	Typ.	Max.
g_{fs}	$V_{DS} = 20\text{ V}$; $I_D = I_T$, Note 1	27	43	S
C_{iss}	$V_{GS} = 0\text{ V}$, $V_{DS} = 25\text{ V}$, $f = 1\text{ MHz}$		12	nF
C_{oss}			910	pF
C_{rss}			30	pF
$t_{d(on)}$	$V_{GS} = 10\text{ V}$, $V_{DS} = 0.5 V_{DSS}$, $I_D = 44\text{ A}$ $R_G = 1\ \Omega$ (External)		28	ns
t_r			22	ns
$t_{d(off)}$			75	ns
t_f			27	ns
$Q_{g(on)}$	$V_{GS} = 10\text{ V}$, $V_{DS} = 0.5 V_{DSS}$, $I_D = I_T$		200	nC
Q_{gs}			67	nC
Q_{gd}			65	nC
R_{thJC}				0.42 $^\circ\text{C/W}$
R_{thCS}		0.15		$^\circ\text{C/W}$

Source-Drain Diode

Symbol	Test Conditions	Characteristic Values ($T_j = 25^\circ\text{C}$ unless otherwise specified)		
		Min.	Typ.	Max.
I_S	$V_{GS} = 0\text{ V}$			44 A
I_{SM}	Repetitive			100 A
V_{SD}	$I_F = I_S$, $V_{GS} = 0\text{ V}$, Note 1			1.5 V
t_{rr}	$I_F = 22\text{ A}$, $-di/dt = 100\text{ A}/\mu\text{s}$			250 ns
Q_{RM}	$V_R = 100\text{ V}$, $V_{GS} = 0\text{ V}$		0.8	μC
I_{RM}			8.0	A

Notes: 1. Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$;
2. Test current $I_T = 22\text{ A}$.

ISOPLUS247 (IXFR) Outline



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.190	.205	4.83	5.21
A1	.090	.100	2.29	2.54
A2	.075	.085	1.91	2.16
b	.045	.055	1.14	1.40
b1	.075	.084	1.91	2.13
b2	.115	.123	2.92	3.12
C	.024	.031	0.61	0.80
D	.819	.840	20.80	21.34
E	.620	.635	15.75	16.13
e	.215 BSC		5.45 BSC	
L	.780	.800	19.81	20.32
L1	.150	.170	3.81	4.32
Q	.220	.244	5.59	6.20
R	.170	.190	4.32	4.83
S	.520	.540	13.21	13.72
T	.620	.640	15.75	16.26
U	.065	.080	1.65	2.03

- 1 - GATE
2 - DRAIN (COLLECTOR)
3 - SOURCE (EMITTER)
4 - NO CONNECTION

NOTE: This drawing will meet all dimensions requirement of JEDEC outline TO-247AD except screw hole.

IXYS reserves the right to change limits, test conditions, and dimensions.

IXYS MOSFETs and IGBTs are covered by 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
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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

Fig. 1. Output Characteristics
@ 25°C

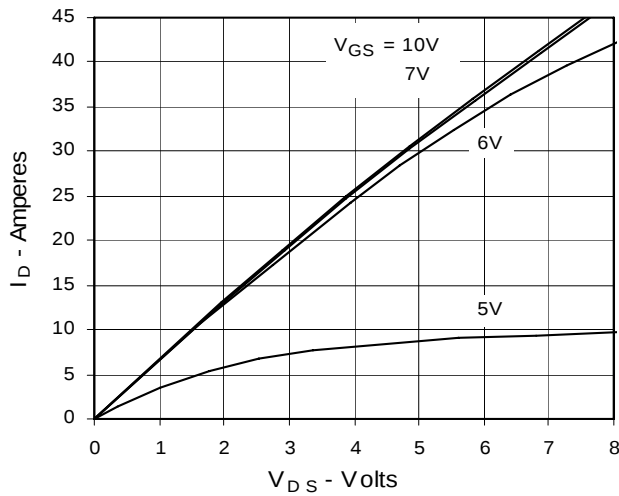


Fig. 2. Extended Output Characteristics
@ 25°C

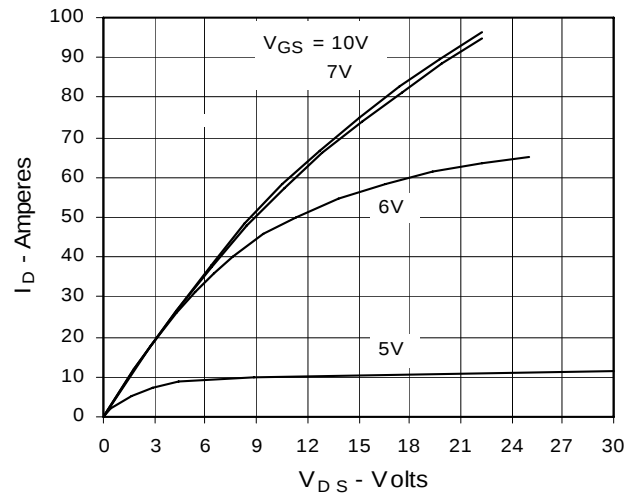
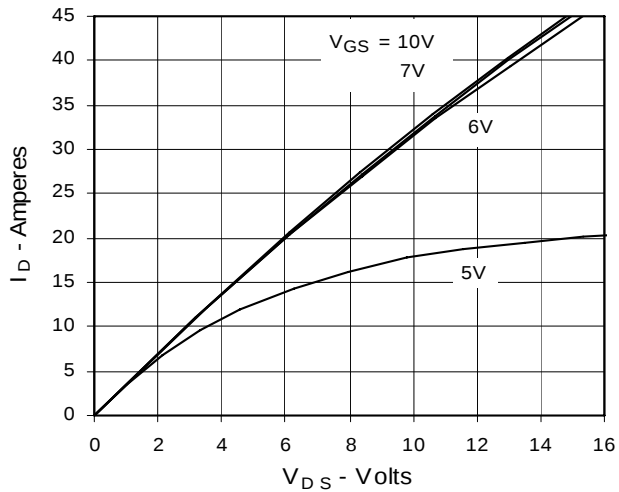
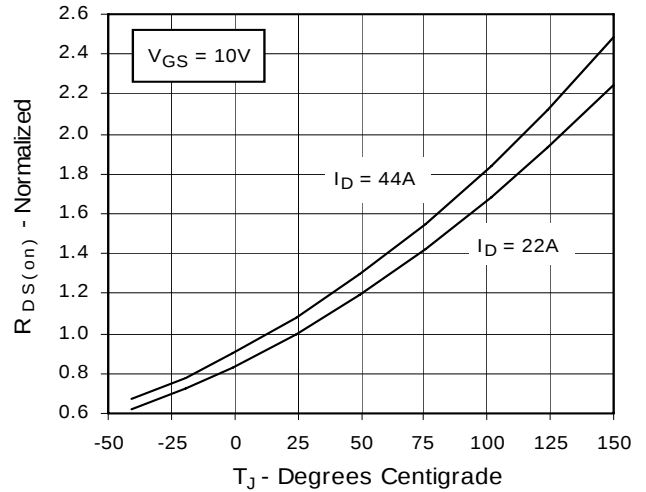


Fig. 3. Output Characteristics
@ 125°C



**Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 22A$
Value vs. Junction Temperature**



**Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 22A$
Value vs. Drain Current**

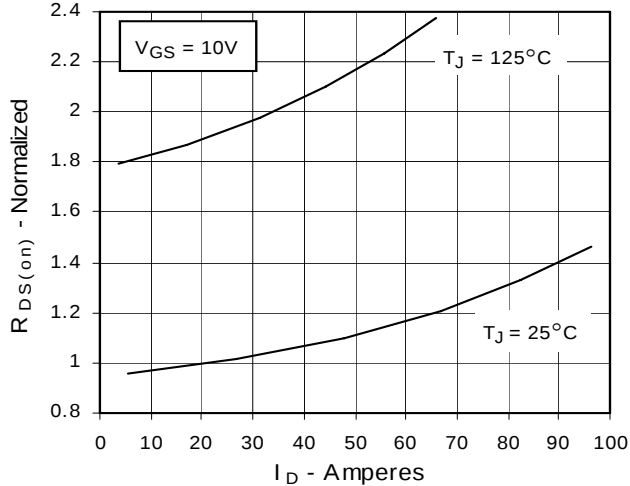


Fig. 6. Drain Current vs. Case Temperature

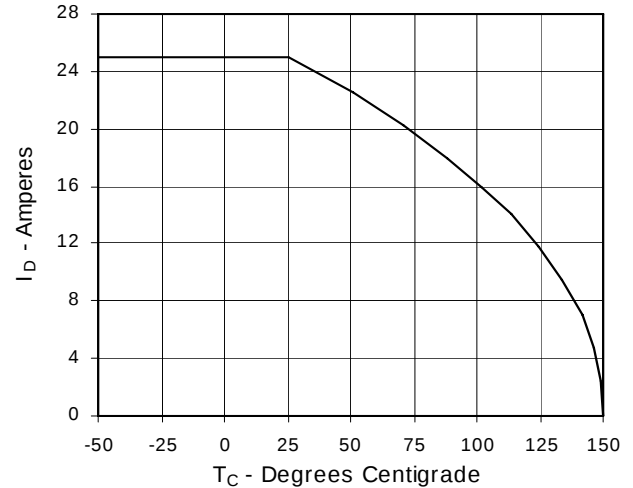
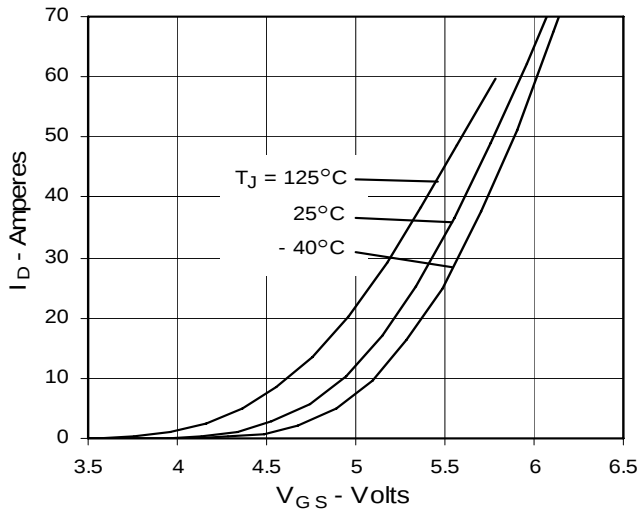
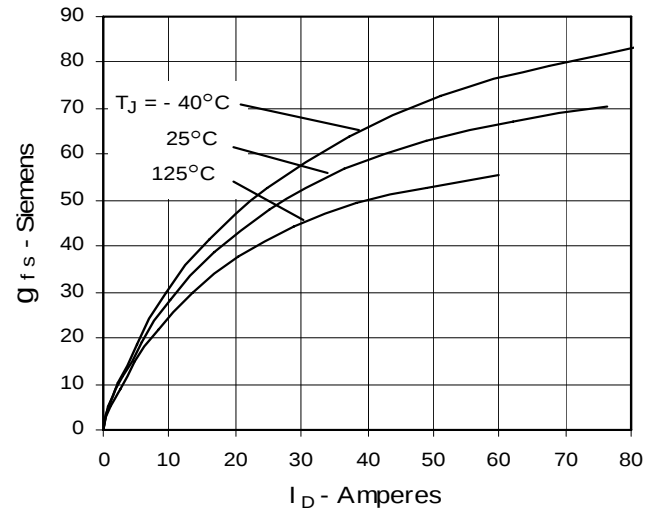
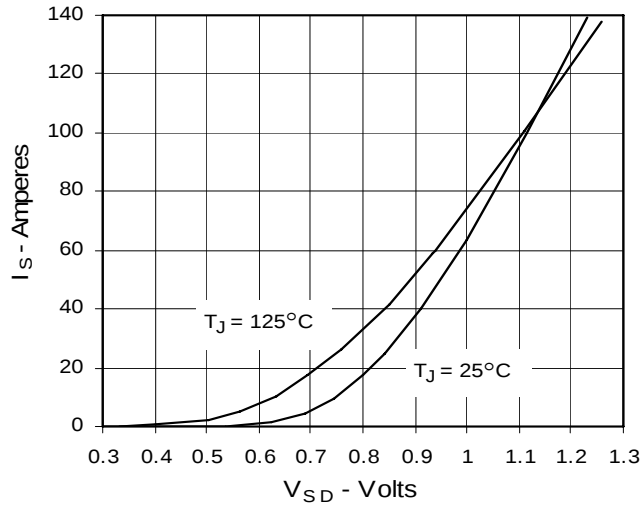
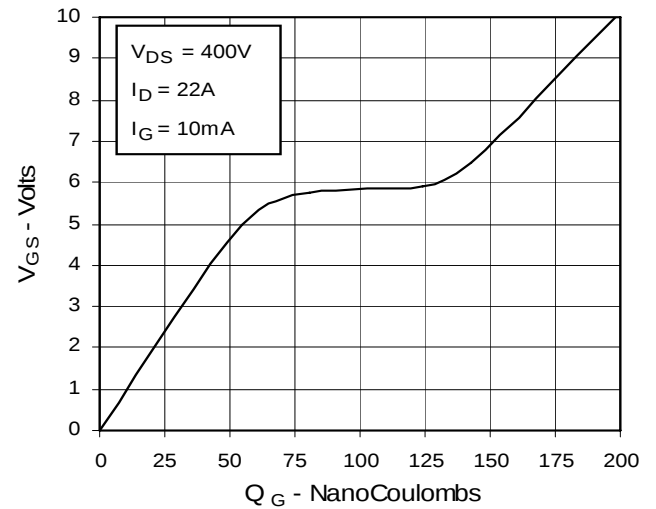
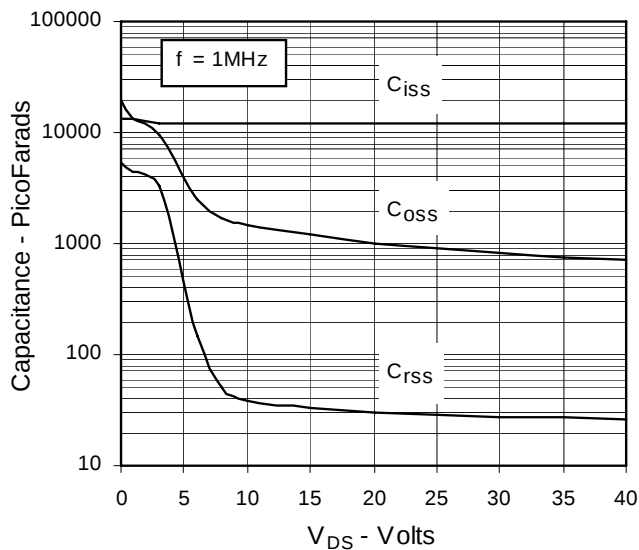
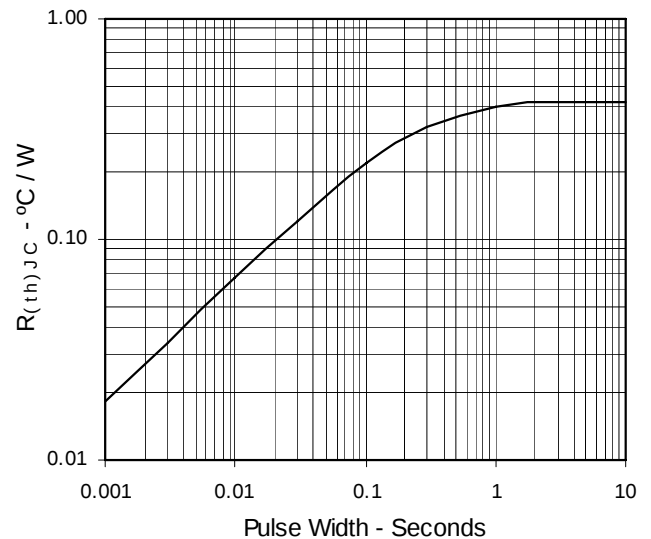


Fig. 7. Input Admittance

Fig. 8. Transconductance

Fig. 9. Source Current vs. Source-To-Drain Voltage

Fig. 10. Gate Charge

Fig. 11. Capacitance

Fig. 12. Maximum Transient Thermal Resistance


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