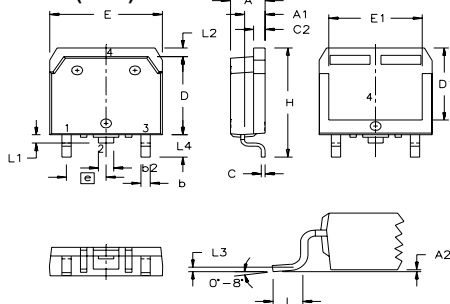


Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
g_{fs}	$V_{DS} = 10\text{ V}; I_D = 0.5 \cdot I_{D25}$, pulse test	6	12	S
C_{iss}	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$		4200	pF
C_{oss}			315	pF
C_{rss}			90	pF
$t_{d(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$ $R_G = 2\ \Omega$ (External)		18	50 ns
t_r			12	50 ns
$t_{d(off)}$			51	100 ns
t_f			18	50 ns
$Q_{g(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$		123	155 nC
Q_{gs}			27	45 nC
Q_{gd}			49	80 nC
R_{thJC}	(IXFH/IXFM)		0.25	0.42 K/W
R_{thCK}				K/W

Source-Drain Diode			Characteristic Values (T _J = 25°C, unless otherwise specified)		
Symbol	Test Conditions		min.	typ.	max.
I _S	V _{GS} = 0 V	10N90			10 A
		12N90			12 A
		13N90			13 A
I _{SM}	Repetitive; pulse width limited by T _{JM}	10N90			40 A
		12N90			48 A
		13N90			52 A
V _{SD}	I _F = I _S , V _{GS} = 0 V, Pulse test, t ≤ 300 μs, duty cycle d ≤ 2 %				1.5 V
t _{rr}	I _F = I _S -di/dt = 100 A/μs, V _R = 100 V	T _J = 25°C			250 ns
		T _J = 125°C			400 ns
Q _{RM}		T _J = 25°C		1	μC
		T _J = 125°C		2	μC
I _{RM}		T _J = 25°C		10	A
		T _J = 125°C		15	A

TO-268 (IXFT) Outline



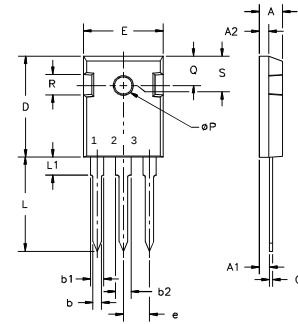
SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.193	.201	4.90	5.10
A1	.106	.114	2.70	2.90
A2	.001	.010	0.02	0.25
b	.045	.057	1.15	1.45
b1	.075	.083	1.90	2.10
b2	.016	.026	0.40	0.65
C	.057	.063	1.45	1.60
D	.543	.551	13.80	14.00
D1	.488	.500	12.40	12.70
E	.624	.632	15.85	16.05
E1	.524	.535	13.30	13.60
e	.215 BSC			
H	.736	.752	18.70	19.10
L	.094	.106	2.40	2.70
L1	.047	.055	1.20	1.40
L2	.039	.045	1.00	1.15
L3	.010 BSC			
L4	.150	.161	3.80	4.10

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

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

4,835,592 4,881,106 5,017,508 5,049,961 5,187,117 5,486,715 6,306,728B1
4,850,072 4,931,844 5,034,796 5,063,307 5,237,481 5,381,025

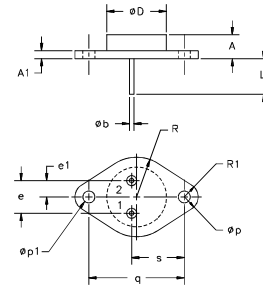
TO-247 AD (IXFH) Outline



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

Dim.	Millimeter Min.	Millimeter Max.	Inches Min.	Inches Max.
A	4.7	5.3	.185	.209
A1	2.2	2.54	.087	.102
A2	2.2	2.6	.059	.098
b	1.0	1.4	.040	.055
b1	1.65	2.13	.065	.084
b2	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			
ØP	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

TO-204 AA (IXFM) Outline



Pins 1 - Gate 2 - Source
Case - Drain

Dim.	Millimeter Min.	Millimeter Max.	Inches Min.	Inches Max.
A	6.4	11.4	.250	.450
A1		3.42		.135
Øb	.97	1.09	.038	.043
ØD	22.22			
e	10.67	11.17	.420	.440
e1	5.21	5.71	.205	.225
L	7.93		.312	
Øp	3.84	4.19	.151	.165
Øp1	3.84	4.19	.151	.165
q	30.15 BSC			
R	13.33			
R1	4.77			
s	16.64	17.14	.655	.675

Fig. 1. Output Characteristics

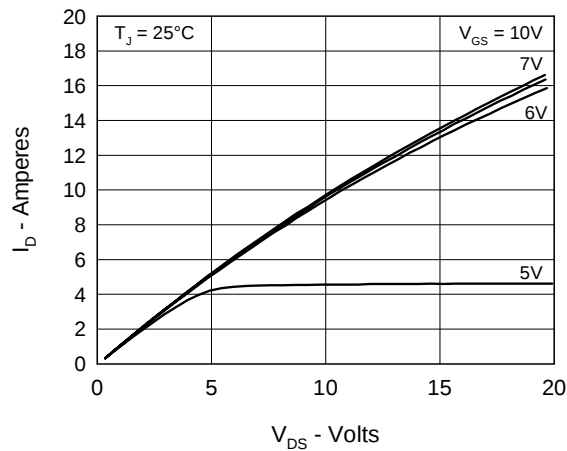


Fig. 2. Input Admittance

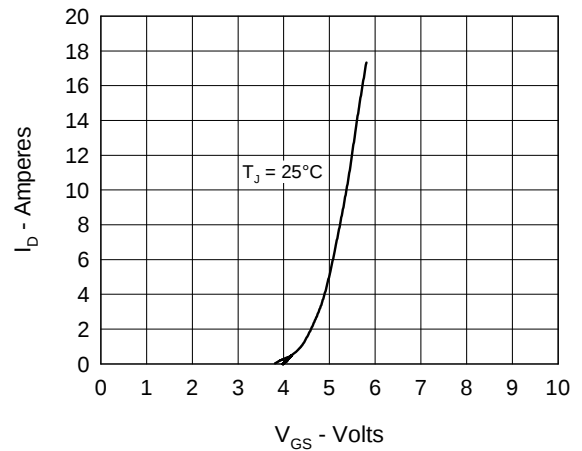


Fig. 3. $R_{DS(on)}$ vs. Drain Current

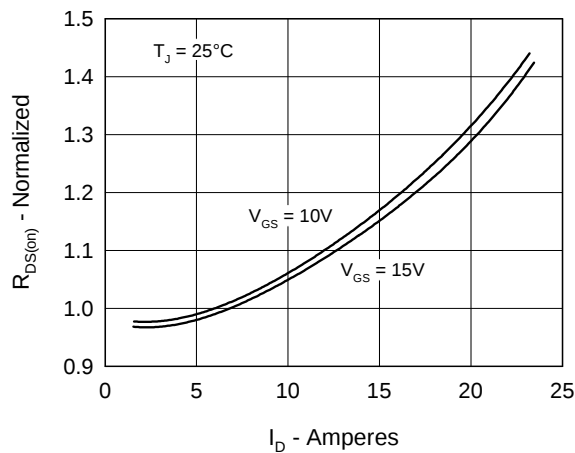


Fig. 4. Temperature Dependence of Drain to Source Resistance

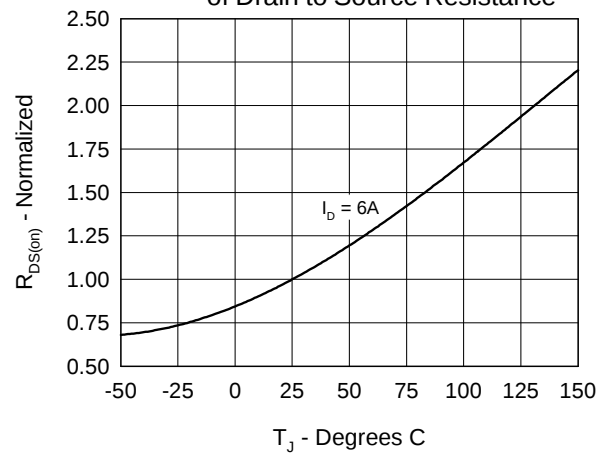


Fig. 5. Drain Current vs. Case Temperature

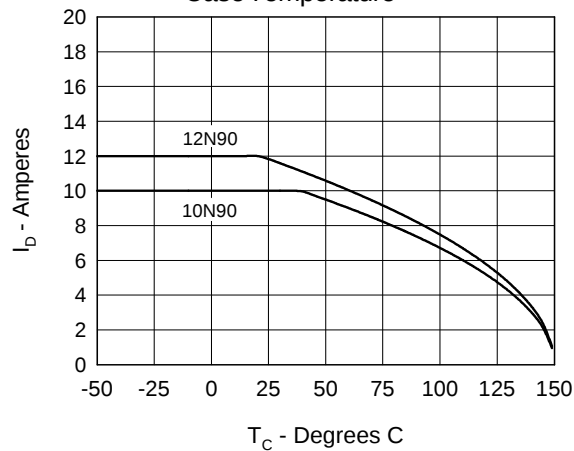


Fig. 6. Temperature Dependence of Breakdown and Threshold Voltage

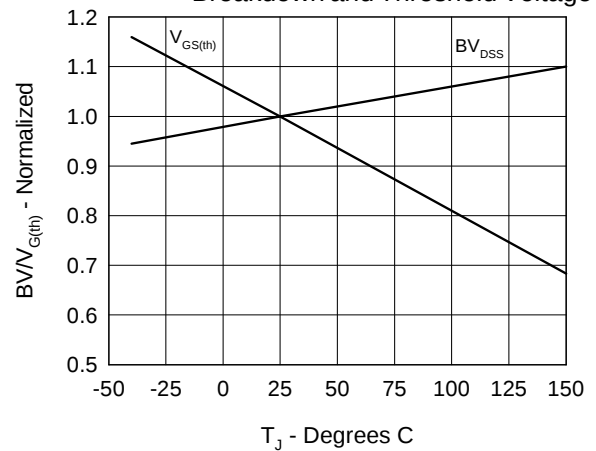
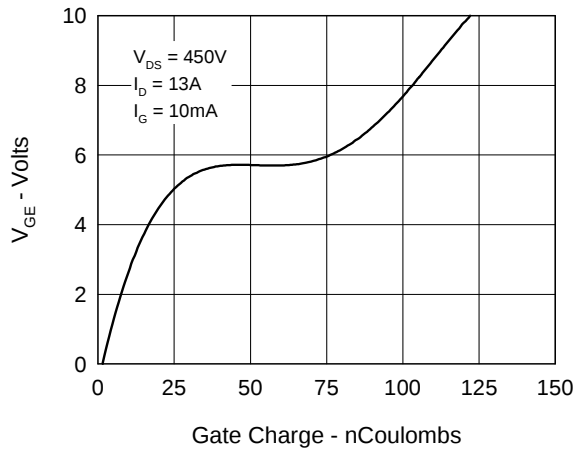
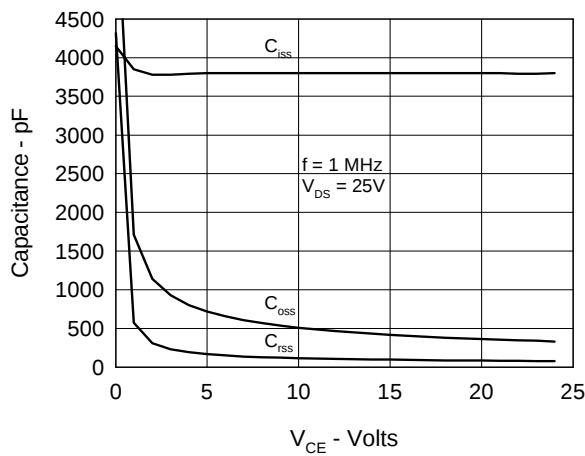
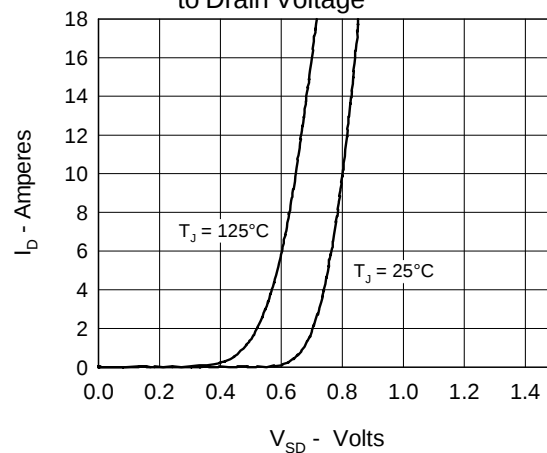
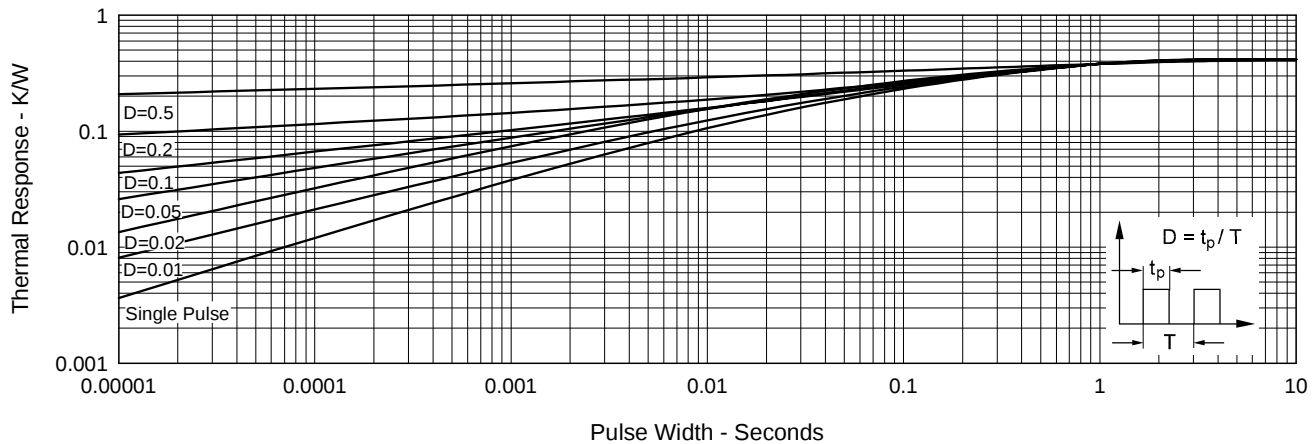


Fig.7. Gate Charge Characteristic Curve

Fig.8. Capacitance Curves

Fig.9. Source Current vs. Source to Drain Voltage

Fig.10. Transient Thermal Impedance


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	4,850,072	4,931,844	5,034,796	5,063,307	5,237,481	5,381,025	