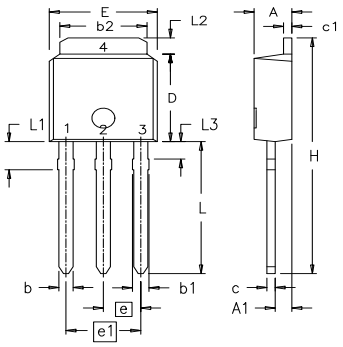
Symbol	Test Conditions (T_J = 25°C, Unless Otherwise Specified)	Characteristic Values Min.	Typ.	Max.	
g_{fs}	V_{DS} = 100V, I_D = 100mA, Note 1	100	200		mS
C_{iss}	V_{GS} = -10V, V_{DS} = 25V, f = 1MHz		100		pF
C_{oss}			12		pF
C_{rss}			2		pF
$t_{d(on)}$	**Resistive Switching Times**		7		ns
t_r	V_{GS} = ±5V, V_{DS} = 50V, I_D = 50mA		10		ns
$t_{d(off)}$	R_G = 30Ω (External)		34		ns
t_f			64		ns
$Q_{g(on)}$	V_{GS} = ±5V, V_{DS} = 500V, I_D = 50mA		5.8		nC
Q_{gs}			3.6		nC
Q_{gd}			0.4		nC
R_{thJC}				5.0	°C/W
R_{thCS}	TO-220		0.50		°C/W

Source-Drain Diode

Symbol	Test Conditions (T_J = 25°C, Unless Otherwise Specified)	Characteristic Values Min.	Typ.	Max.	
V_{SD}	I_F = 100mA, V_{GS} = -10V, Note 1			1.5	V
t_{rr}	I_F = 750mA, -di/dt = 100A/µs V_R = 25V, V_{GS} = -10V			1.5	µs

Note 1. Pulse test, t ≤ 300µs, duty cycle, d ≤ 2%.

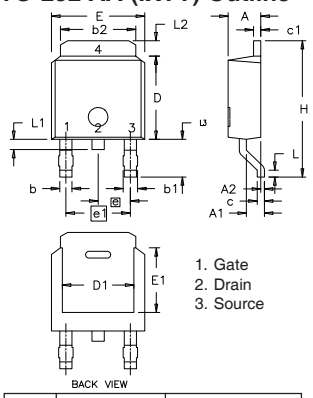
TO-251 (IXTU) Outline



1. Gate 2,4 .Drain
3. Source

Dim.	Millimeter Min.	Max.	Inches Min.	Max.
A	2.19	2.38	.086	.094
A1	0.89	1.14	0.35	.045
b	0.64	0.89	.025	.035
b1	0.76	1.14	.030	.045
b2	5.21	5.46	.205	.215
c	0.46	0.58	.018	.023
c1	0.46	0.58	.018	.023
D	5.97	6.22	.235	.245
E	6.35	6.73	.250	.265
e	2.28	BSC	.090	BSC
e1	4.57	BSC	.180	BSC
H	17.02	17.78	.670	.700
L	8.89	9.65	.350	.380
L1	1.91	2.28	.075	.090
L2	0.89	1.27	.035	.050

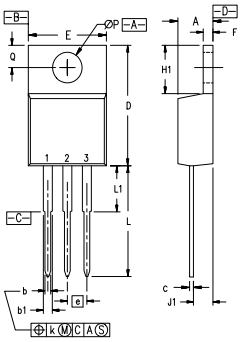
TO-252 AA (IXTY) Outline



1. Gate
2. Drain
3. Source

Dim.	Millimeter Min.	Max.	Inches Min.	Max.
A	2.19	2.38	0.086	0.094
A1	0.89	1.14	0.035	0.045
A2	0	0.13	0	0.005
b	0.64	0.89	0.025	0.035
b1	0.76	1.14	0.030	0.045
b2	5.21	5.46	0.205	0.215
c	0.46	0.58	0.018	0.023
c1	0.46	0.58	0.018	0.023
D	5.97	6.22	0.235	0.245
D1	4.32	5.21	0.170	0.205
E	6.35	6.73	0.250	0.265
E1	4.32	5.21	0.170	0.205
e	2.28 BSC		0.090 BSC	
e1	4.57 BSC		0.180 BSC	
H	9.40	10.42	0.370	0.410
L	0.51	1.02	0.020	0.040
L1	0.64	1.02	0.025	0.040
L2	0.89	1.27	0.035	0.050
L3	2.54	2.92	0.100	0.115

TO-220 (IXTP) Outline



Pins: 1 - Gate 2 - Drain
3 - Source

SYM	INCHES MIN	MAX	MILLIMETERS MIN	MAX
A	.170	.190	4.32	4.83
b	.025	.040	0.64	1.02
b1	.045	.065	1.15	1.65
c	.014	.022	0.35	0.56
D	.580	.630	14.73	16.00
E	.390	.420	9.91	10.66
e	.100 BSC		2.54 BSC	
F	.045	.055	1.14	1.40
H1	.230	.270	5.85	6.85
J1	.090	.110	2.29	2.79
k	0	.015	0	0.38
L	.500	.550	12.70	13.97
L1	.110	.230	2.79	5.84
ØP	.139	.161	3.53	4.08
Q	.100	.125	2.54	3.18

Fig. 1. Output Characteristics @ T_J = 25°C

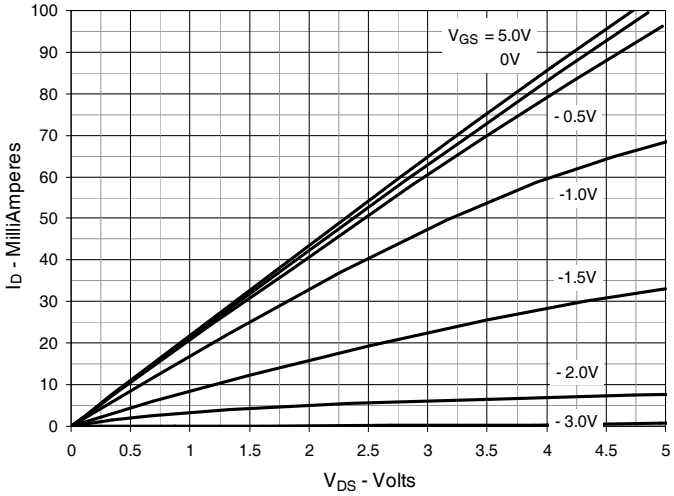


Fig. 2. Output Characteristics @ T_J = 125°C

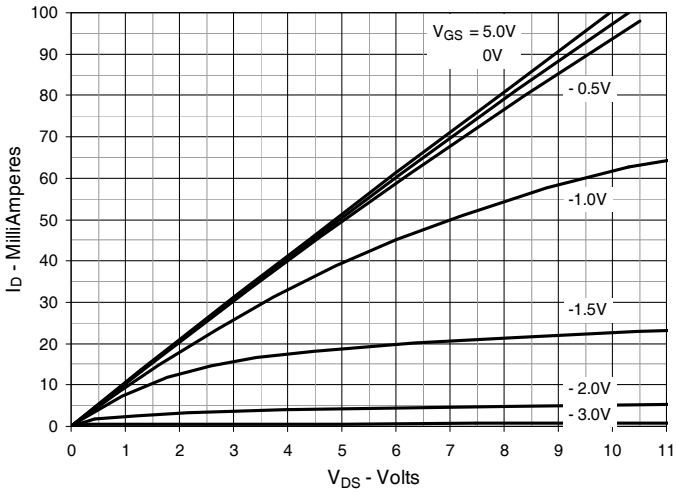


Fig. 3. Drain Current @ T_J = 25°C

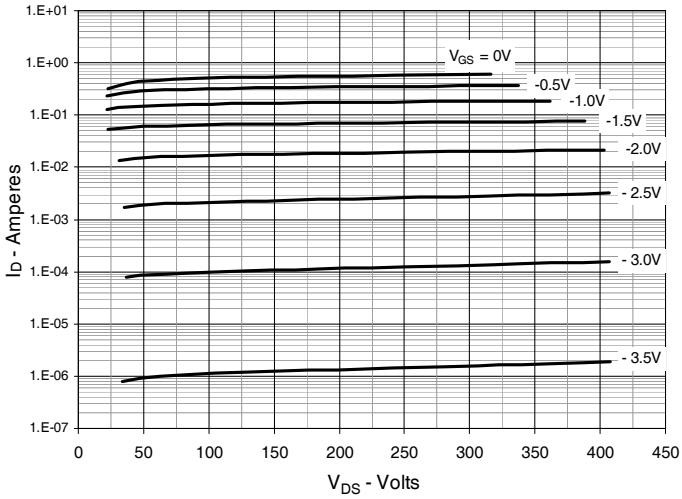


Fig. 4. Drain Current @ T_J = 100°C

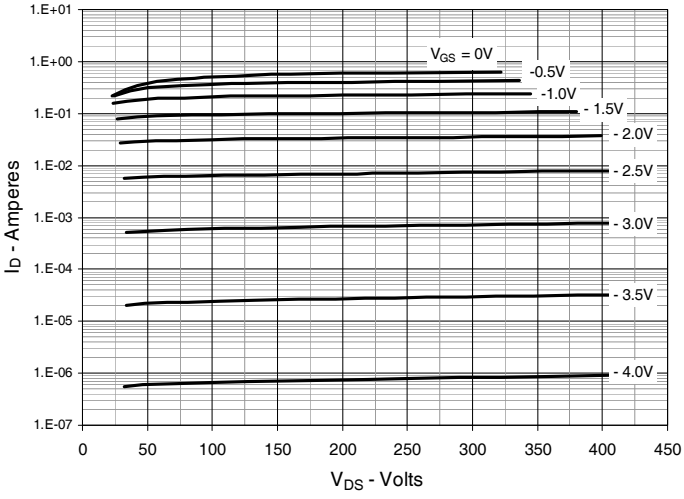


Fig. 5. Dynamic Resistance vs. Gate Voltage

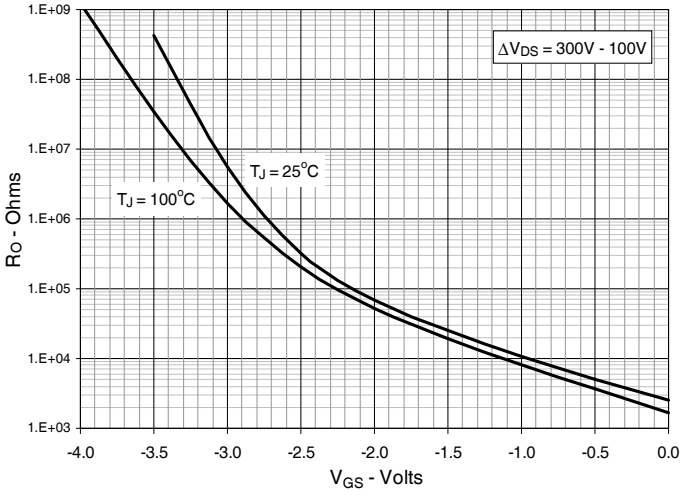


Fig. 6. Normalized $R_{DS(on)}$ vs. Junction Temperature

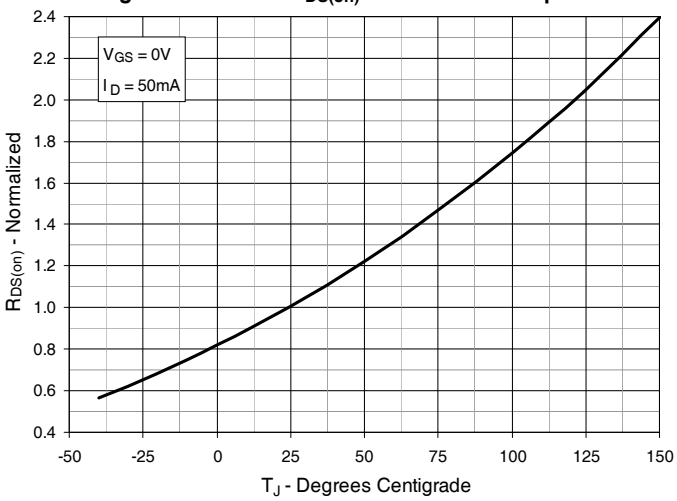


Fig. 7. $R_{DS(on)}$ Normalized to I_D = 50mA Value vs. Drain Current

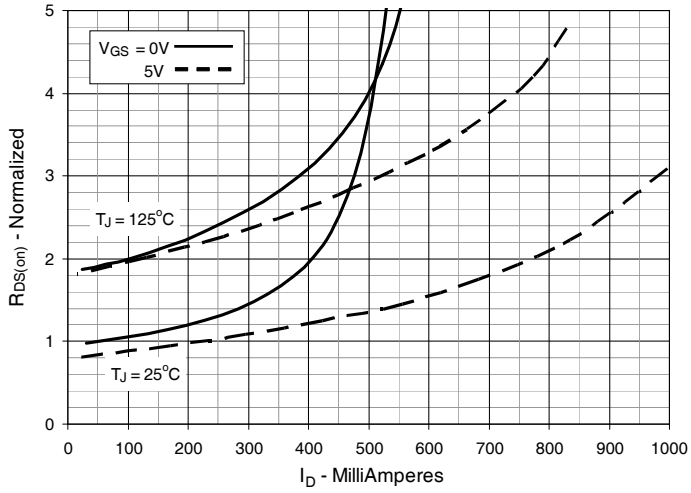


Fig. 8. Input Admittance

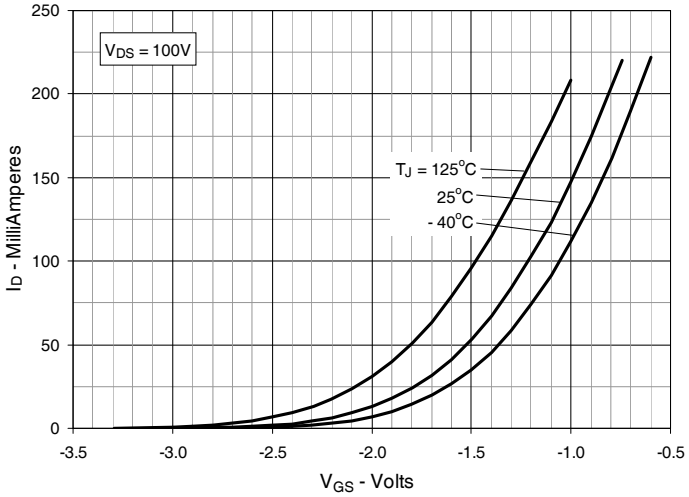


Fig. 9. Transconductance

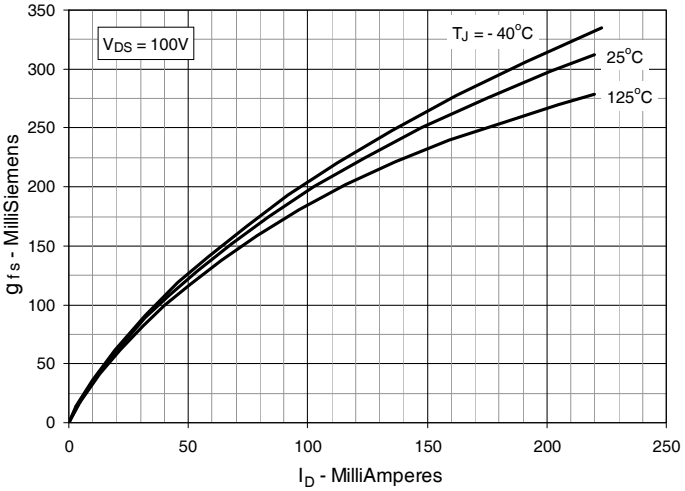


Fig. 10. Forward Voltage Drop of Intrintsic Diode

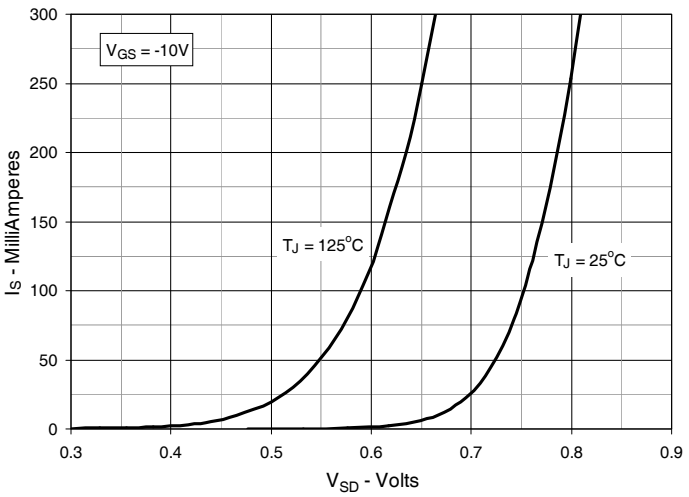


Fig. 11. Capacitance

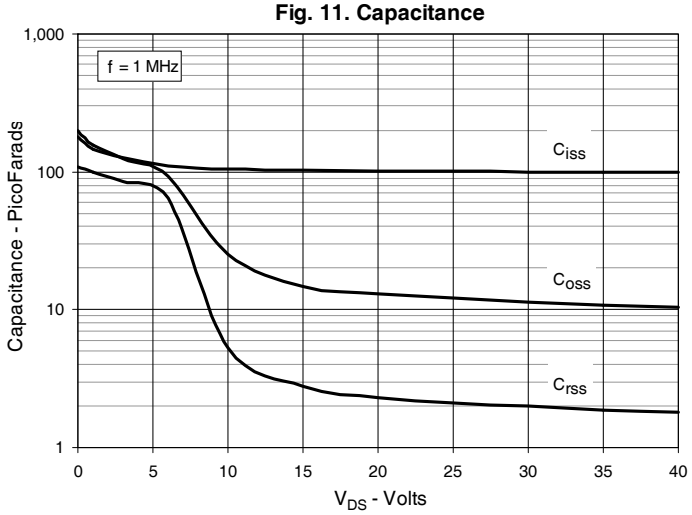


Fig. 12. Gate Charge

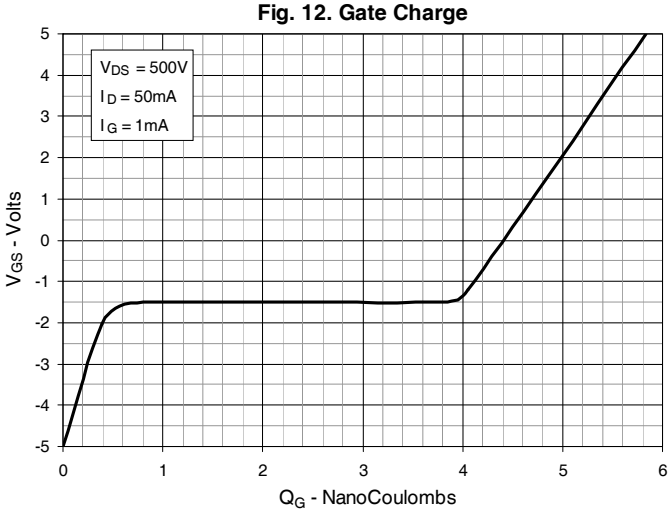


Fig. 13. Forward-Bias Safe Operating Area @ T_C = 25°C

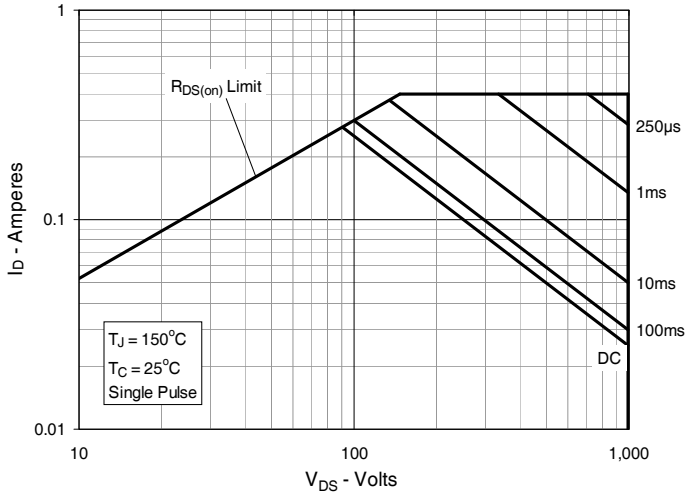


Fig. 14. Forward-Bias Safe Operating Area @ T_C = 75°C

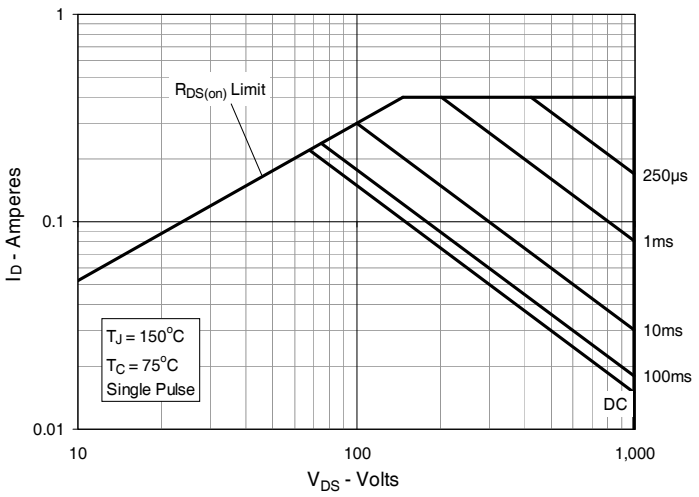


Fig. 15. Maximum Transient Thermal Impedance