

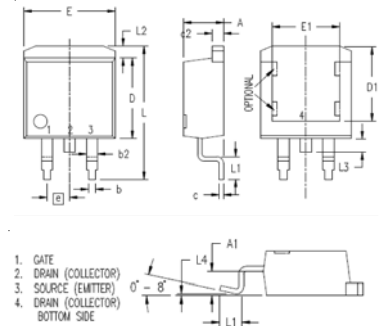
Symbol	Test Conditions	Characteristic Values		
	(T _J = 25°C, Unless Otherwise Specified)	Min.	Typ.	Max.
g_{fs}	V _{DS} = 10V, I _D = 0.5 • I _{D25} , Note 1	7.5	13	S
C_{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		1830	pF
C_{oss}			182	pF
C_{rss}			16	pF
t_{d(on)}	Resistive Switching Time V _{GS} = 10V, V _{DS} = 0.5 • V _{DSS} , I _D = 0.5 • I _{D25} R _G = 10Ω (External)		22	ns
t_r			27	ns
t_{d(off)}			65	ns
t_f			20	ns
Q_{g(on)}	V _{GS} = 10V, V _{DS} = 0.5 • V _{DSS} , I _D = 0.5 • I _{D25}		29	nC
Q_{gs}			11	nC
Q_{gd}			10	nC
R_{thJC}	TO-220		0.50	0.62 °C/W
R_{thCH}				°C/W

Source-Drain Diode

Symbol	Test Conditions	Characteristic Values		
	(T _J = 25°C, Unless Otherwise Specified)	Min.	Typ.	Max.
I_S	V _{GS} = 0V			12 A
I_{SM}	Repetitive, Pulse Width Limited by T _{JM}			48 A
V_{SD}	I _F = I _S , V _{GS} = 0V, Note 1			1.5 V
t_{rr}	I _F = 6A, -di/dt = 150A/μs, V _R = 100V, V _{GS} = 0V		2.8	300 ns
Q_{RM}				μC
I_{RM}				A

- Notes: 1. Pulse test, t ≤ 300μs, duty cycle, d ≤ 2%.
2. On through-hole packages, R_{DS(on)} Kelvin test contact location must be 5mm or less from the package body.

TO-263 Outline



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.160	.190	4.06	4.83
A1	.080	.110	2.03	2.79
b	.020	.039	0.51	0.99
b2	.045	.055	1.14	1.40
c	.016	.029	0.40	0.74
c2	.045	.055	1.14	1.40
D	.340	.380	8.64	9.65
D1	.315	.350	8.00	8.89
E	.380	.410	9.65	10.41
E1	.245	.320	6.22	8.13
e	.100 BSC		2.54 BSC	
L	.575	.625	14.61	15.88
L1	.090	.110	2.29	2.79
L2	.040	.055	1.02	1.40
L3	.050	.070	1.27	1.78
L4	0	.005	0	0.13

TO-220 Outline

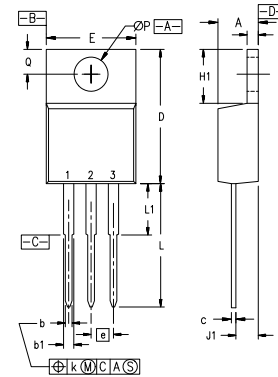


Fig. 1. Output Characteristics @ $T_J = 25^\circ\text{C}$

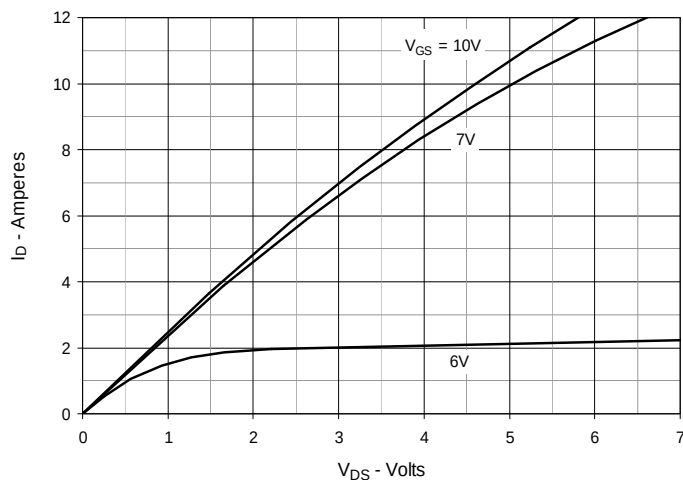


Fig. 2. Extended Output Characteristics @ $T_J = 25^\circ\text{C}$

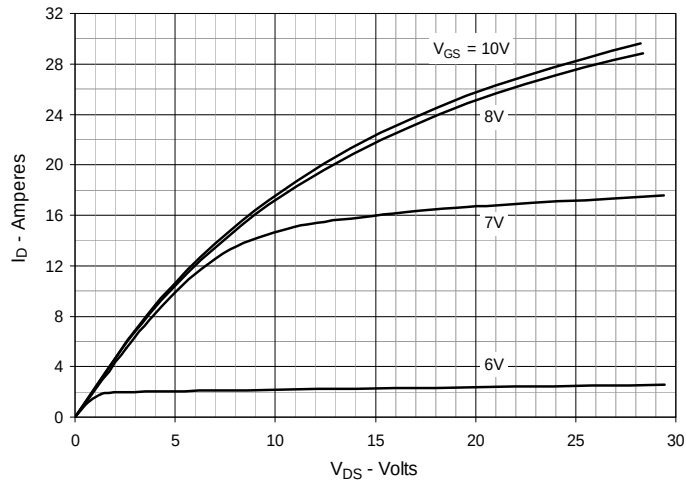


Fig. 3. Output Characteristics @ $T_J = 125^\circ\text{C}$

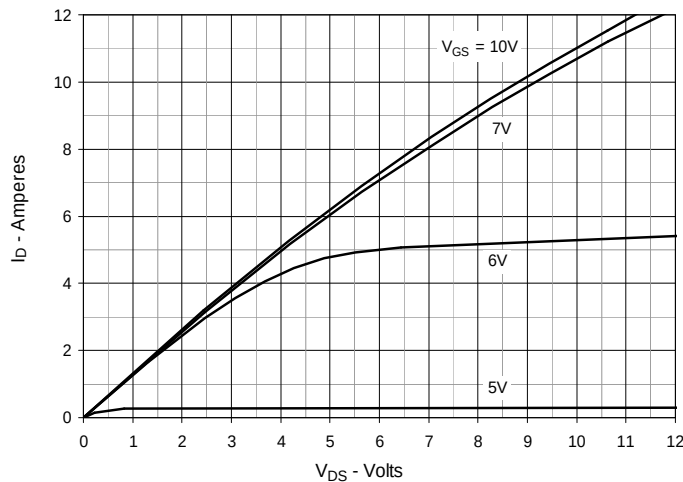


Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 6\text{A}$ Value vs. Junction Temperature

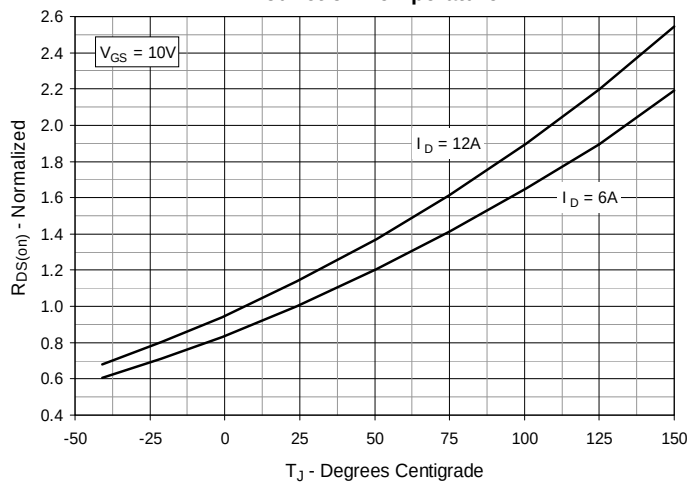


Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 6\text{A}$ Value vs. Drain Current

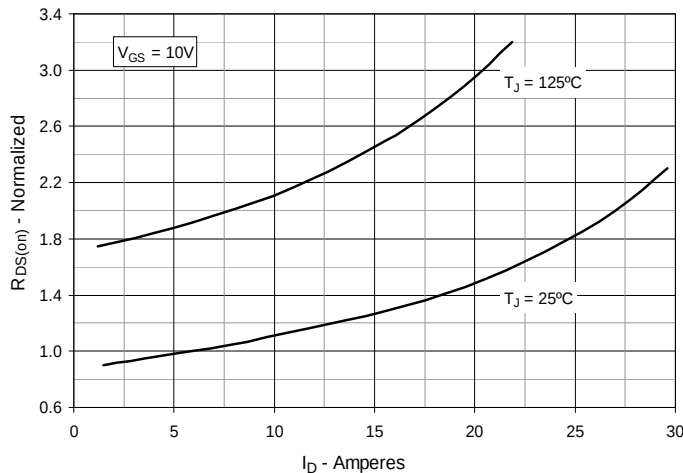


Fig. 6. Maximum Drain Current vs. Case Temperature

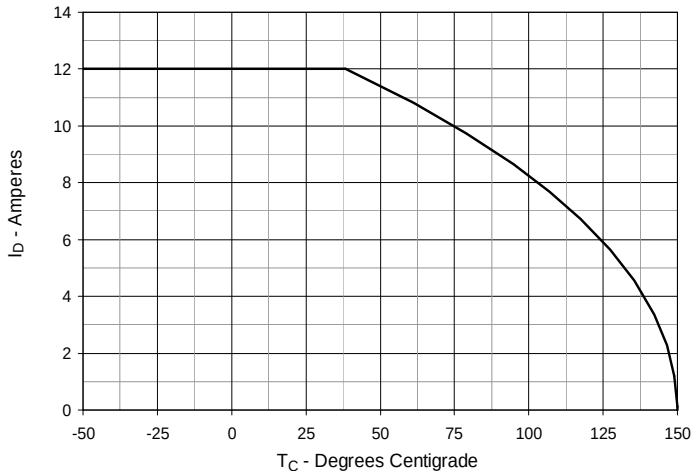


Fig. 7. Input Admittance

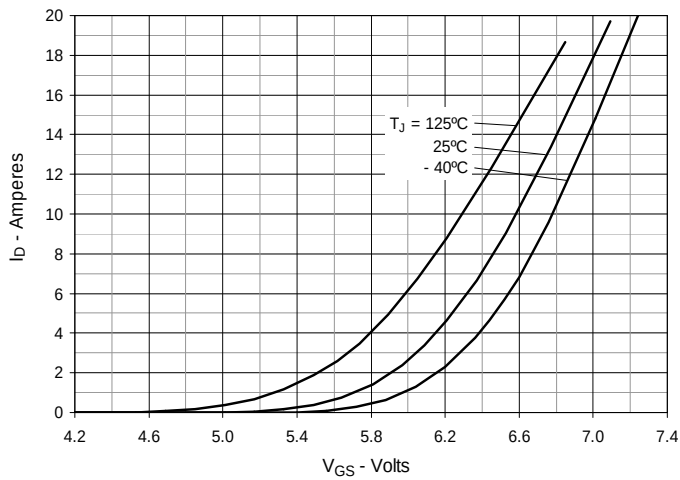


Fig. 8. Transconductance

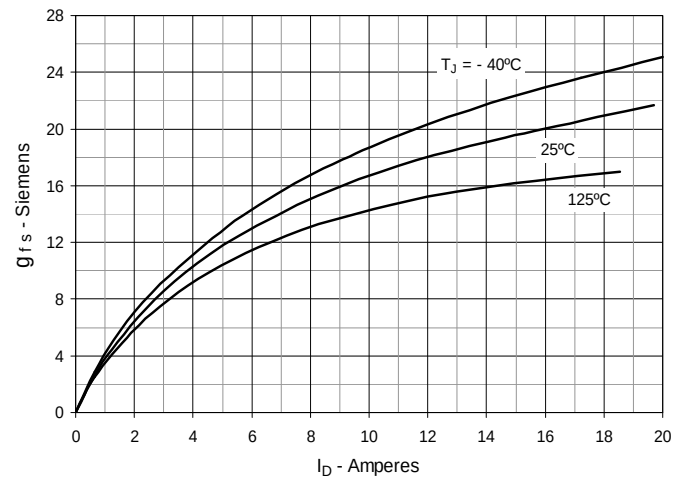


Fig. 9. Forward Voltage Drop of Intrinsic Diode

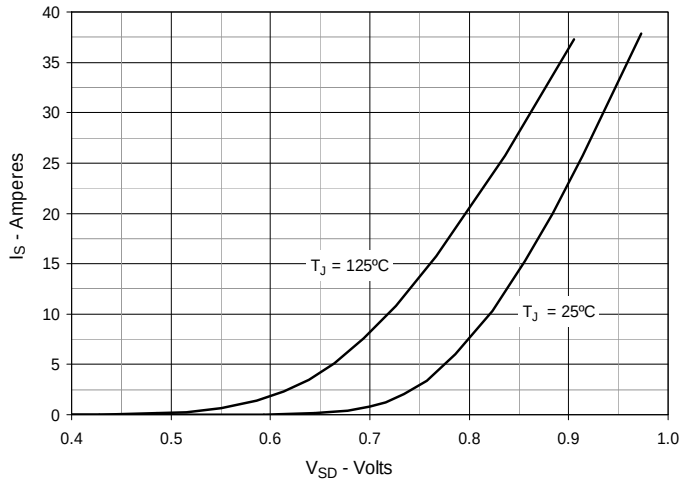


Fig. 10. Gate Charge

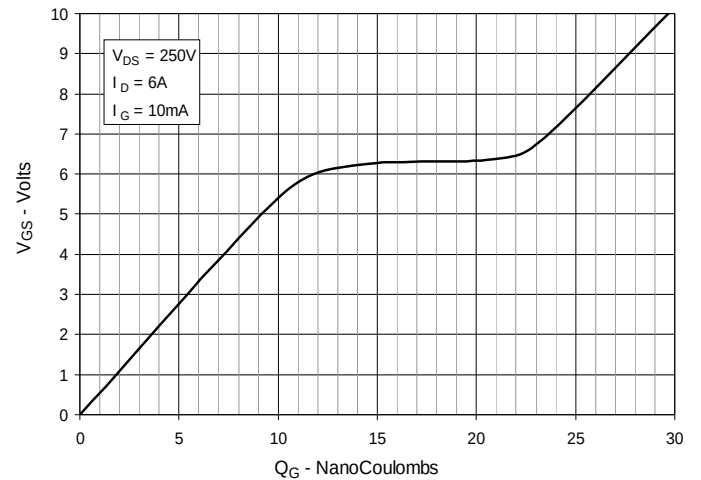


Fig. 11. Capacitance

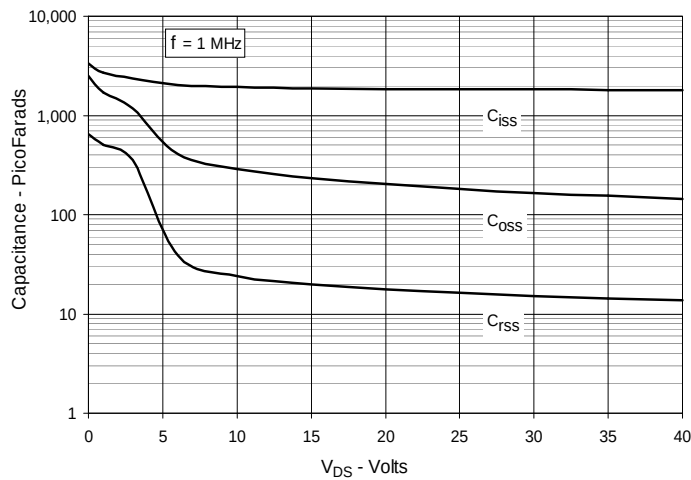


Fig. 12. Forward-Bias Safe Operating Area

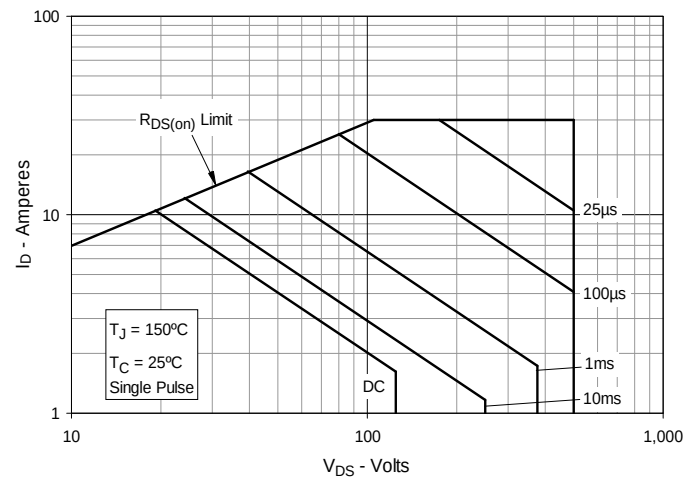
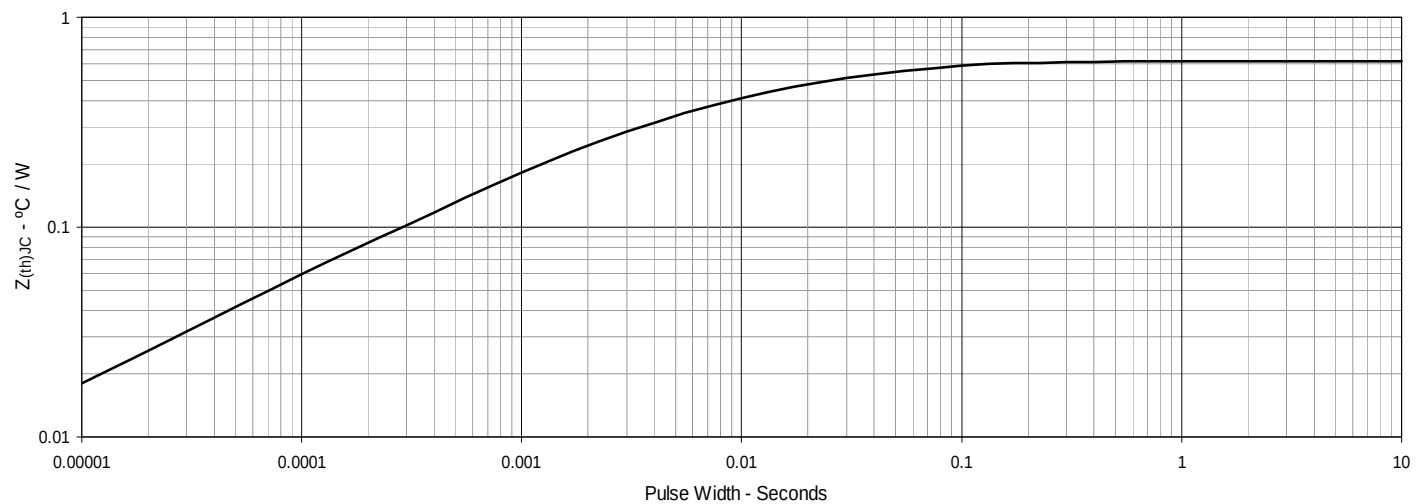


Fig. 13. Maximum Transient Thermal Impedance





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