

Symbol	Test Conditions	Characteristic Values		
		Min.	Typ.	Max.
g_{fs}	$V_{DS} = 10\text{ V}; I_D = 0.5 \cdot I_{D25}$, pulse test		45	S
C_{iss}	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$		9400	pF
C_{oss}			1280	pF
C_{rss}			460	pF
$t_{d(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$ $R_G = 1\ \Omega$ (External),		45	ns
t_r			60	ns
$t_{d(off)}$			120	ns
t_f			45	ns
$Q_{g(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$		330	nC
Q_{gs}			55	nC
Q_{gd}			155	nC
R_{thJC}	TO-264 AA		0.22	K/W
R_{thCK}	TO-264 AA		0.15	K/W
R_{thJC}	miniBLOC, SOT-227 B		0.21	K/W
R_{thCK}	miniBLOC, SOT-227 B		0.05	K/W

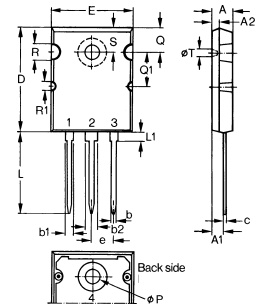
Source-Drain Diode

($T_J = 25^\circ\text{C}$, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values		
		Min.	Typ.	Max.
I_S	$V_{GS} = 0$	55N50 50N50		55 50 A
I_{SM}	Repetitive; pulse width limited by T_{JM}	55N50 50N50		220 200 A
V_{SD}	$I_F = 100\text{ A}, V_{GS} = 0\text{ V},$ Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$			1.5 V
t_{rr}	$I_F = 50\text{ A}, -di/dt = 100\text{ A}/\mu\text{s}, V_R = 100\text{ V}$		209	ns
Q_{RM}			1.4	μC
I_{RM}			13	A

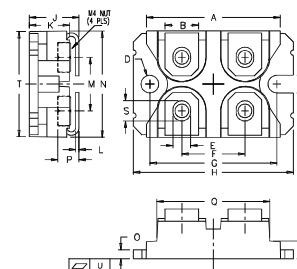
Notes: 1. $R_{GS} = 1\text{ M}\Omega$
2. Pulse width limited by T_{JM} .

TO-264 AA Outline



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.82	5.13	.190	.202
A1	2.54	2.89	.100	.114
A2	2.00	2.10	.079	.083
b	1.12	1.42	.044	.056
b1	2.39	2.69	.094	.106
b2	2.90	3.09	.114	.122
c	0.53	0.83	.021	.033
D	25.91	26.16	1.020	1.030
E	19.81	19.96	.780	.786
e	5.46	BSC	.215	BSC
J	0.00	0.25	.000	.010
K	0.00	0.25	.000	.010
L	20.32	20.83	.800	.820
L1	2.29	2.59	.090	.102
P	3.17	3.66	.125	.144
Q	6.07	6.27	.239	.247
Q1	8.38	8.69	.330	.342
R	3.81	4.32	.150	.170
R1	1.78	2.29	.070	.090
S	6.04	6.30	.238	.248
T	1.57	1.83	.062	.072

miniBLOC, SOT-227 B



M4 screws (4x) supplied

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	31.50	31.88	1.240	1.255
B	7.80	8.20	0.307	0.323
C	4.09	4.29	0.161	0.169
D	4.09	4.29	0.161	0.169
E	4.09	4.29	0.161	0.169
F	14.91	15.11	0.587	0.595
G	30.12	30.30	1.186	1.193
H	38.00	38.23	1.496	1.505
J	11.68	12.22	0.460	0.481
K	8.92	9.60	0.351	0.378
L	0.76	0.84	0.030	0.033
M	12.60	12.85	0.496	0.506
N	25.15	25.42	0.990	1.001
O	1.98	2.13	0.078	0.084
P	4.95	5.97	0.195	0.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	0.155	0.174
S	4.72	4.85	0.186	0.191
T	24.59	25.07	0.968	0.987
U	-0.05	0.1	-0.002	0.004

Figure 1. Output Characteristics at 25°C

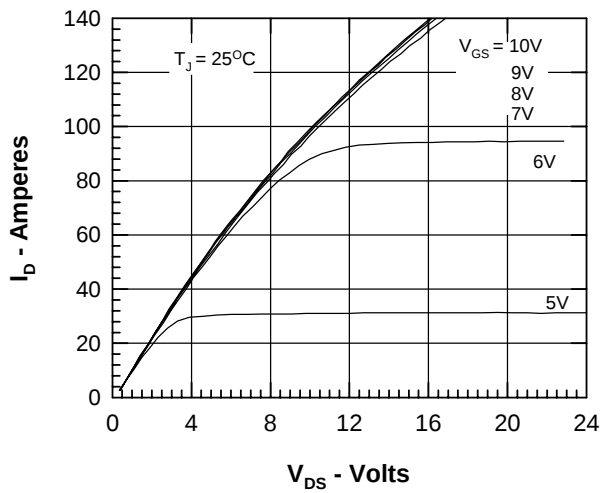


Figure 2. Output Characteristics at 125°C

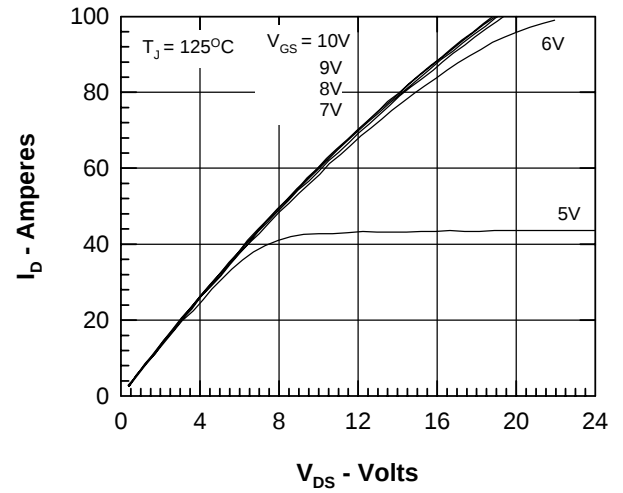
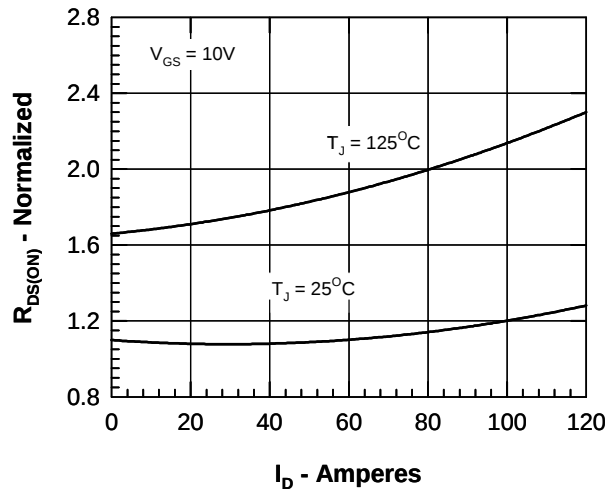
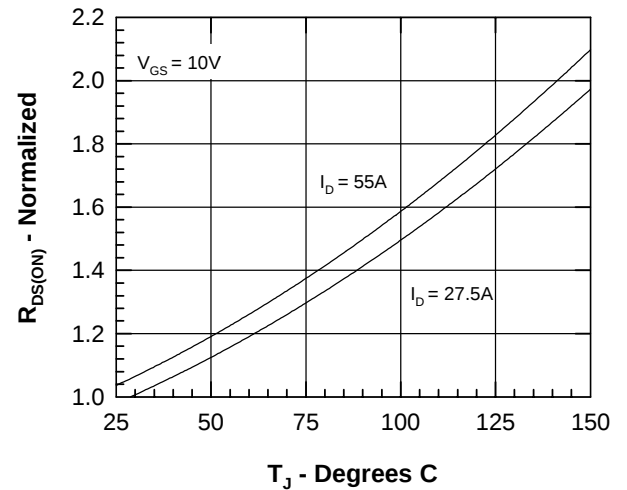

 Figure 3. $R_{DS(on)}$ normalized to 0.5 I_{D25} value vs. I_D

 Figure 4. $R_{DS(on)}$ normalized to 0.5 I_{D25} value vs. T_J


Figure 5. Drain Current vs. Case Temperature

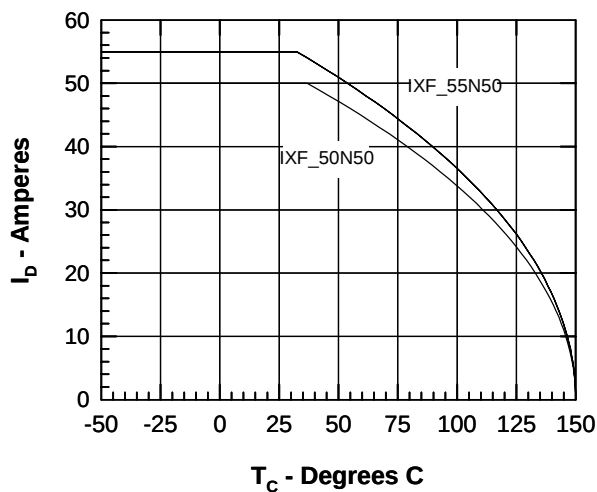


Figure 6. Admittance Curves

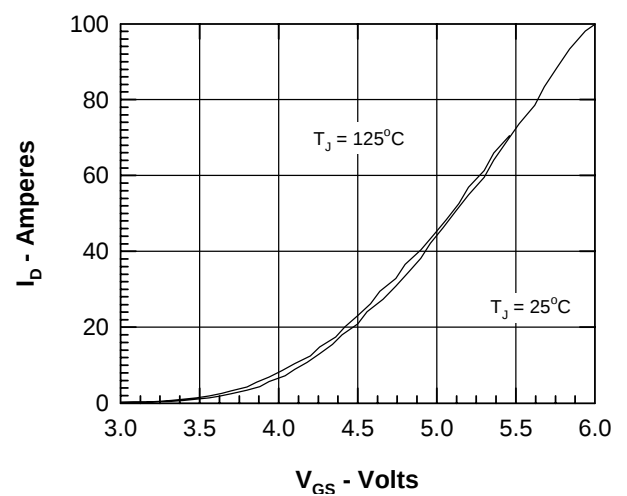


Figure 7. Gate Charge

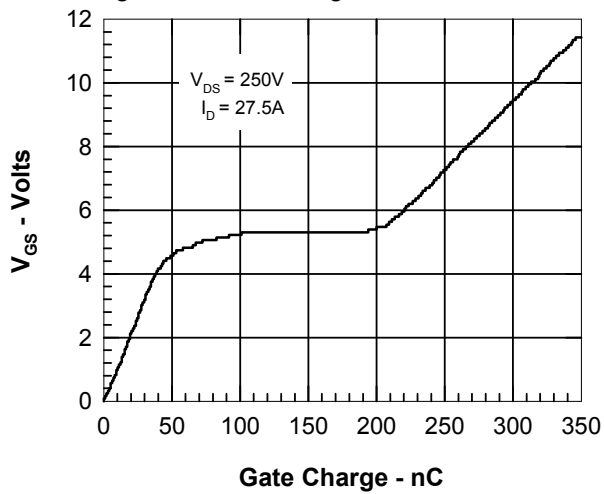


Figure 8. Capacitance Curves

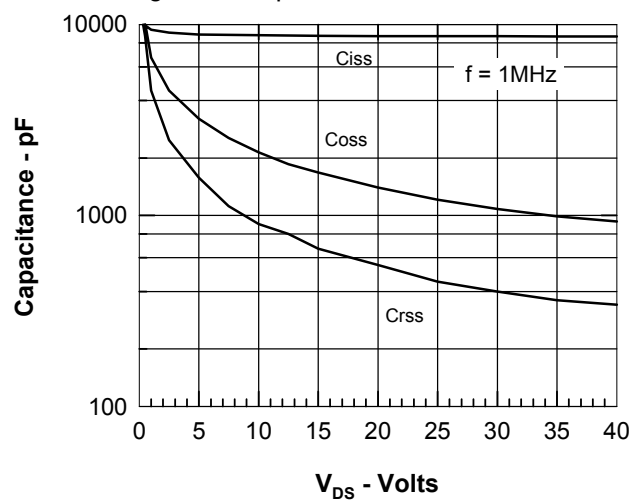


Figure 9. Forward Voltage Drop of the Intrinsic Diode

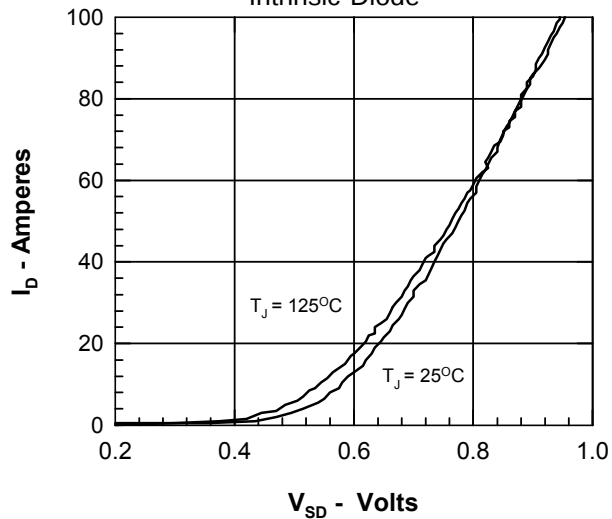


Figure 10. Transient Thermal Resistance

