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Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V_{DSS}	-20	V
Gate-Source Voltage			V_{GSS}	±8	V
Continuous Drain Current (Note 5) V_{GS} = -4.5V	Steady State	T_A = +25°C T_A = +70°C	I_D	-330 -260	mA
Pulsed Drain Current (Note 6)			I_{DM}	1.5	A

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Units
Total Power Dissipation (Note 5)	Steady state	P_D	360	mW
Thermal Resistance, Junction to Ambient (Note 5)	Steady state	$R_{\theta JA}$	353	°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV_{DSS}	-20	—	—	V	V_{GS} = 0V, I_D = -250µA
Zero Gate Voltage Drain Current @T_C = +25°C	I_{DSS}	—	—	100	nA	V_{DS} = -16V, V_{GS} = 0V
Gate-Source Leakage	I_{GSS}	—	—	±10	µA	V_{GS} = ±8V, V_{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	$V_{GS(th)}$	-0.3	—	-1.0	V	V_{DS} = V_{GS}, I_D = -250µA
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	—	0.5	1.0	Ω	V_{GS} = -4.5V, I_D = -200mA
		—	0.6	1.2		V_{GS} = -2.5V, I_D = -100mA
		—	0.8	1.6		V_{GS} = -1.8V, I_D = -50mA
		—	1.0	3.0		V_{GS} = -1.5V, I_D = -10mA
Diode Forward Voltage	V_{SD}	—	—	-1.0	V	V_{GS} = 0V, I_S = -10mA
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C_{iss}	—	49	—	pF	V_{DS} = -15V, V_{GS} = 0V, f = 1.0MHz
Output Capacitance	C_{oss}	—	6.5	—	pF	
Reverse Transfer Capacitance	C_{rss}	—	5.0	—	pF	
Total Gate Charge	Q_g	—	0.8	—	nC	V_{GS} = -4.5V, V_{DS} =- 10V, I_D = -200mA
Gate-Source Charge	Q_{gs}	—	0.1	—	nC	
Gate-Drain Charge	Q_{gd}	—	0.2	—	nC	
Turn-On Delay Time	$t_{D(on)}$	—	10.3	—	ns	V_{DD} = -15V, V_{GS} = -4.5V, R_G = 2Ω, I_D = -200mA
Turn-On Rise Time	t_r	—	37.3	—	ns	
Turn-Off Delay Time	$t_{D(off)}$	—	330	—	ns	
Turn-Off Fall Time	t_f	—	163	—	ns	

Notes: 5. Device mounted on FR-4 PCB, with minimum recommended pad layout.
6. Device mounted on minimum recommended pad layout test board, 10µs pulse duty cycle = 1%.
7. Short duration pulse test used to minimize self-heating effect.
8. Guaranteed by design. Not subject to product testing.

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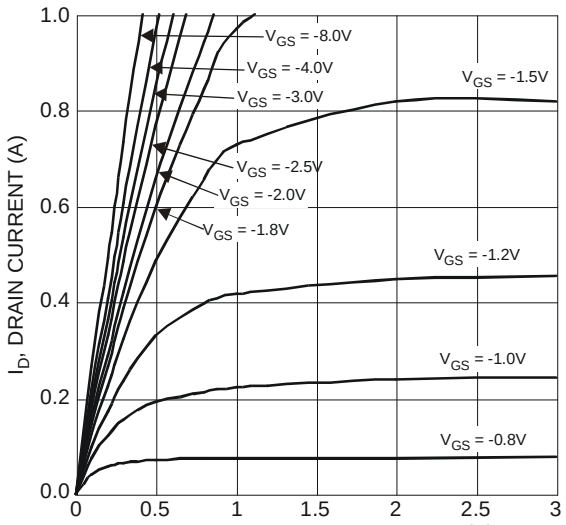

Figure 1 Typical Output Characteristics

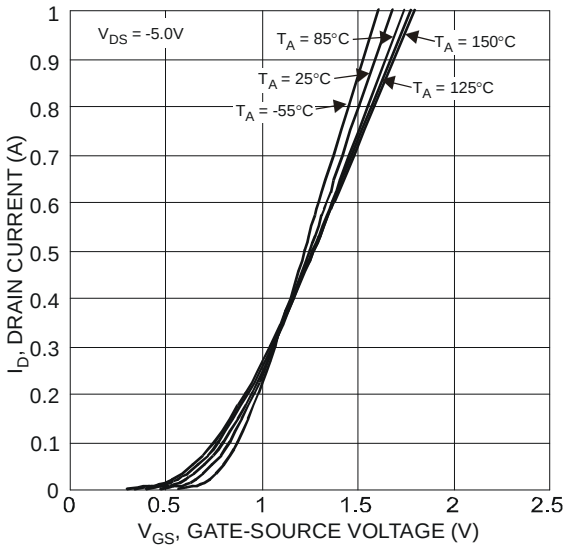

Figure 2 Typical Transfer Characteristics

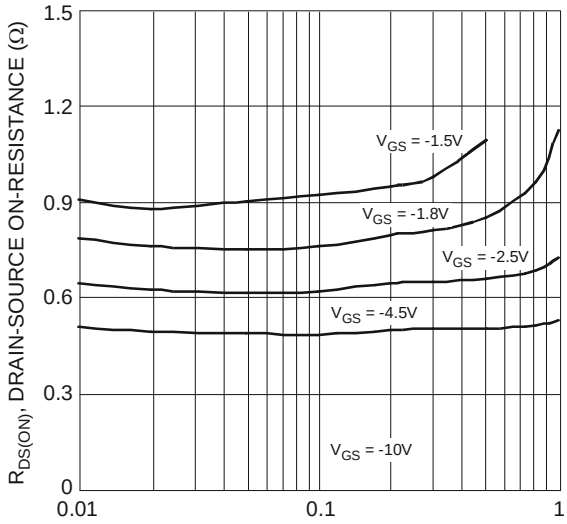

Figure 3 Typical On-Resistance vs. Drain Current and Gate Voltage

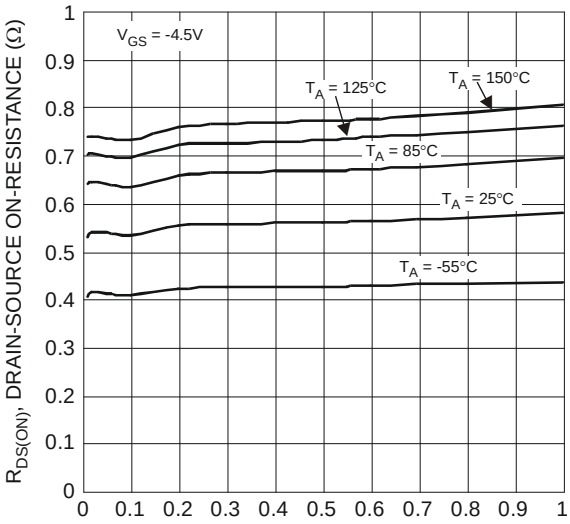

Figure 4 Typical On-Resistance vs. Drain Current and Temperature

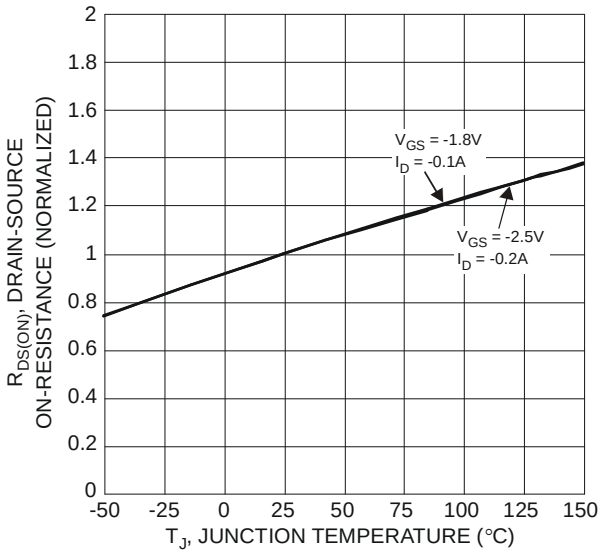

Figure 5 On-Resistance Variation with Temperature

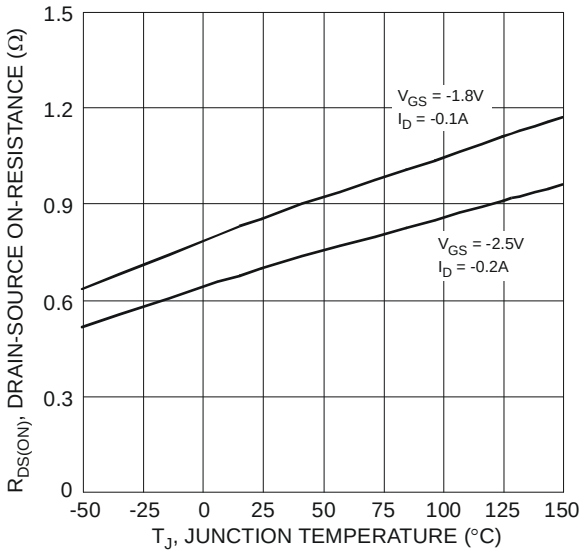

Figure 6 On-Resistance Variation with Temperature

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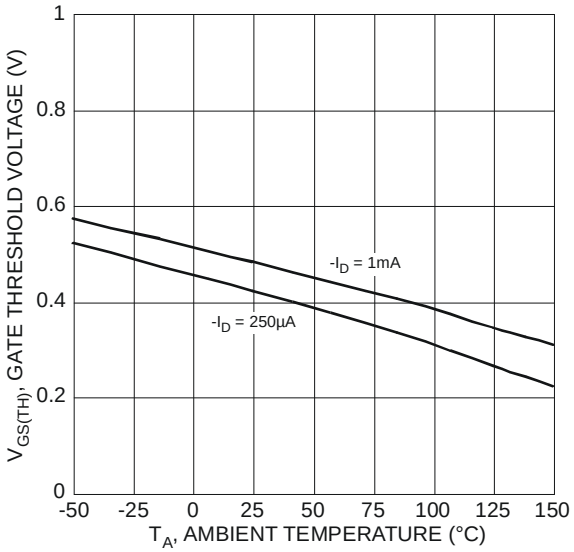

Figure 7 Gate Threshold Variation vs. Ambient Temperature

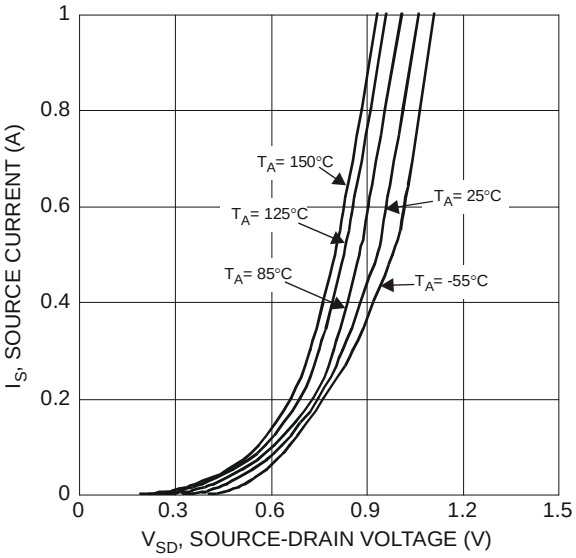

Figure 8 Diode Forward Voltage vs. Current

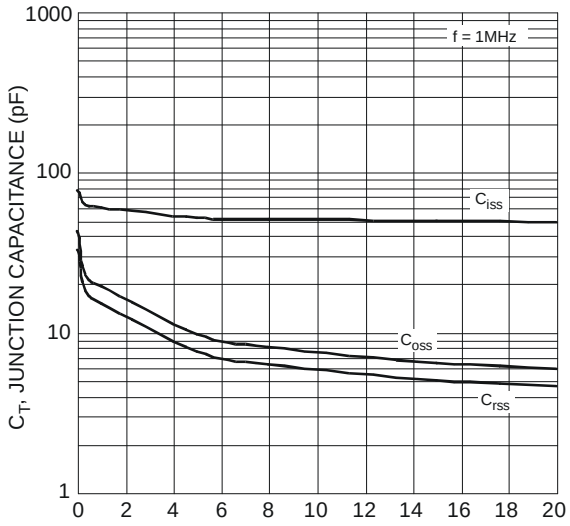

Figure 9 ypical Junction Capacitance

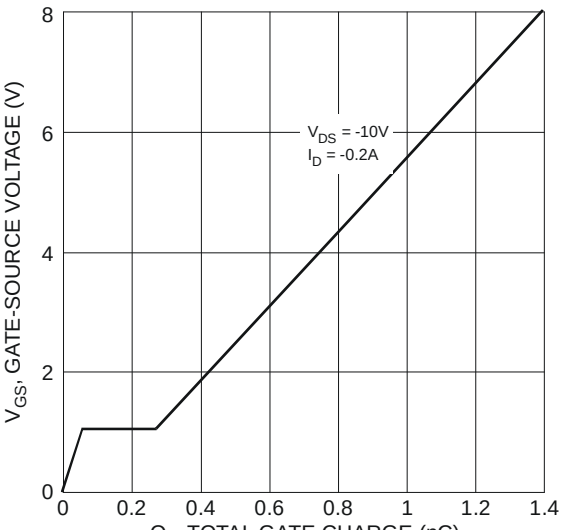

Figure 10 Gate-Charge Characteristics

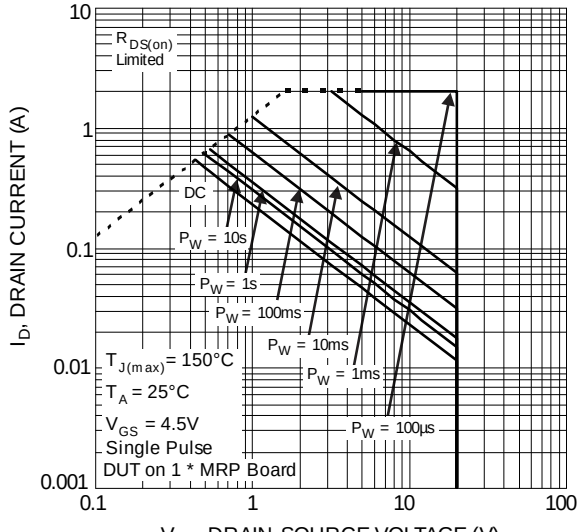

Figure 11 SOA, Safe Operation Area

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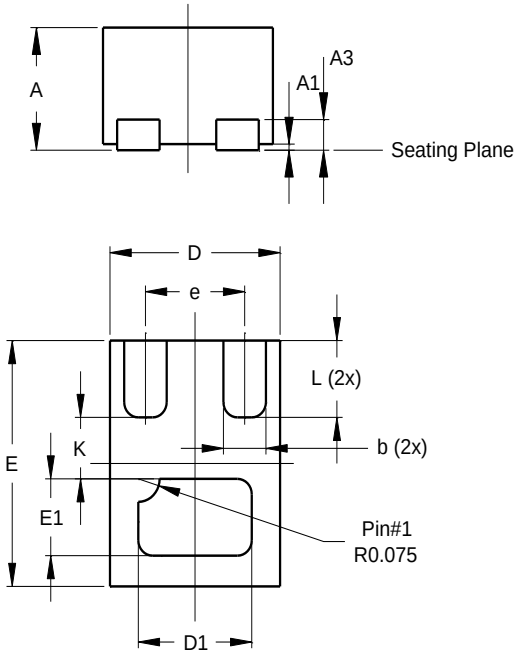
Package Outline Dimensions

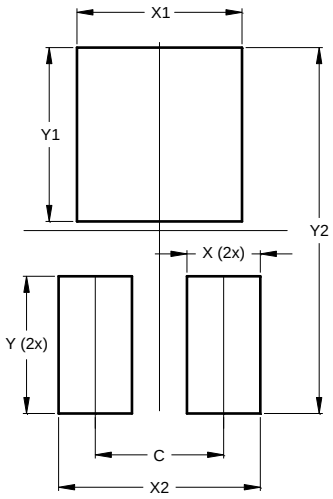
Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



X2-DFN0806-3			
Dim	**Min**	**Max**	**Typ**
A	0.375	0.40	0.39
A1	0	0.05	0.02
A3	-	-	0.10
b	0.10	0.20	0.15
D	0.55	0.65	0.60
D1	0.35	0.45	0.40
E	0.75	0.85	0.80
E1	0.20	0.30	0.25
e	-	-	0.35
K	-	-	0.20
L	0.20	0.30	0.25
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
C	0.350
X	0.200
X1	0.450
X2	0.550
Y	0.375
Y1	0.475
Y2	1.000

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