

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

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V _{DSS}	-25	V
Gate-Source Voltage			V _{GSS}	-8	V
Continuous Drain Current (Note 6) V _{GS} = -4.5V	Steady State	T _A = +25°C T _A = +70°C	I _D	-0.17 -0.14	A
Continuous Drain Current (Note 6) V _{GS} = -2.7V	Steady State	T _A = +25°C T _A = +70°C	I _D	-0.15 -0.12	A
Pulsed Drain Current T _P ≤ 300μs, Duty Cycle = 2%			I _{DM}	-0.5	A

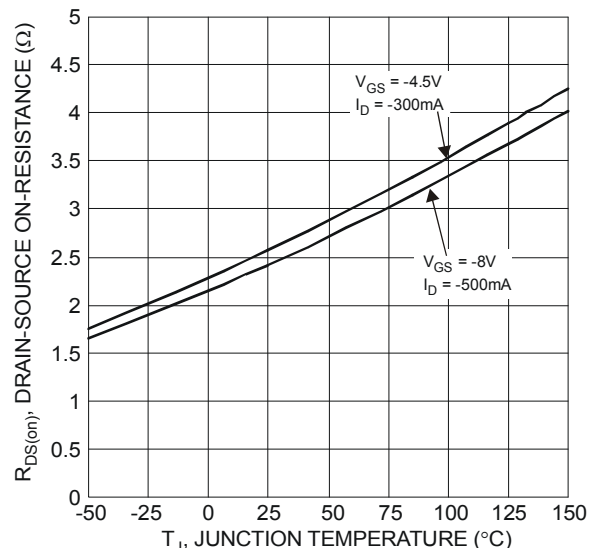
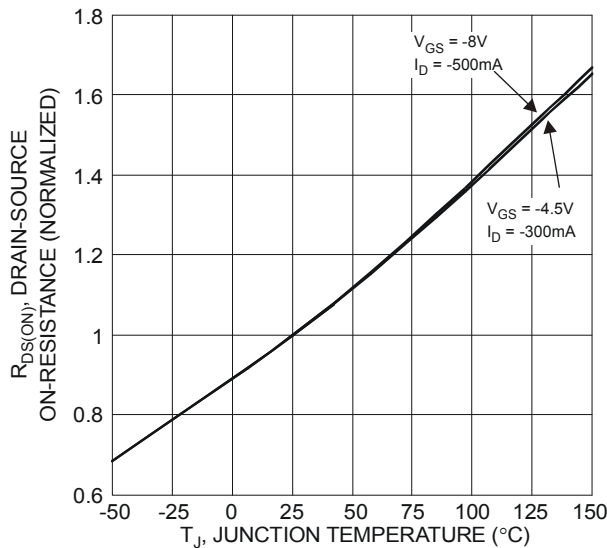
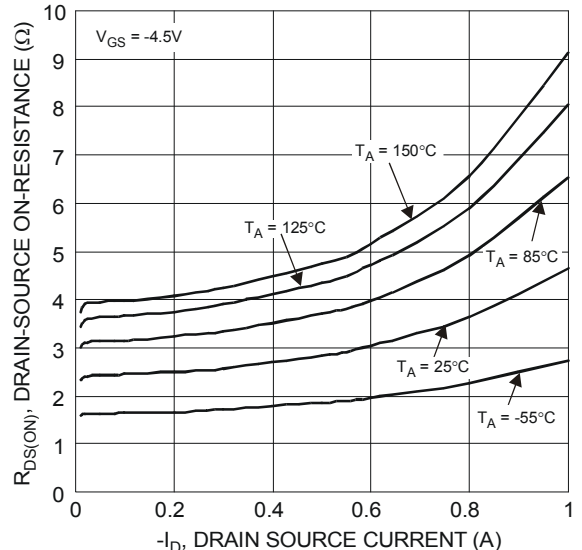
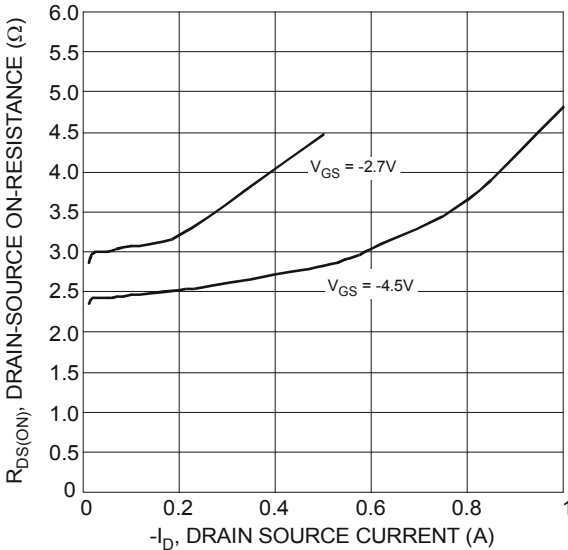
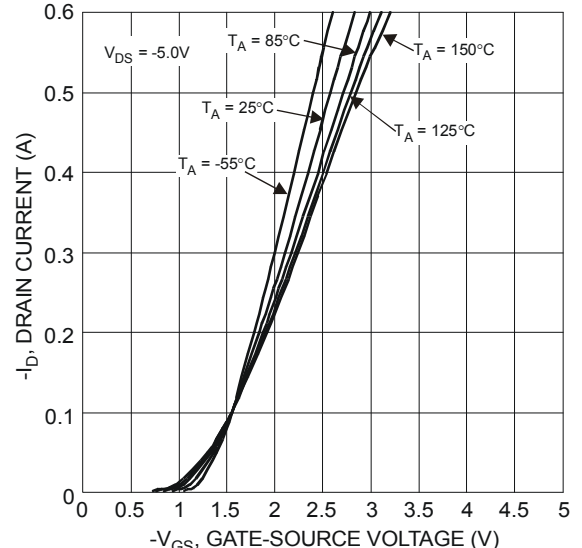
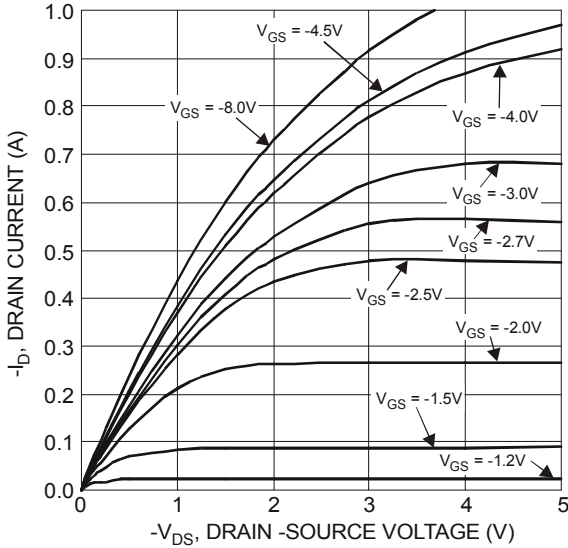
Thermal Characteristics

Characteristic		Symbol	Value	Units
Total Power Dissipation	(Note 5)	P _D	0.33	W
	(Note 6)		0.45	
Thermal Resistance, Junction to Ambient	(Note 5)	R _{θJA}	376	°C/W
	(Note 6)		275	
Thermal Resistance, Junction to Case	(Note 6)	R _{θJC}	81	
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}	-25	—	—	V	V _{GS} = 0V, I _D = -250μA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	-1	μA	V _{DS} = -20V, V _{GS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	-100	nA	V _{GS} = -8V, V _{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	V _{GS(th)}	-0.65	-0.96	-1.5	V	V _{DS} = V _{GS} , I _D = -250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	2.5	10	Ω	V _{GS} = -4.5V, I _D = -0.2A
		—	3	13		V _{GS} = -2.7V, I _D = -0.05A
Forward Transfer Admittance	Y _{fs}	—	189	—	ms	V _{DS} = -5V, I _D = -0.2A
Diode Forward Voltage (Note 7)	V _{SD}	—	—	-1.5	V	V _{GS} = 0V, I _S = -0.2A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	27.2	—	pF	V _{DS} = -10V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	6.1	—		
Reverse Transfer Capacitance	C _{rss}	—	1.7	—		
Total Gate Charge	Q _g	—	0.35	—	nC	V _{DS} = -5V, I _D = -0.2A, V _{GS} = -4.5V,
Gate-Source Charge	Q _{gs}	—	0.08	—		
Gate-Drain Charge	Q _{gd}	—	0.06	—		
Turn-On Delay Time	t _{d(on)}	—	4.5	—	ns	V _{GS} = -4.5V, V _{DD} = -6V I _D = -0.2A, R _G = 50Ω
Rise Time	t _r	—	2.3	—		
Turn-Off Delay Time	t _{d(off)}	—	24.1	—		
Fall Time	t _f	—	11.0	—		

- Notes:
- Device mounted on FR-4 PC board, with minimum recommended pad layout, single sided.
 - Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper pad layout
 - Short duration pulse test used to minimize self-heating effect.
 - Guaranteed by design. Not subject to production testing.



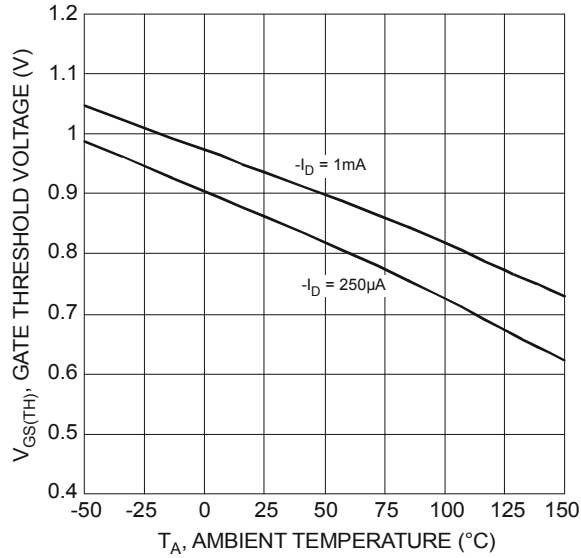


Figure 7 Gate Threshold Variation vs. Ambient Temperature

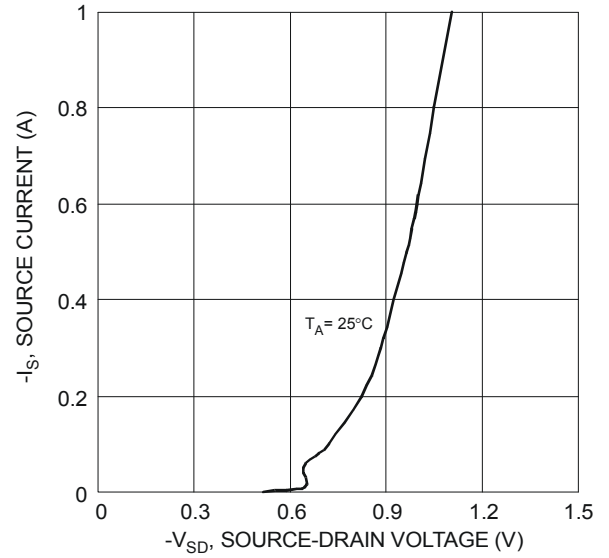


Figure 8 Diode Forward Voltage vs. Current

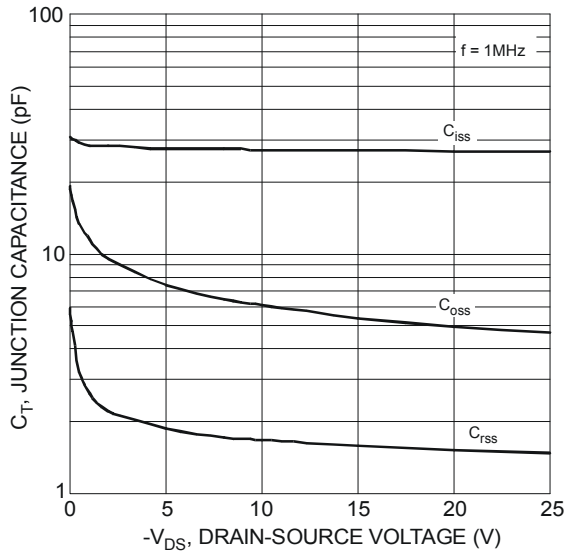


Figure 9 Typical Junction Capacitance

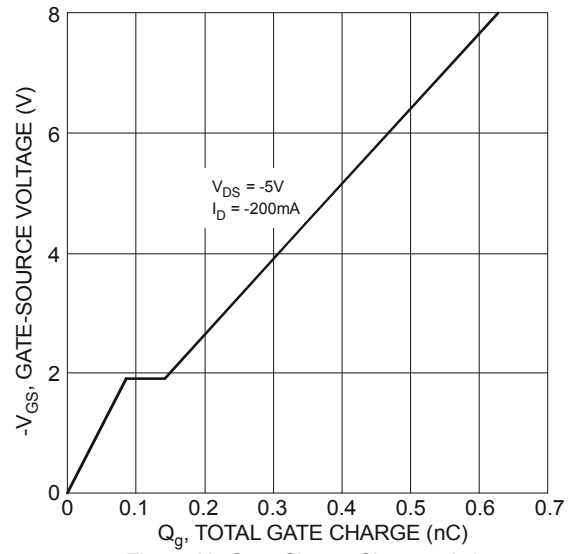


Figure 10 Gate-Charge Characteristics

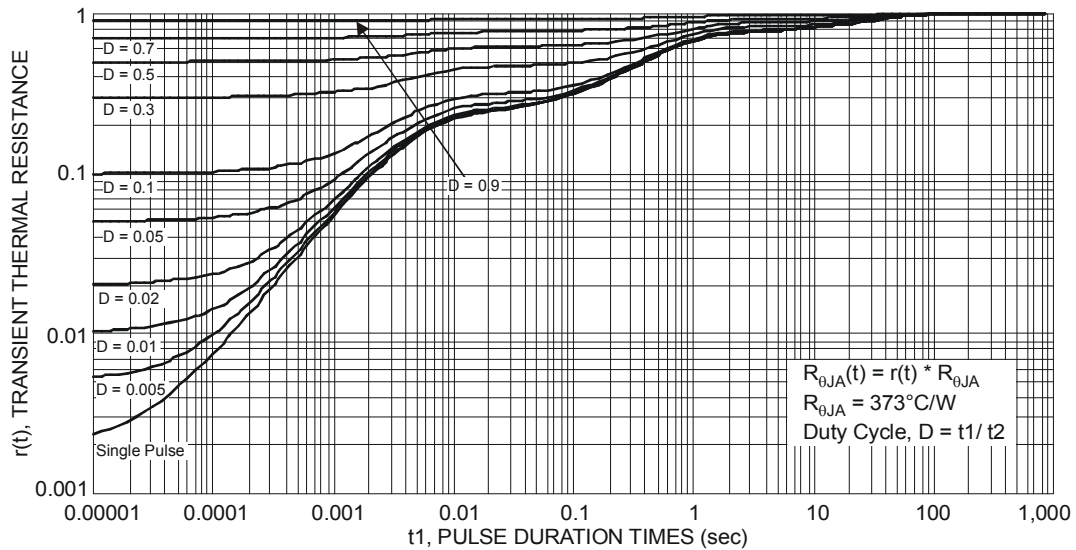
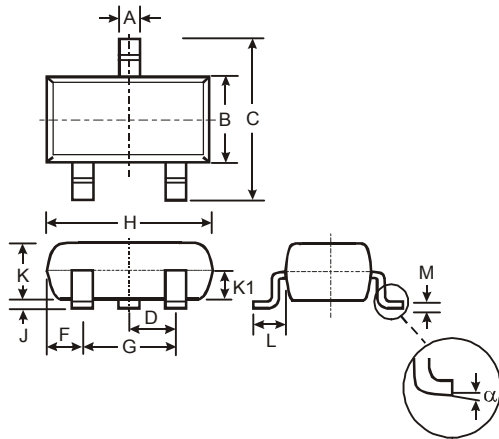


Figure 11 Transient Thermal Resistance

Package Outline Dimensions

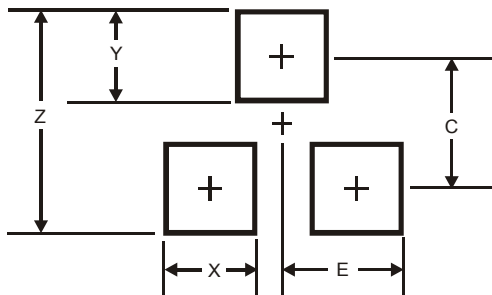
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.903	1.10	1.00
K1	-	-	0.400
L	0.45	0.61	0.55
M	0.085	0.18	0.11
α	0°	8°	-
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)
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

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