

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

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V _{DSS}	300	V
Gate-Source Voltage			V _{GSS}	±20	V
Continuous Drain Current (Note 6) V _{GS} = 10V	Steady State	T _A = +25°C T _A = +70°C	I _D	0.21 0.16	A
Pulsed Drain Current (10μs pulse, duty cycle ≤1%)			I _{DM}	1	A
Maximum Body Diode Continuous Current (Note 6)			I _S	2	A

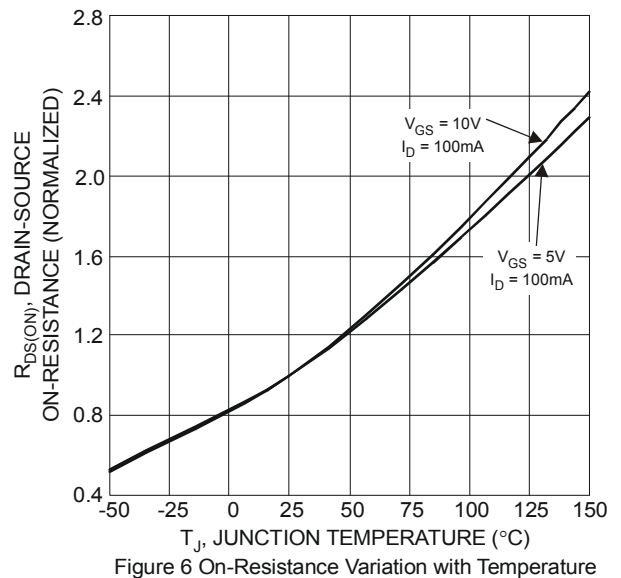
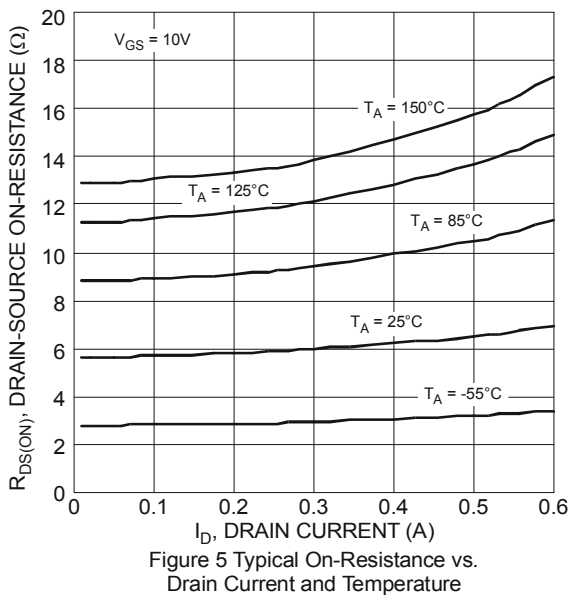
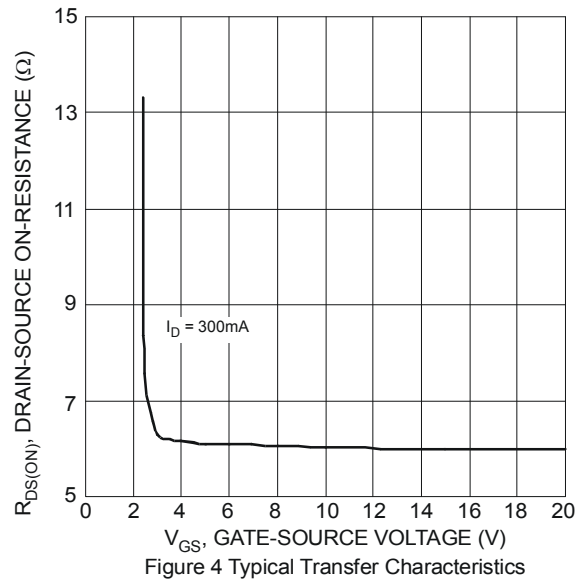
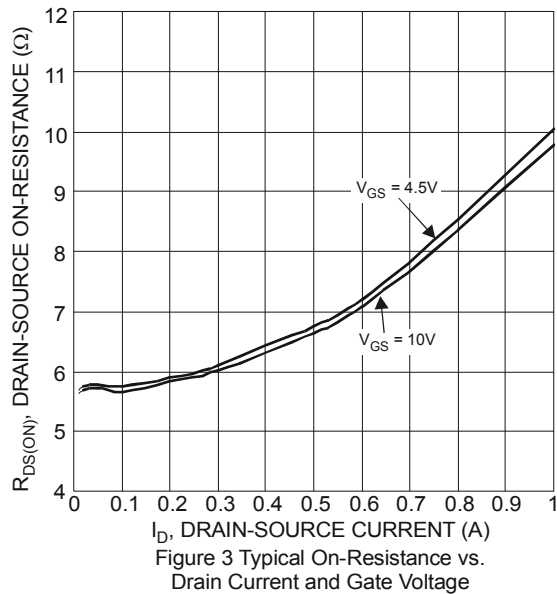
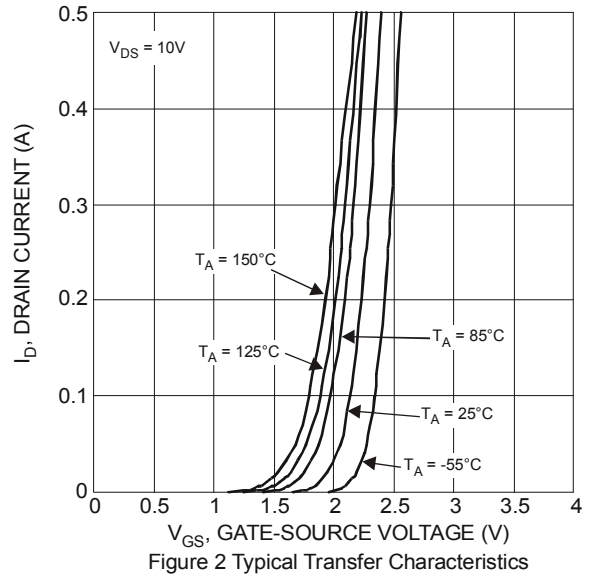
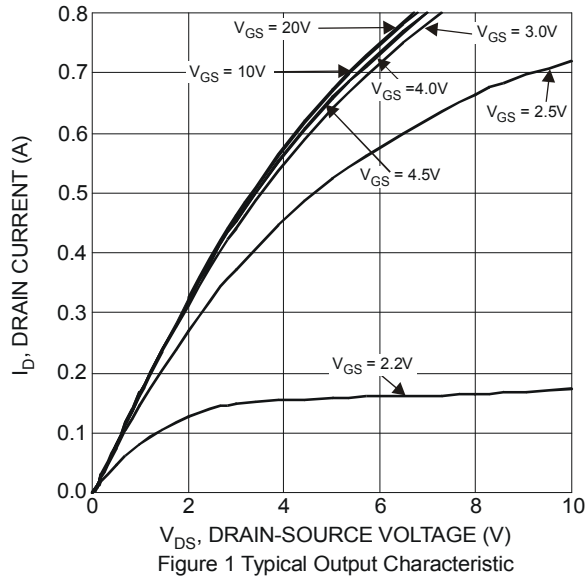
Thermal Characteristics

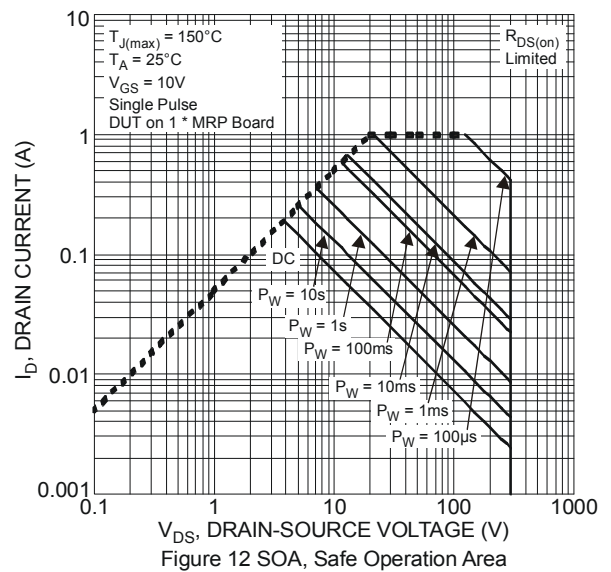
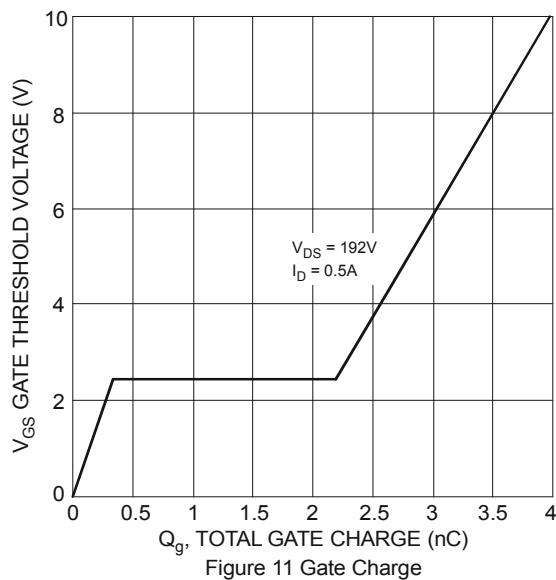
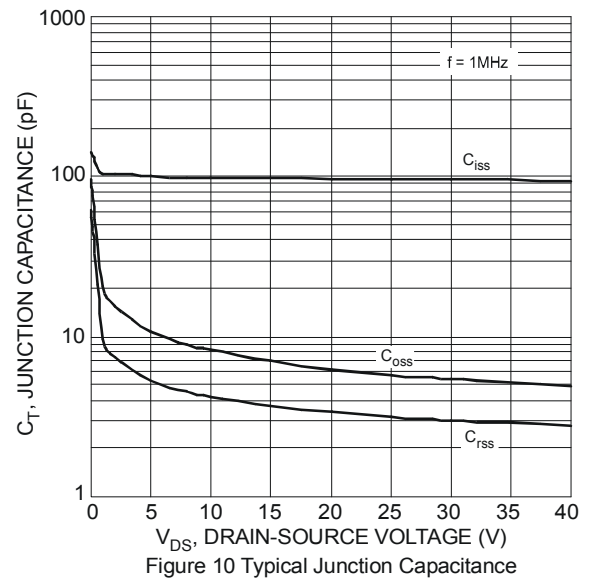
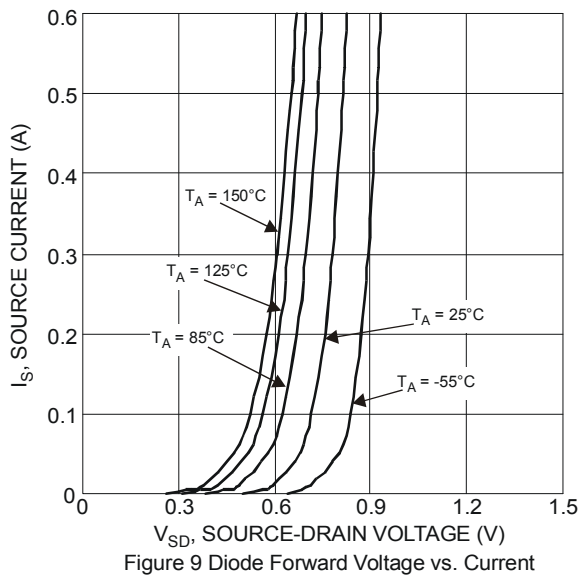
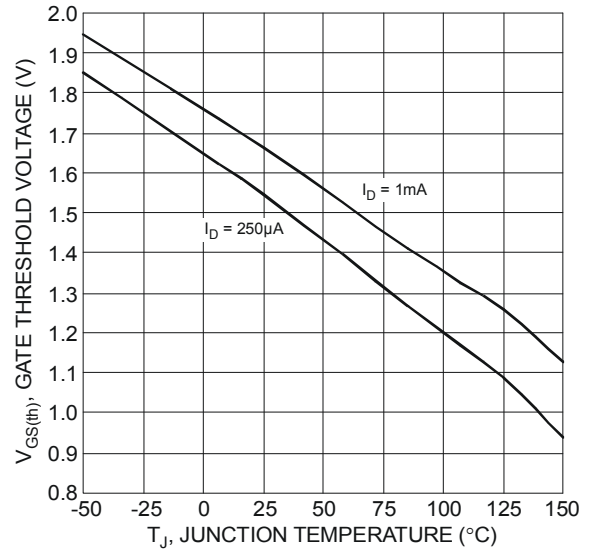
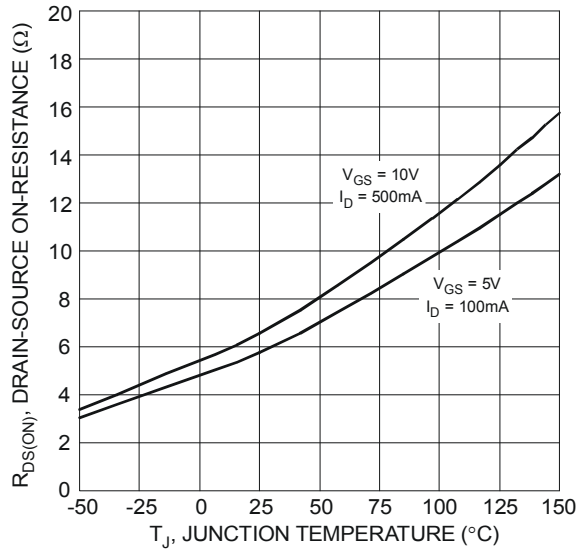
Characteristic		Symbol	Value	Units
Total Power Dissipation	(Note 5)	P _D	0.9	W
	(Note 6)		2.2	
Thermal Resistance, Junction to Ambient	(Note 5)	R _{θJA}	132	°C/W
	(Note 6)		55	
Thermal Resistance, Junction to Case	(Note 6)	R _{θJC}	9.6	
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150	°C

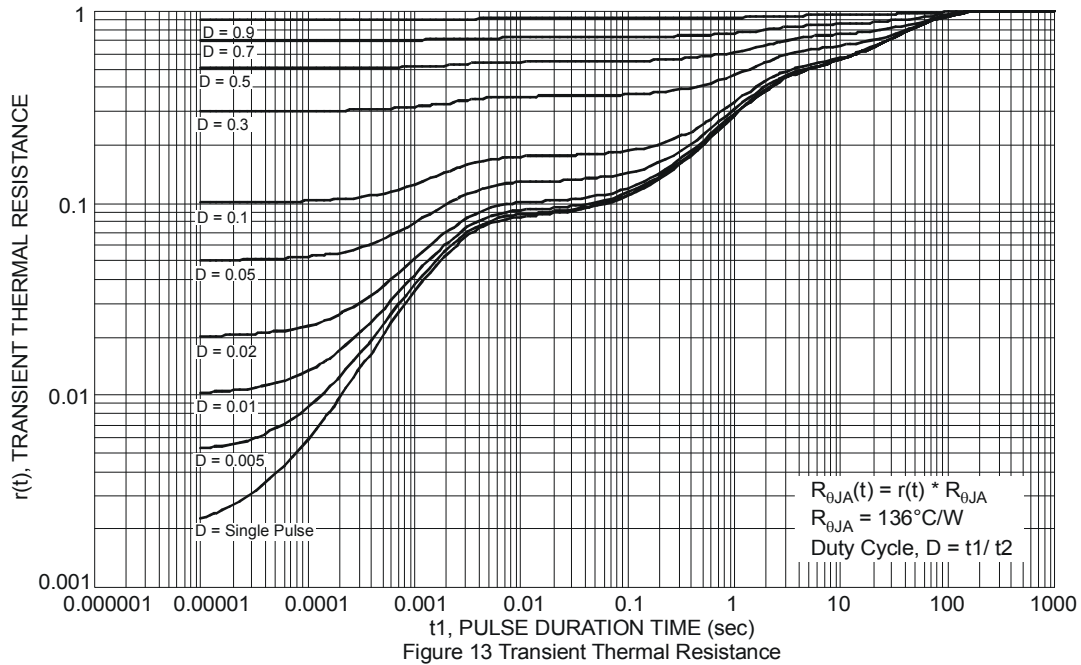
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV _{DSS}	300	—	—	V	V _{GS} = 0V, I _D = 250μA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	1	μA	V _{DS} = 240V, V _{GS} = 0V
Gate-Body Leakage	I _{GSS}	—	—	±100	nA	V _{GS} = ±20V, V _{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	V _{GS(th)}	1	—	3	V	V _{DS} = V _{GS} , I _D = 250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	6	14	Ω	V _{GS} = 10V, I _D = 0.3A
		—	6	20		V _{GS} = 4.5V, I _D = 0.2A
Diode Forward Voltage	V _{SD}	—	0.7	1.2	V	V _{GS} = 0V, I _S = 0.3A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	96	—	pF	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz
Output Capacitance	C _{oss}	—	5.8	—		
Reverse Transfer Capacitance	C _{rss}	—	3.2	—		
Gate Resistance	R _G	—	12	—	Ω	V _{DS} = 0V, V _{GS} = 0V, f = 1.0MHz
Total Gate Charge	Q _g	—	4	—	nC	V _{DS} = 192V, V _{GS} = 10V, I _D = 0.5A
Gate-Source Charge	Q _{gs}	—	0.3	—		
Gate-Drain Charge	Q _{gd}	—	1.9	—		
Turn-On Delay Time	t _{D(on)}	—	3.3	—	nS	V _{DS} = 60V, R _L = 200Ω, V _{GS} = 10V, R _G = 25Ω
Turn-On Rise Time	t _r	—	8.6	—		
Turn-Off Delay Time	t _{D(off)}	—	22	—		
Turn-Off Fall Time	t _f	—	12	—		
Reverse Recovery Time	t _{rr}	—	43	—	nS	V _R = 100V, I _F = 1.0A, di/dt = 100A/μs
Reverse Recovery Charge	Q _{rr}	—	47	—	nC	

- 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 thermal bias to bottom layer 1inch square copper plate
 - Short duration pulse test used to minimize self-heating effect
 - Guaranteed by design. Not subject to production testing

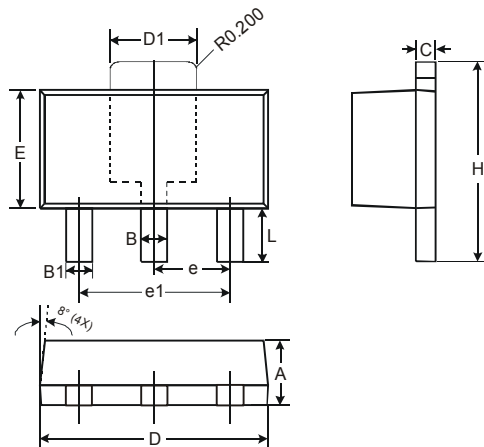






Package Outline Dimensions

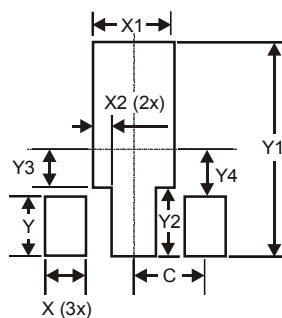
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SOT89		
Dim	Min	Max
A	1.40	1.60
B	0.44	0.62
B1	0.35	0.54
C	0.35	0.43
D	4.40	4.60
D1	1.52	1.83
E	2.29	2.60
e	1.50 Typ	
e1	3.00 Typ	
H	3.94	4.25
L	0.89	1.20
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)
X	0.900
X1	1.733
X2	0.416
Y	1.300
Y1	4.600
Y2	1.475
Y3	0.950
Y4	1.125
C	1.500

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