

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

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V _{DSS}	30	V
Gate-Source Voltage			V _{GSS}	±12	V
Continuous Drain Current (Note 6) V _{GS} = 4.5V	Steady State	T _A = +25°C	I _D	2.6	A
		T _A = +70°C		2.1	
Pulsed Drain Current (10µs pulse, duty cycle = 1%)			I _{DM}	10	A

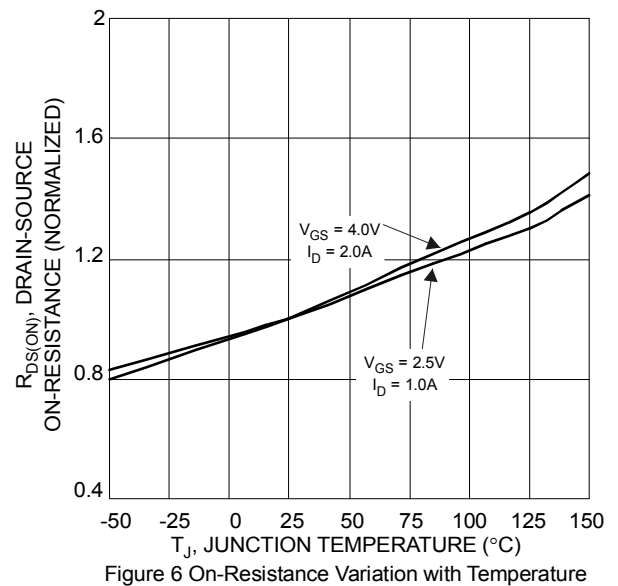
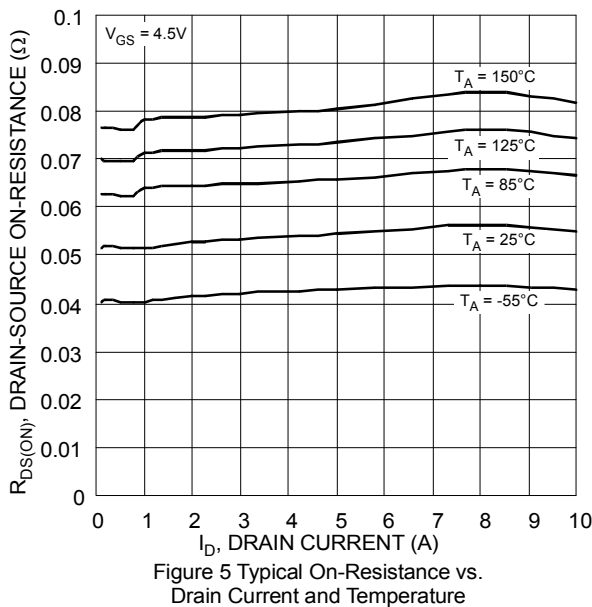
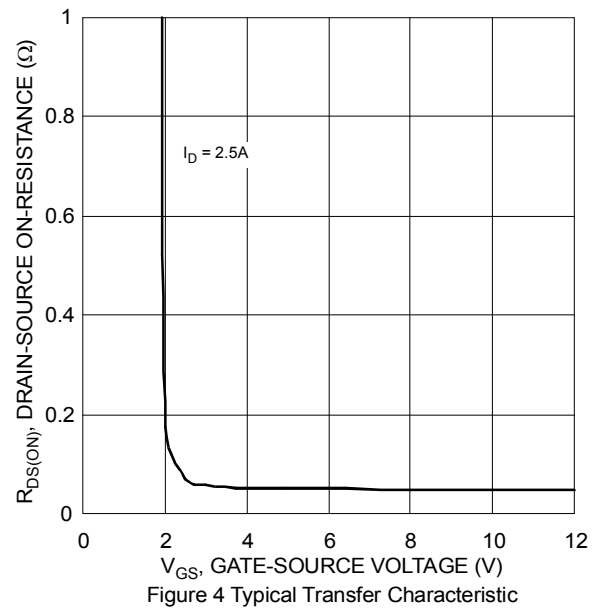
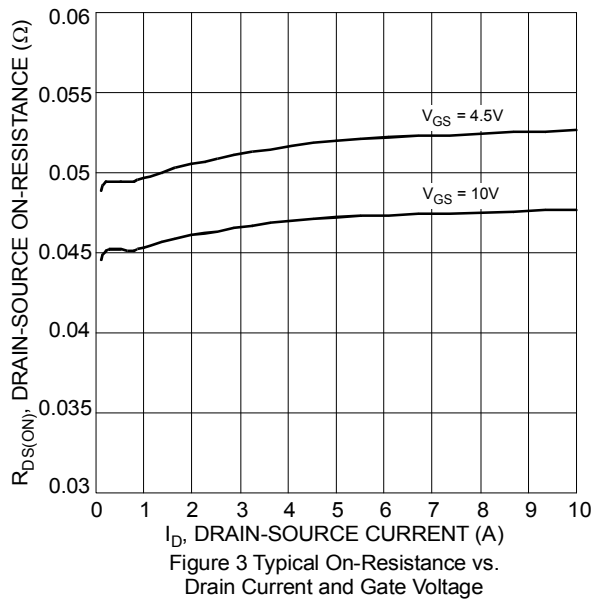
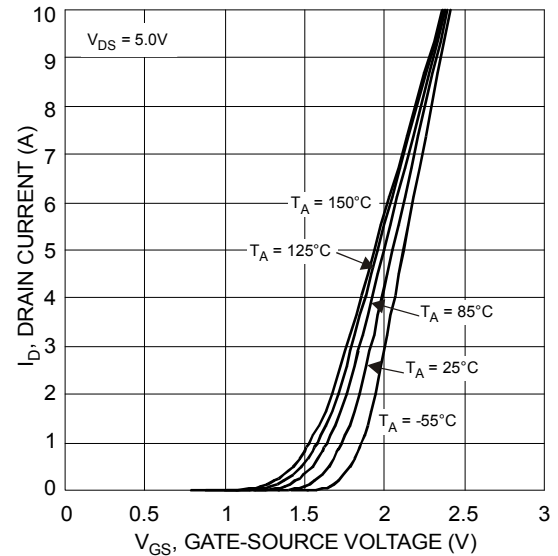
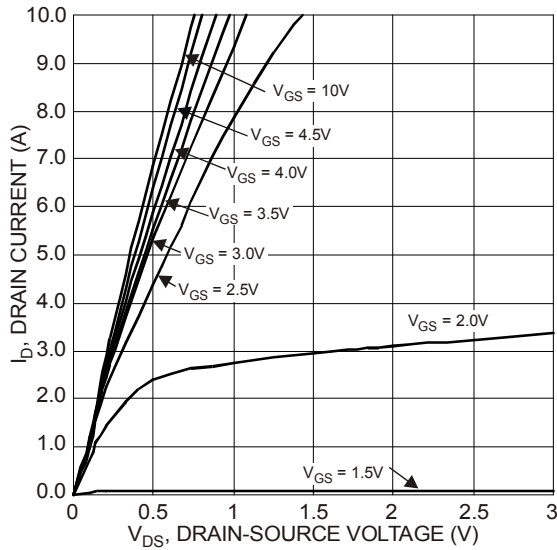
Thermal Characteristics

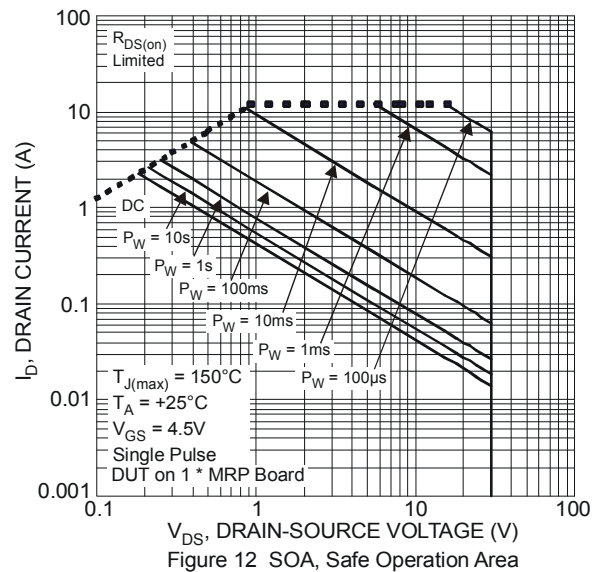
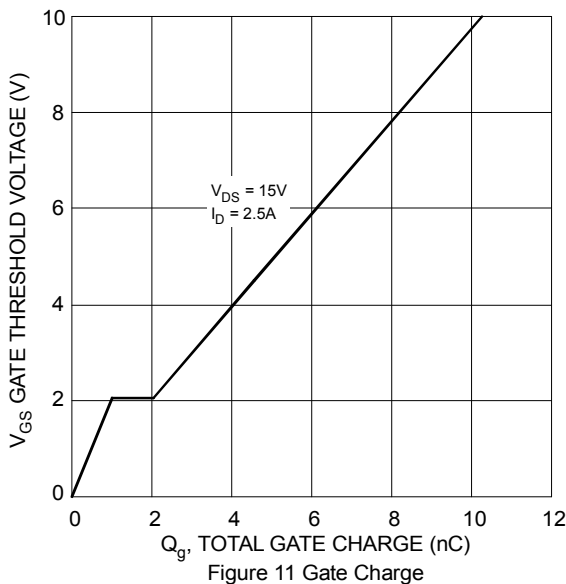
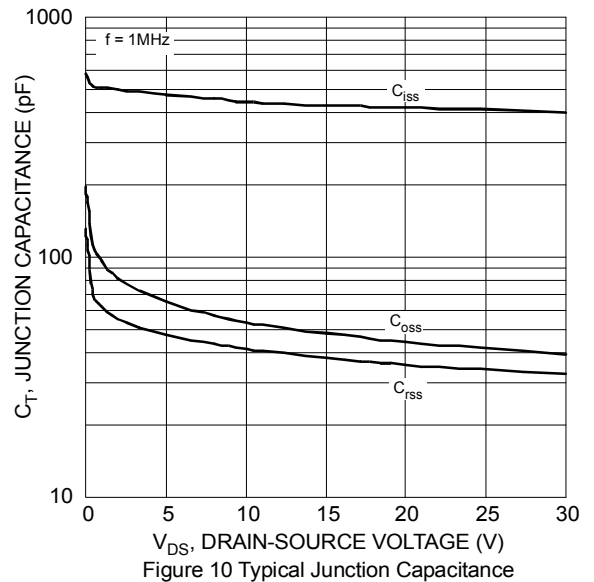
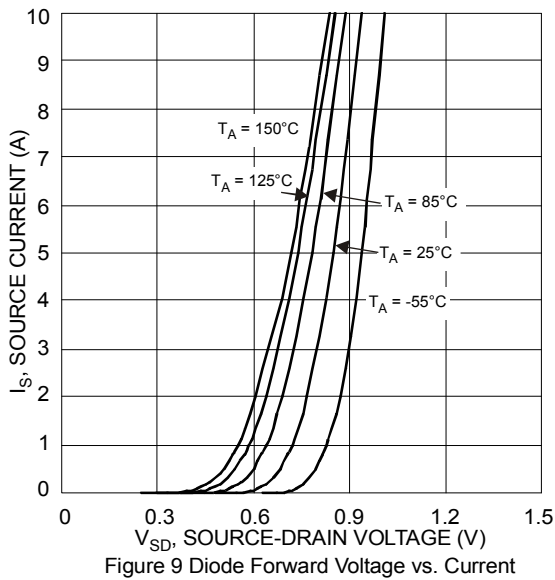
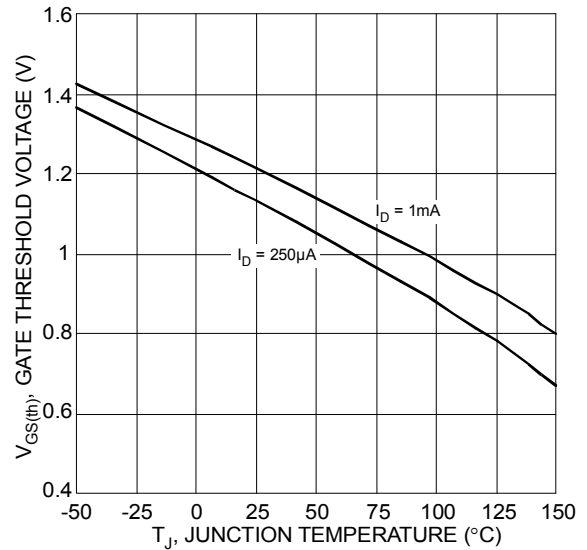
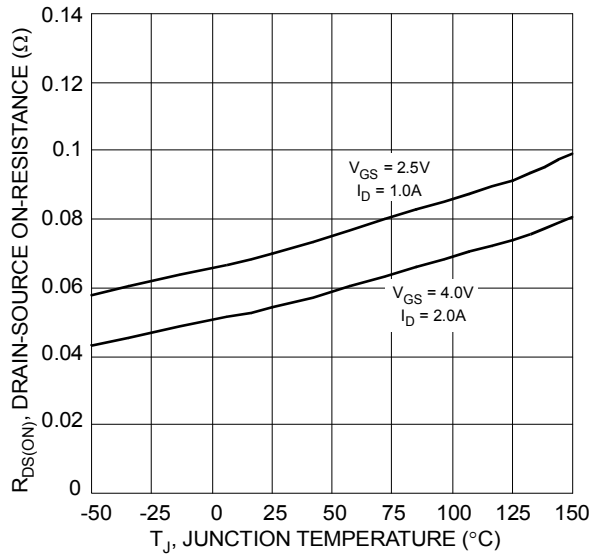
Characteristic		Symbol	Value	Units
Total Power Dissipation	(Note 5)	P _D	0.5	W
	(Note 6)		1.1	
Thermal Resistance, Junction to Ambient	(Note 5)	R _{θJA}	241	°C/W
	(Note 6)		130	
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150	°C

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}	30	—	—	V	V _{GS} = 0V, I _D = 250µA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	1	µA	V _{DS} = 30V, V _{GS} = 0V
Gate-Body Leakage	I _{GSS}	—	—	±10	µA	V _{GS} = ±12V, V _{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	V _{GS(th)}	0.5	—	1.5	V	V _{DS} = V _{GS} , I _D = 250µA
Static Drain-Source On-Resistance	R _{DS(on)}	—	48	67	mΩ	V _{GS} = 4.5V, I _D = 2.5A
		—	50	70		V _{GS} = 4.0V, I _D = 2.5A
		—	70	98		V _{GS} = 2.5V, I _D = 2.5A
Diode Forward Voltage	V _{SD}	—	—	1.2	V	V _{GS} = 0V, I _S = 0.6A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	447	—	pF	V _{DS} = 10V, V _{GS} = 0V, f = 1.0MHz
Output Capacitance	C _{oss}	—	54	—		
Reverse Transfer Capacitance	C _{rss}	—	41	—		
Gate Resistance	R _G	—	23	—	Ω	V _{DS} = 0V, V _{GS} = 0V, f = 1.0MHz
Total Gate Charge	Q _g	—	4.6	—	nC	V _{GS} = 4.5V, V _{DS} = 15V, I _D = 2.5A
Gate-Source Charge	Q _{gs}	—	1.0	—		
Gate-Drain Charge	Q _{gd}	—	1.0	—		
Turn-On Delay Time	t _{D(on)}	—	3.8	—	nS	V _{DD} = 15V, I _D = 1.25A, V _{GEN} = 4.5V, R _{GEN} = 10Ω
Turn-On Rise Time	t _r	—	5.2	—		
Turn-Off Delay Time	t _{D(off)}	—	15	—		
Turn-Off Fall Time	t _f	—	6.1	—		

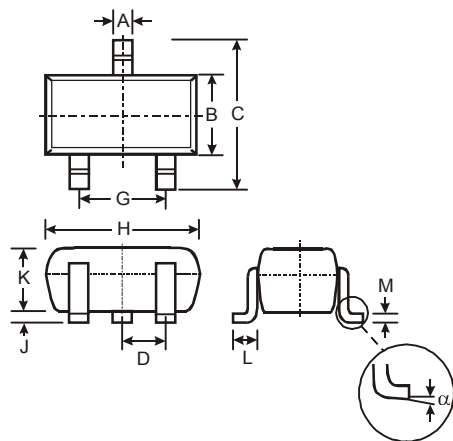
- Notes:
- Device mounted on FR-4 PC board, with minimum recommended pad layout, single sided.
 - Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper pad layout
 - Short duration pulse test used to minimize self-heating effect.
 - Guaranteed by design. Not subject to production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





Package Outline Dimensions

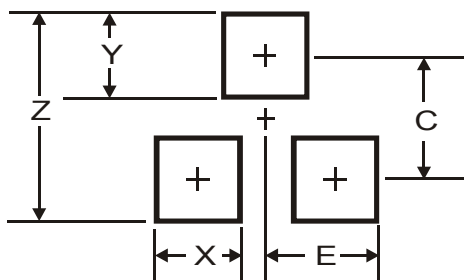
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT323			
Dim	Min	Max	Typ
A	0.25	0.40	0.30
B	1.15	1.35	1.30
C	2.00	2.20	2.10
D	-	-	0.65
G	1.20	1.40	1.30
H	1.80	2.20	2.15
J	0.0	0.10	0.05
K	0.90	1.00	0.95
L	0.25	0.40	0.30
M	0.10	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	2.8
X	0.7
Y	0.9
C	1.9
E	1.0

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