

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

Characteristic			Symbol	Value	Units
Drain-Source Voltage			V _{DSS}	100	V
Gate-Source Voltage			V _{GSS}	±16	V
Continuous Drain Current (Note 5) V _{GS} = 10V	(Note 6)	T _A = +25°C T _A = +70°C	I _D	2.24 1.79	A
	(Note 5)	T _A = +25°C T _A = +70°C	I _D	1.87 1.50	A
Maximum Continuous Body Diode Forward Current (Note 6)			I _S	1.50	A
Pulsed Drain Current (10μs pulse, duty cycle = 1%)			I _{DM}	6.60	A

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

Characteristic		Symbol	Value	Units
Total Power Dissipation (Note 6)	T _A = +25°C	P _D	1.67	W
	T _A = +70°C		1.07	
Thermal Resistance, Junction to Ambient	(Note 6)	R _{θJA}	75	°C/W
	(Note 5)		108	
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}	100	—	—	V	V _{GS} = 0V, I _D = 250μA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	1	μA	V _{DS} = 100V, V _{GS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±100	nA	V _{GS} = ±16V, V _{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	V _{GS(th)}	1	1.8	2.5	V	V _{DS} = V _{GS} , I _D = 250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	172	220	mΩ	V _{GS} = 10V, I _D = 1.6A
			211	250		V _{GS} = 4.5V, I _D = 1.3A
Diode Forward Voltage	V _{SD}	—	0.77	1.2	V	V _{GS} = 0V, I _S = 1.1A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	401	—	pF	V _{DS} = 25V, V _{GS} = 0V f = 1MHz
Output Capacitance	C _{oss}	—	22	—		
Reverse Transfer Capacitance	C _{rss}	—	17	—		
Gate Resistance	R _g	—	2.1	—	Ω	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz
Total Gate Charge (V _{GS} = 4.5V)	Q _g	—	4.1	—	nC	V _{DS} = 50V, I _D = 1.6A
Total Gate Charge (V _{GS} = 10V)	Q _g	—	8.3	—		
Gate-Source Charge	Q _{gs}	—	1.5	—		
Gate-Drain Charge	Q _{gd}	—	2	—		
Turn-On Delay Time	t _{D(on)}	—	6.8	—	ns	V _{DS} = 50V, V _{GS} = 4.5V, R _G = 6.8Ω, I _D = 1A
Turn-On Rise Time	t _r	—	8.2	—		
Turn-Off Delay Time	t _{D(off)}	—	7.9	—		
Turn-Off Fall Time	t _f	—	3.6	—		
Reverse Recovery Time	t _{rr}	—	17	—	ns	I _F = 1.1A, di/dt = 100A/μs
Reverse Recovery Charge	Q _{rr}	—	9.8	—	nC	

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

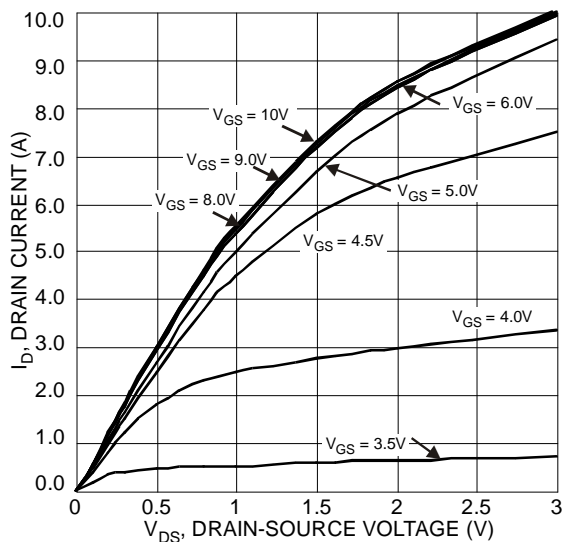


Figure 1 Typical Output Characteristic

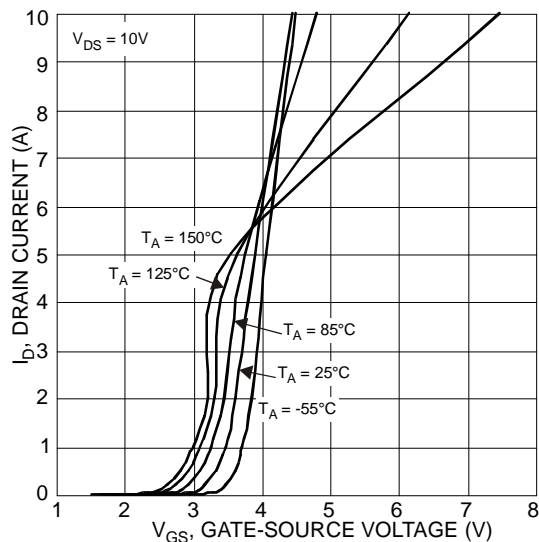


Figure 2 Typical Transfer Characteristics

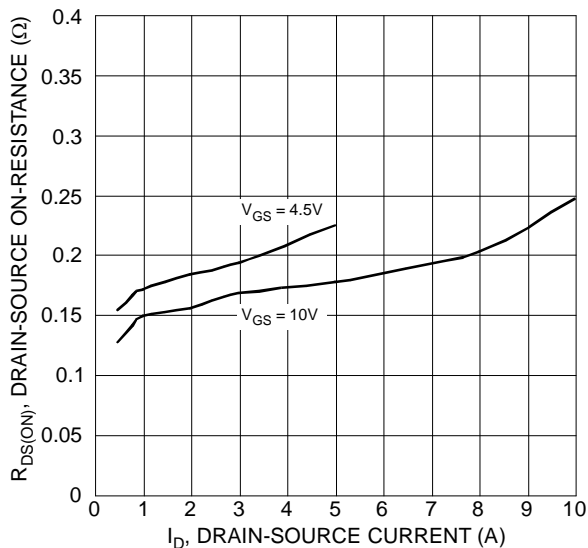


Figure 3 Typical On-Resistance vs. Drain Current and Gate Voltage

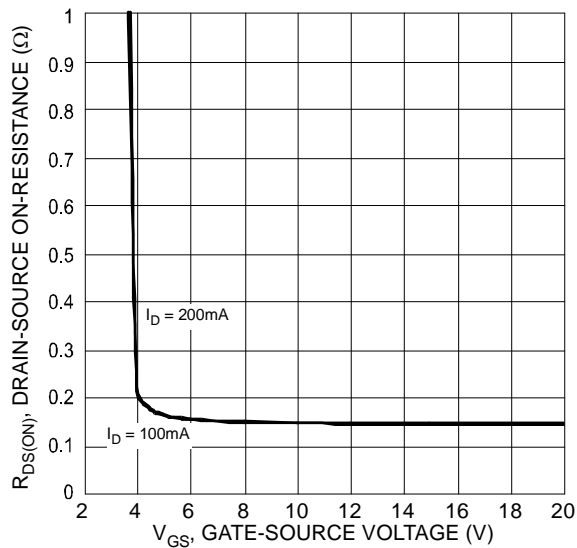


Figure 4 Typical Transfer Characteristic

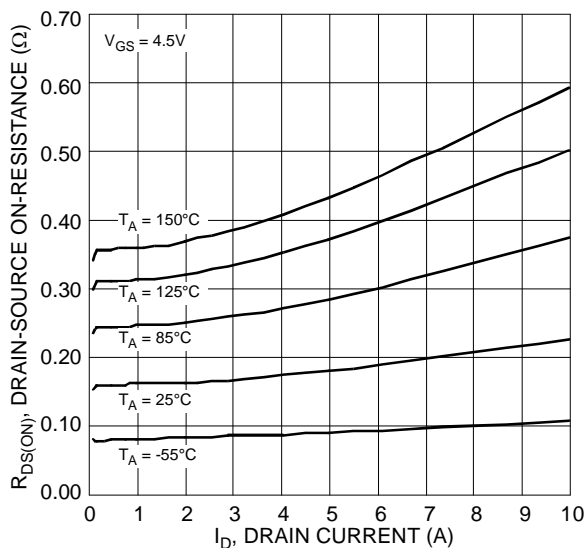


Figure 5 Typical On-Resistance vs. Drain Current and Temperature

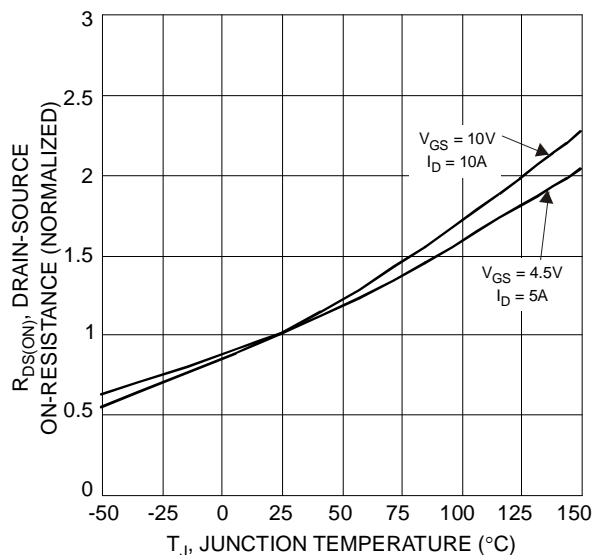
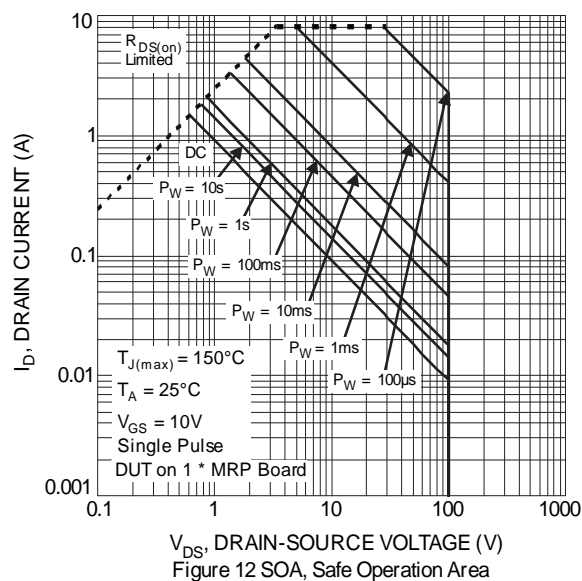
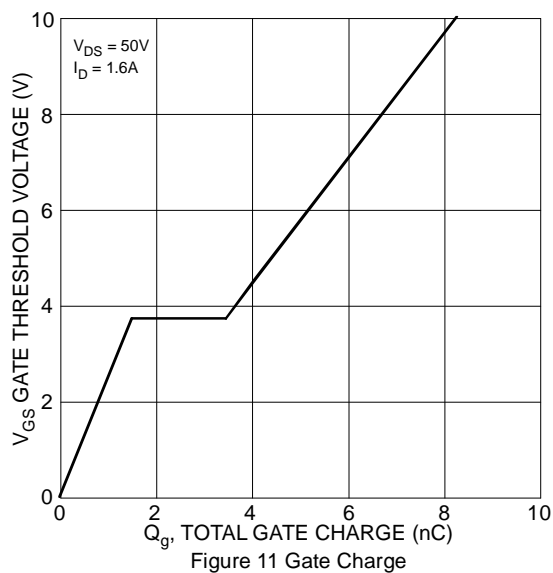
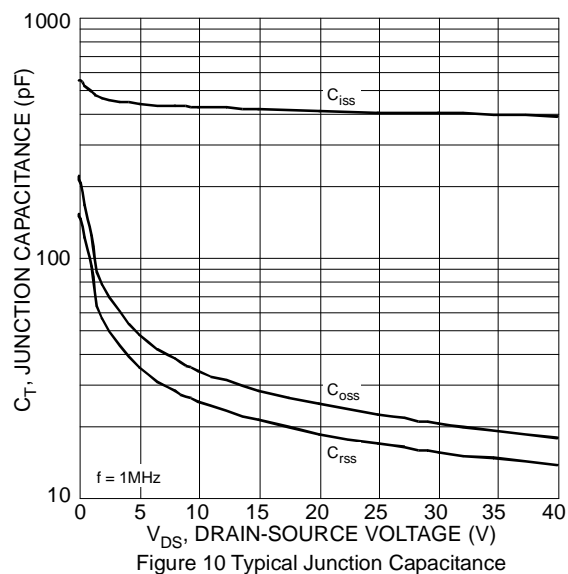
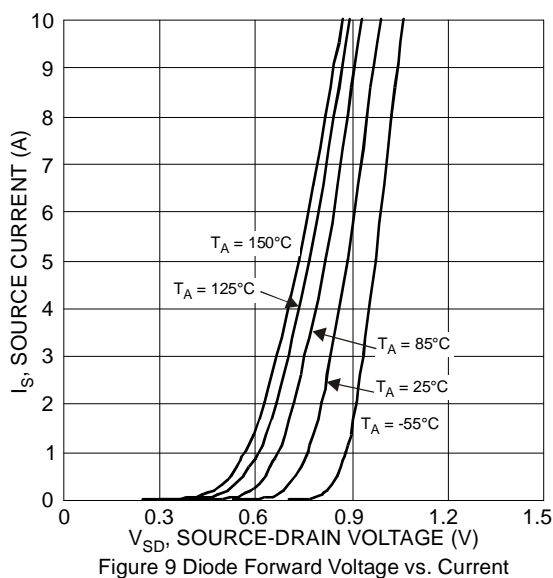
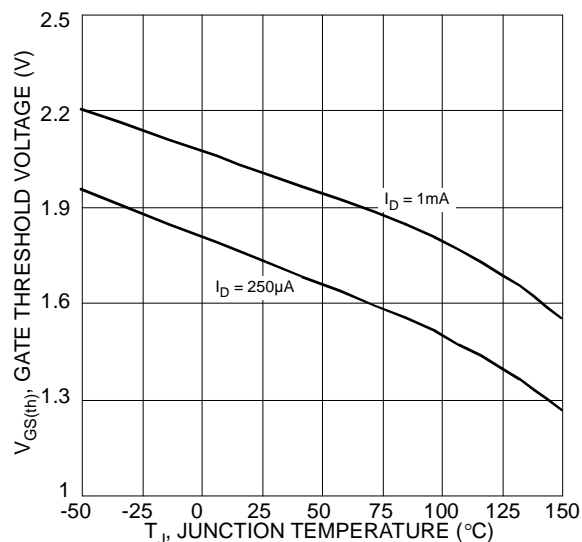
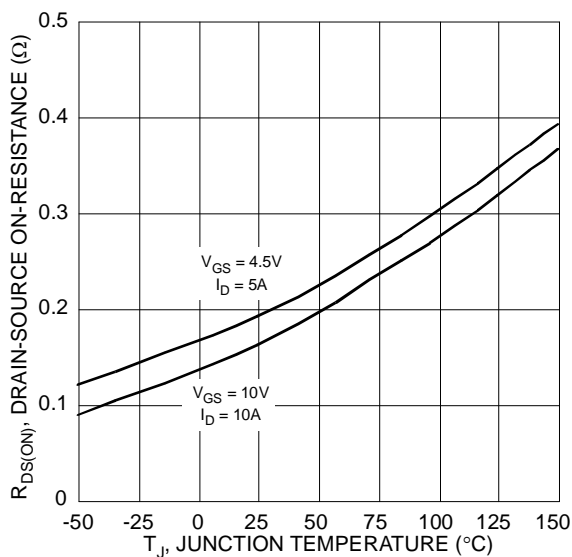
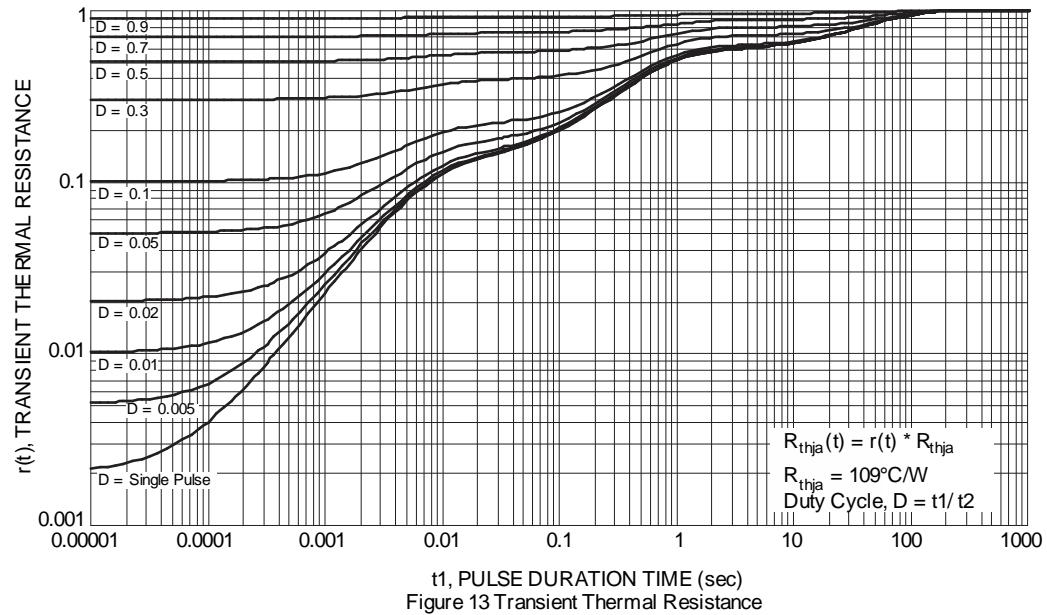


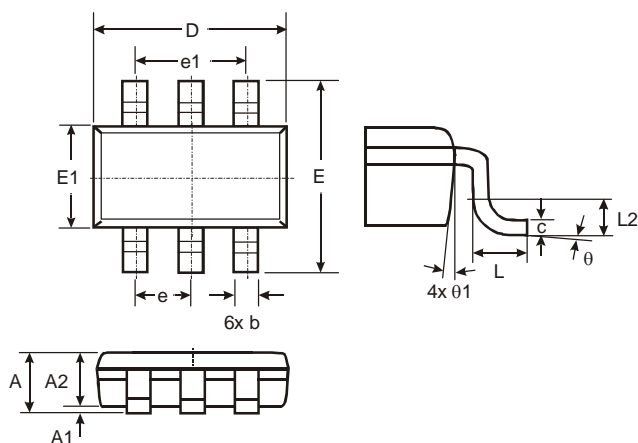
Figure 6 On-Resistance Variation with Temperature





Package Outline Dimensions

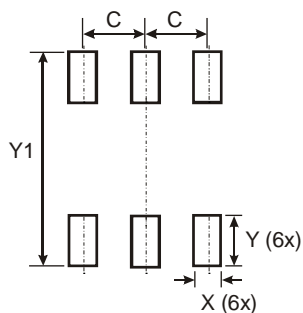
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



TSOT26			
Dim	Min	Max	Typ
A	—	1.00	—
A1	0.01	0.10	—
A2	0.84	0.90	—
D	—	—	2.90
E	—	—	2.80
E1	—	—	1.60
b	0.30	0.45	—
c	0.12	0.20	—
e	—	—	0.95
e1	—	—	1.90
L	0.30	0.50	—
L2	—	—	0.25
theta	0°	8°	4°
theta1	4°	12°	—
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	0.950
X	0.700
Y	1.000
Y1	3.199

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