

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}	±20	V
Continuous Drain Current (Note 6) V _{GS} = 10V	Steady State	T _A = +25°C T _A = +70°C	I _D	2.6 2.1	A
Pulsed Drain Current (10µs pulse, duty cycle ≤1%)			I _{DM}	11.2	A
Maximum Body Diode Continuous Current (Note 6)			I _S	2.0	A

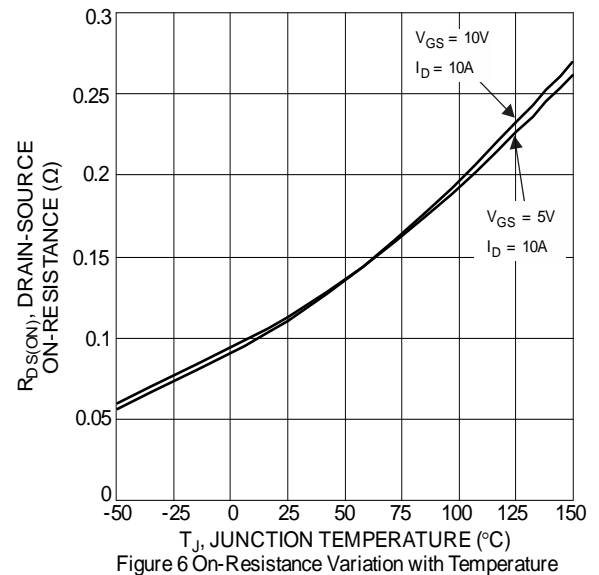
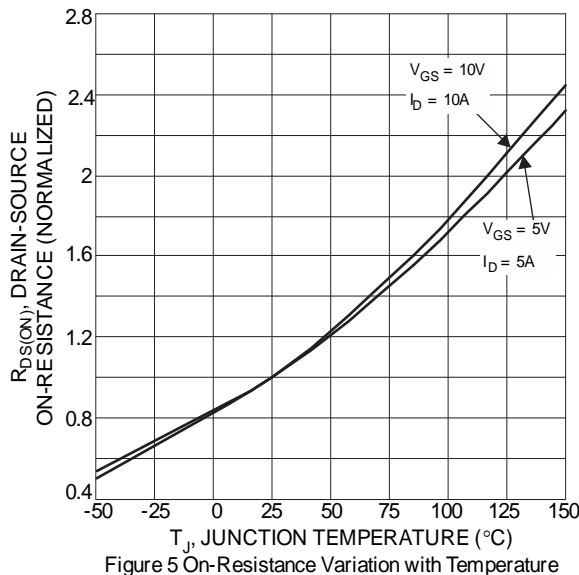
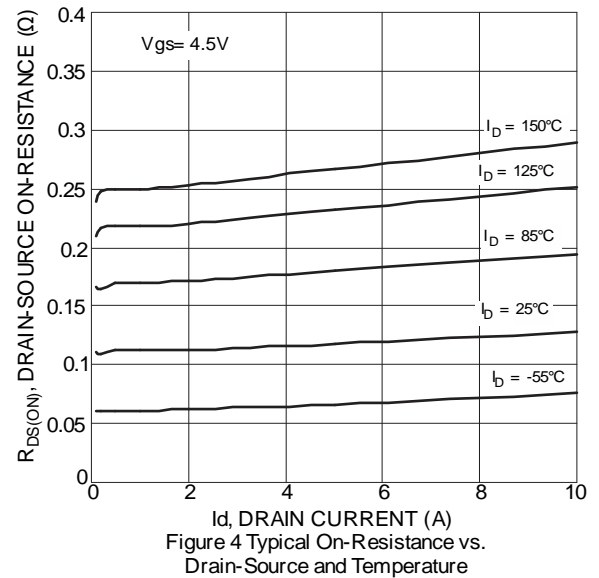
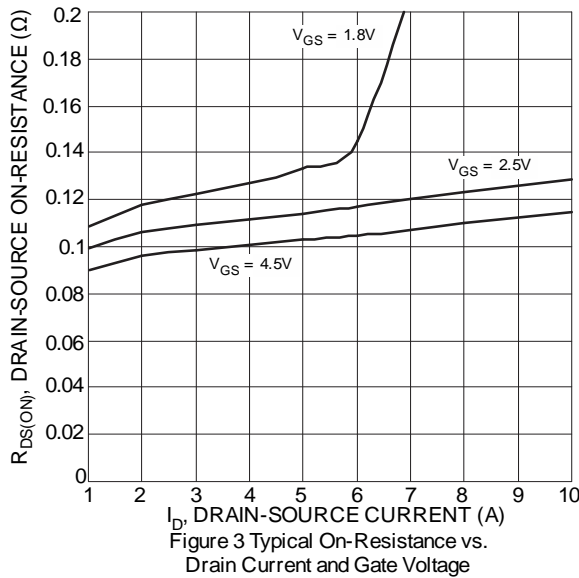
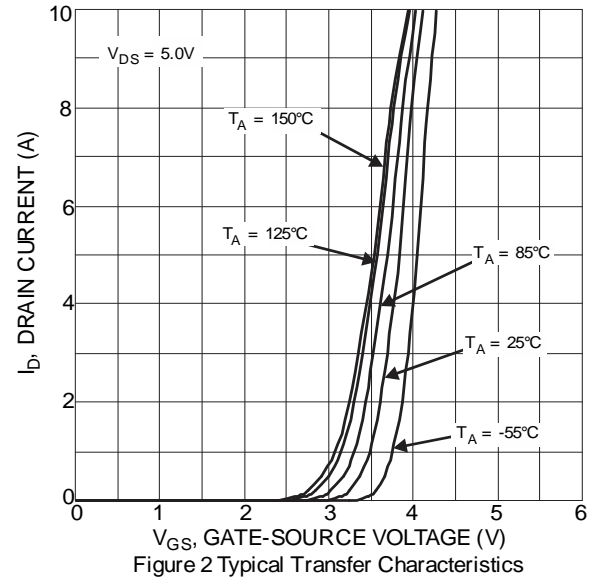
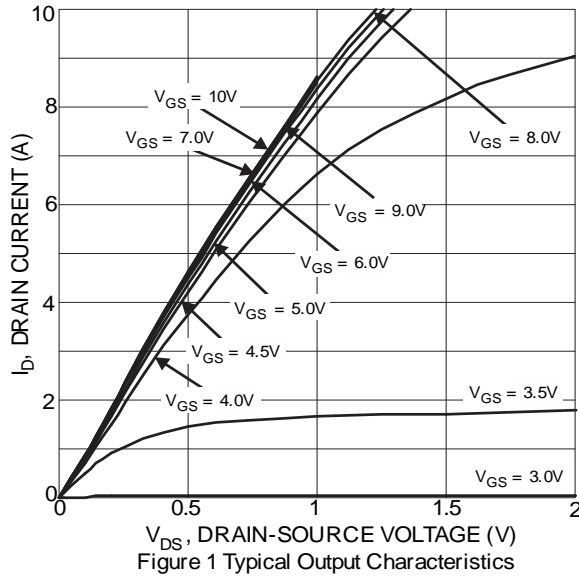
Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Units
Total Power Dissipation	(Note 5)	P _D	1.2	W
	(Note 6)		1.7	
Thermal Resistance, Junction to Ambient	(Note 5)	R _{θJA}	101	°C/W
	(Note 6)		73	
Thermal Resistance, Junction to Case	(Note 6)	R _{θJC}	15	
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}	—	—	1.0	µA	V _{DS} = 100V, 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)}	1.0	2.0	3.0	V	V _{DS} = V _{GS} , I _D = 250µA
Static Drain-Source On-Resistance	R _{DS(on)}	—	115	160	mΩ	V _{GS} = 10V, I _D = 5.0A
		—	124	200		V _{GS} = 4.5V, I _D = 5.0A
Diode Forward Voltage	V _{SD}	—	0.9	1.0	V	V _{GS} = 0V, I _S = 10A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	1,167	—	pF	V _{DS} = 25V, V _{GS} = 0V, f = 1.0MHz
Output Capacitance	C _{oss}	—	36	—		
Reverse Transfer Capacitance	C _{rss}	—	25	—		
Gate Resistance	R _g	—	1.3	—	Ω	V _{DS} = 0V, V _{GS} = 0V, f = 1.0MHz
Total Gate Charge (V _{GS} = 4.5V)	Q _g	—	4.9	—	nC	V _{DS} = 80V, I _D = 12.8A
Total Gate Charge (V _{GS} = 10V)	Q _g	—	9.7	—		
Gate-Source Charge	Q _{gs}	—	2.0	—		
Gate-Drain Charge	Q _{gd}	—	2.0	—		
Turn-On Delay Time	t _{D(on)}	—	10	—	nS	V _{DD} = 50V, V _{GS} = 10V, R _G = 25Ω, I _D = 12.8A
Turn-On Rise Time	t _r	—	11	—		
Turn-Off Delay Time	t _{D(off)}	—	42	—		
Turn-Off Fall Time	t _f	—	12	—		
Reverse Recovery Time	t _{rr}	—	30	—	nS	V _{GS} = 0V, I _S = 12.8A, di/dt = 100A/µs
Reverse Recovery Charge	Q _{rr}	—	35	—	nC	

- Notes: 5. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.
6. Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.
7. Short duration pulse test used to minimize self-heating effect.
8. Guaranteed by design. Not subject to product testing.



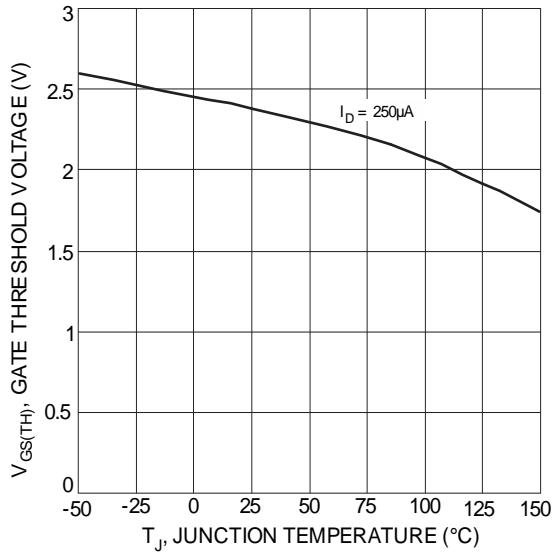


Figure 7 Gate Threshold Variation vs. Ambient Temperature

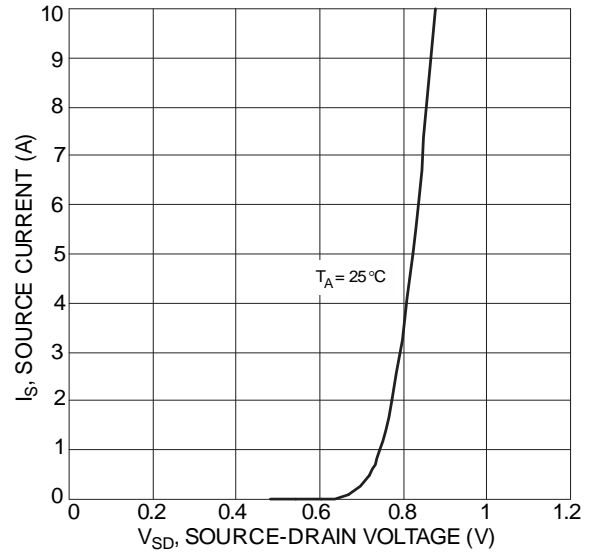


Figure 8 Diode Forward Voltage vs. Current

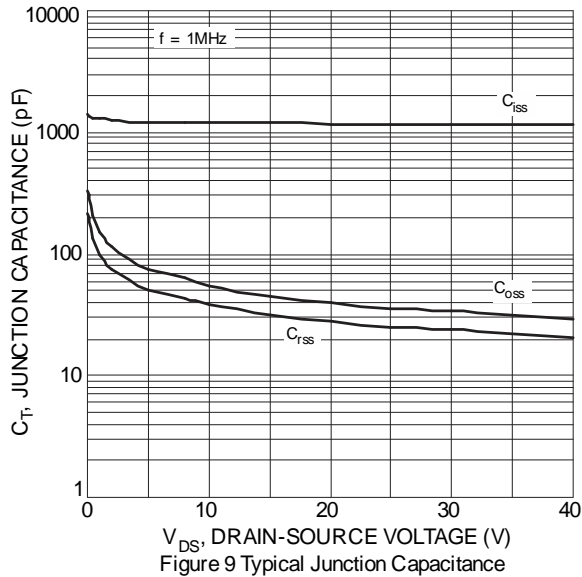


Figure 9 Typical Junction Capacitance

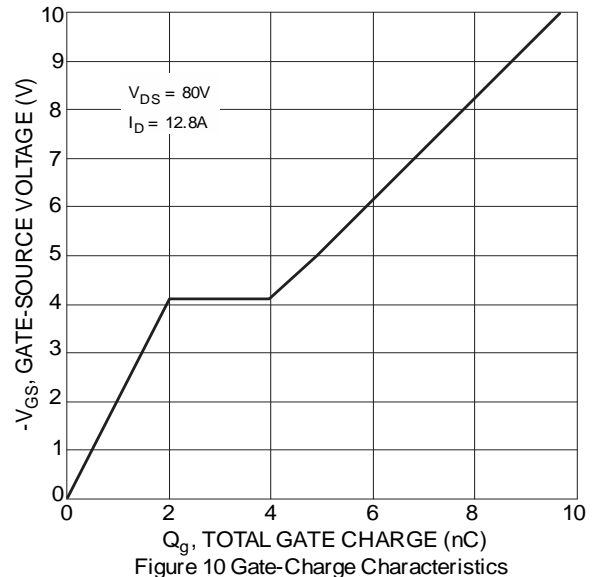


Figure 10 Gate-Charge Characteristics

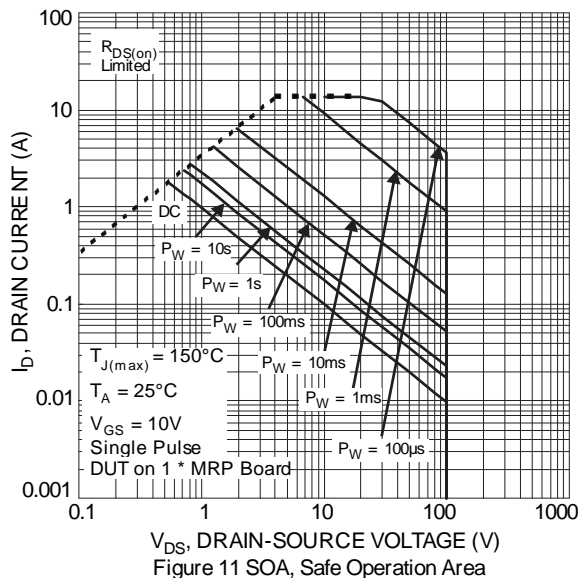
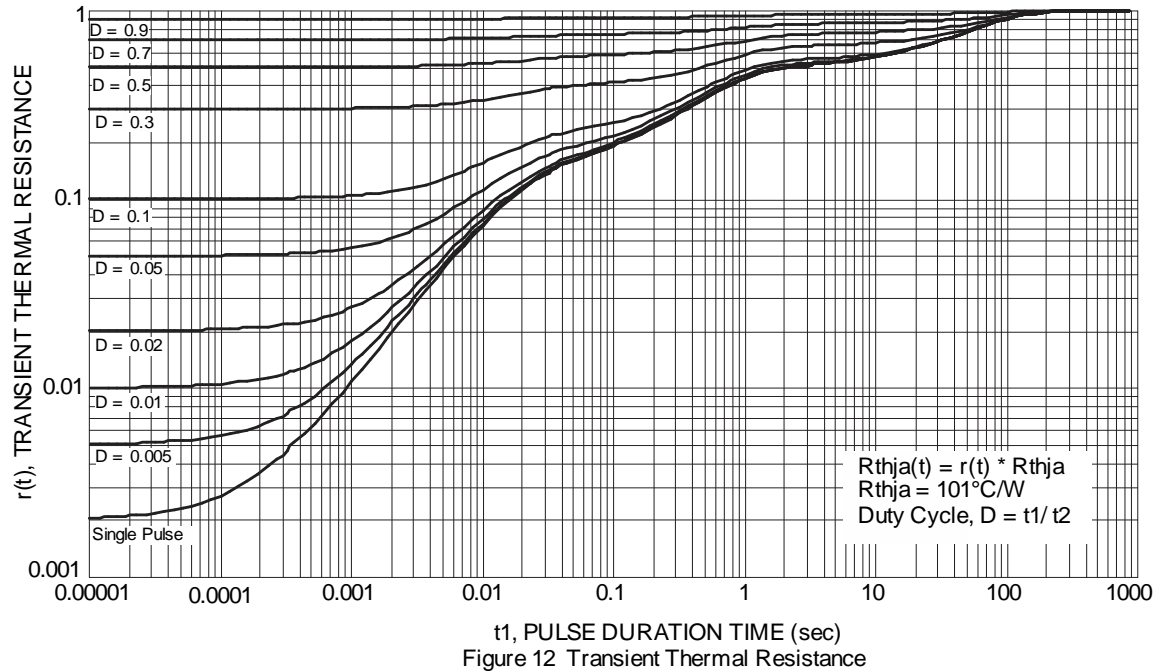
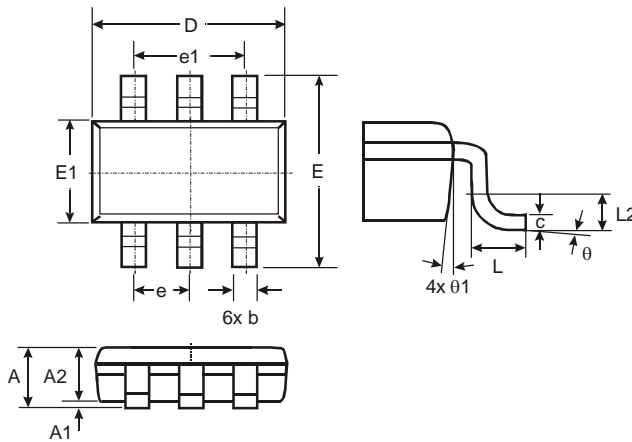


Figure 11 SOA, Safe Operation Area



Package Outline Dimensions

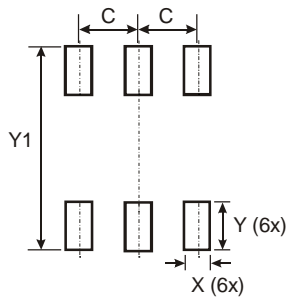
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



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
θ	0°	8°	4°
θ1	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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