

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

Characteristic			Symbol	Value	Unit
Drain-Source Voltage			V _{DSS}	20	V
Gate-Source Voltage			V _{GSS}	±8	V
Continuous Drain Current (Note 6) V _{GS} = 4.5V	Steady State	T _A = +25°C	I _D	5.8	A
		T _A = +70°C		4.6	
Maximum Continuous Body Diode Forward Current (Note 6)			I _S	1.3	A
Pulsed Drain Current (10μs Pulse, Duty Cycle = 1%)			I _{DM}	36	A

Thermal Characteristics

Characteristic			Symbol	Value	Unit
Total Power Dissipation (Note 5)			P _D	1.1	W
Thermal Resistance, Junction to Ambient (Note 5)		Steady State	R _{θJA}	113	°C/W
Total Power Dissipation (Note 6)			P _D	0.92	W
Thermal Resistance, Junction to Ambient (Note 6)		Steady State	R _{θJA}	87	°C/W
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}	20	—	—	V	V _{GS} = 0V, I _D = 250μA
Zero Gate Voltage Drain Current T _J = +25°C	I _{DSS}	—	—	1.0	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)}	0.4	—	0.9	V	V _{DS} = V _{GS} , I _D = 250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	17	28	mΩ	V _{GS} = 4.5V, I _D = 8.2A
			22	32		V _{GS} = 2.5V, I _D = 3.3A
			32	40		V _{GS} = 1.8V, I _D = 2.0A
Diode Forward Voltage	V _{SD}	—	0.7	0.9	V	V _{GS} = 0V, I _D = 2.25A
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C _{iss}	—	689	—	pF	V _{DS} = 10V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	89	—	pF	
Reverse Transfer Capacitance	C _{rss}	—	79	—	pF	
Gate Resistance	R _g	—	1.05	—	Ω	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz
Total Gate Charge	Q _g	—	9.1	—	nC	V _{GS} = 4.5V, V _{DS} = 10V, I _D = 8.2A
Gate-Source Charge	Q _{gs}	—	0.3	—	nC	
Gate-Drain Charge	Q _{gd}	—	2.1	—	nC	
Turn-On Delay Time	t _{D(ON)}	—	9	—	ns	V _{DS} = 10V, V _{GS} = 4.5V, R _L = 10Ω, R _g = 6Ω, I _D = 1A
Turn-On Rise Time	t _R	—	21	—	ns	
Turn-Off Delay Time	t _{D(OFF)}	—	32	—	ns	
Turn-Off Fall Time	t _F	—	17	—	ns	

- Notes:
- Device mounted on FR-4 PCB, with minimum recommended pad layout.
 - Device mounted on 1" x 1" FR-4 PCB with high coverage 2oz. Copper, single sided.
 - Short duration pulse test used to minimize self-heating effect.
 - Guaranteed by design. Not subject to product testing.

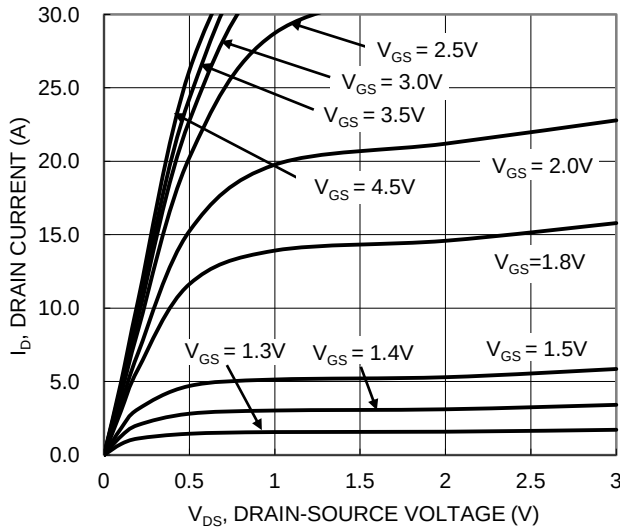


Figure 1. Typical Output Characteristic

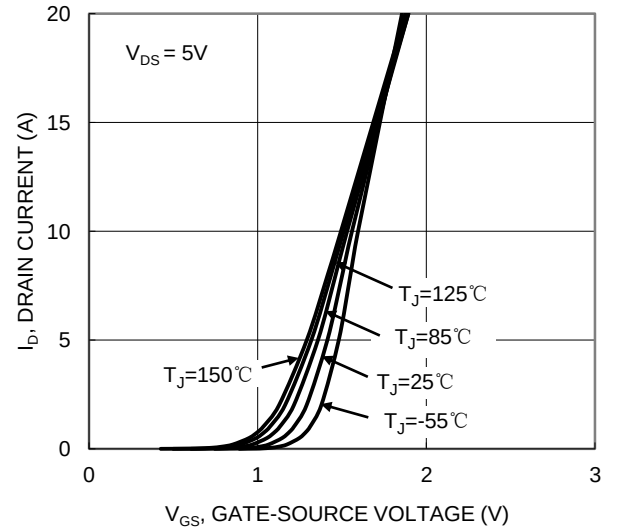


Figure 2. Typical Transfer Characteristic

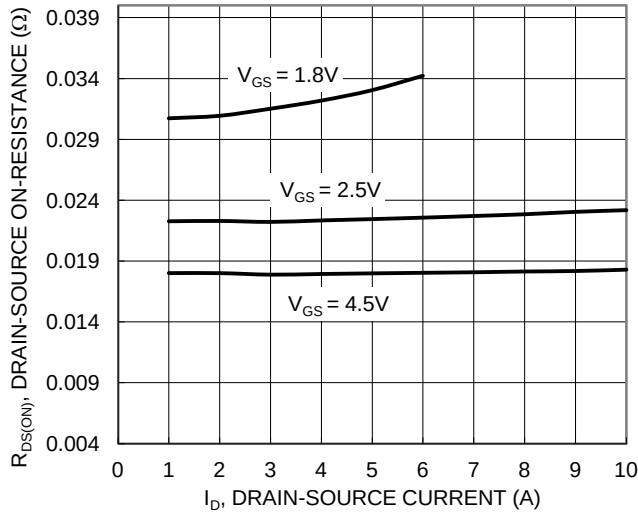


Figure 3. Typical On-Resistance vs. Drain Current and Gate Voltage

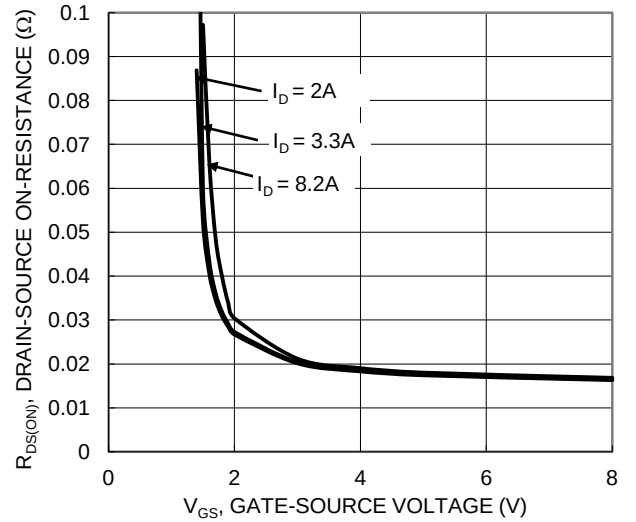


Figure 4. Typical Transfer Characteristic

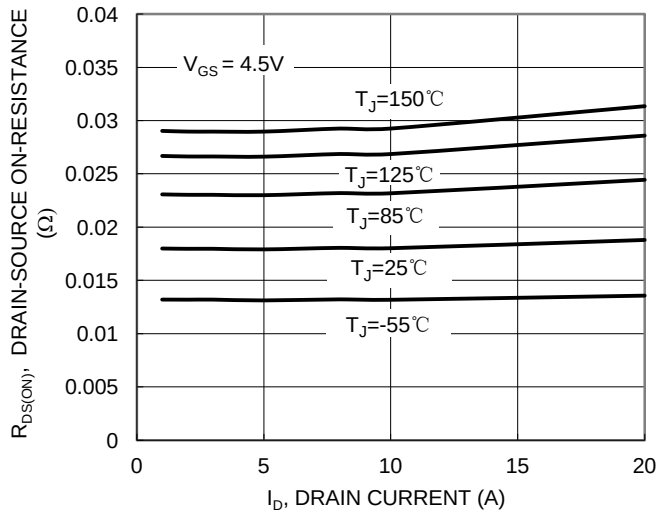


Figure 5. Typical On-Resistance vs. Drain Current and Junction Temperature

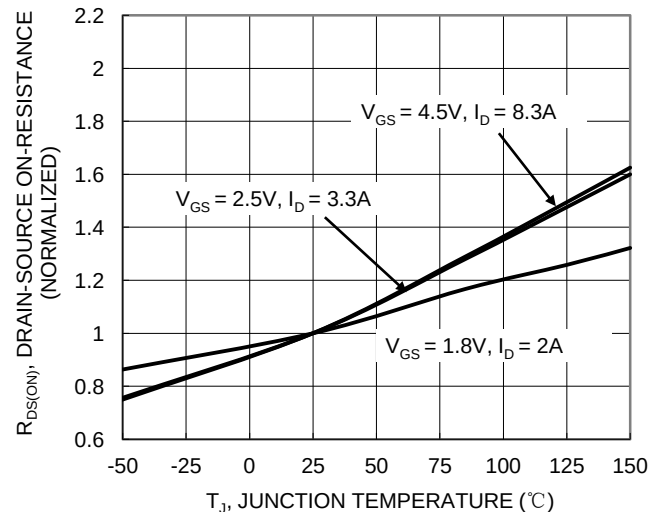
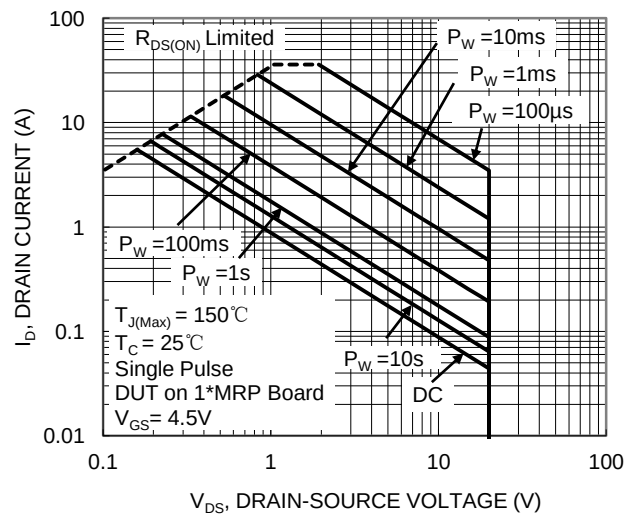
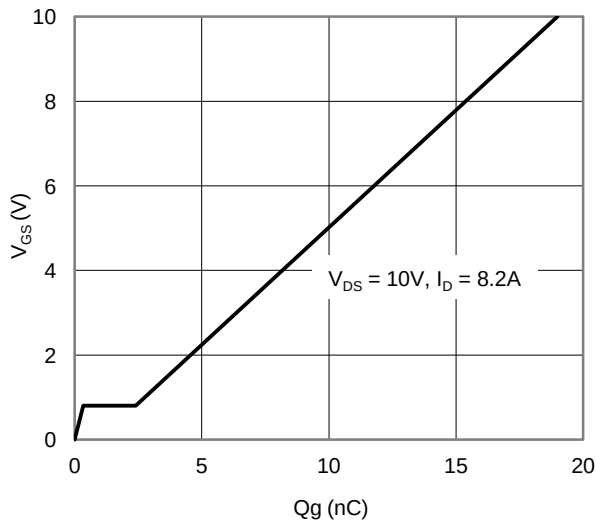
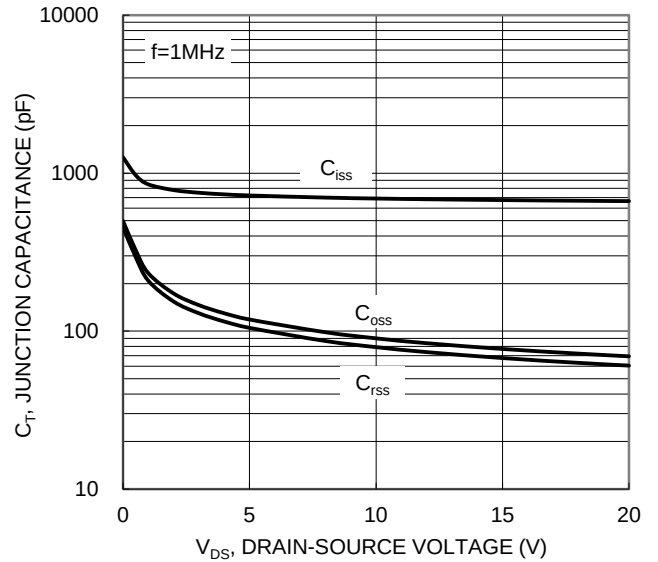
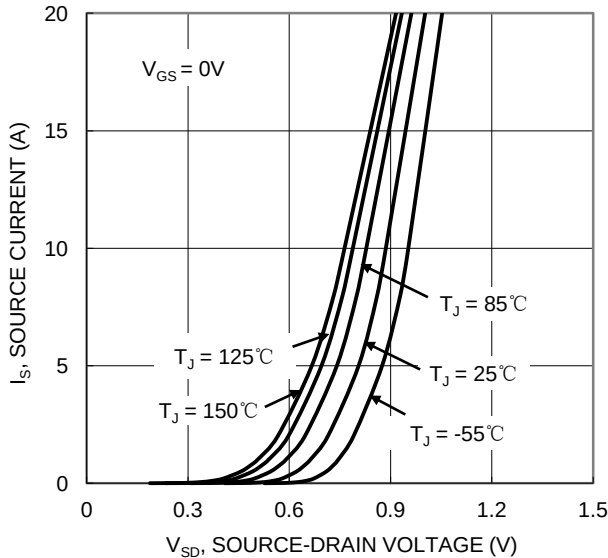
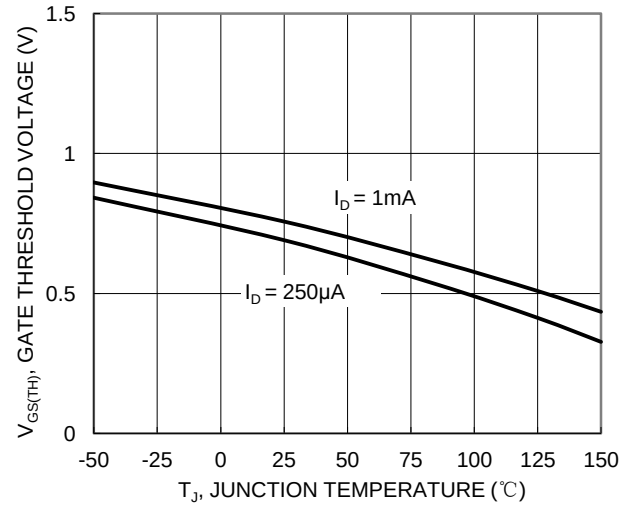
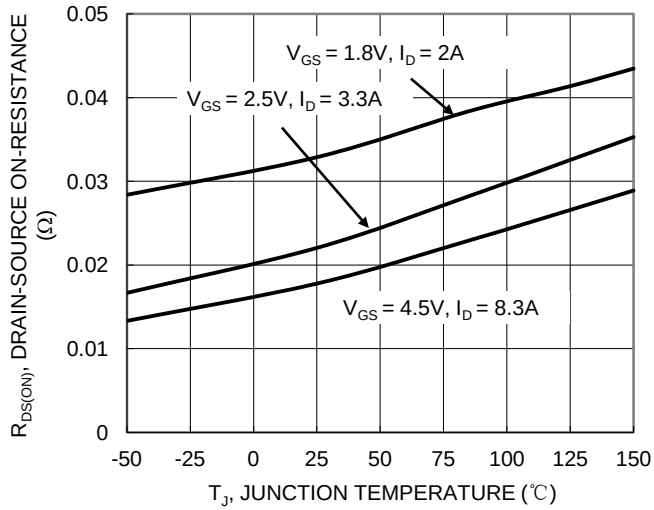


Figure 6. On-Resistance Variation with Junction Temperature



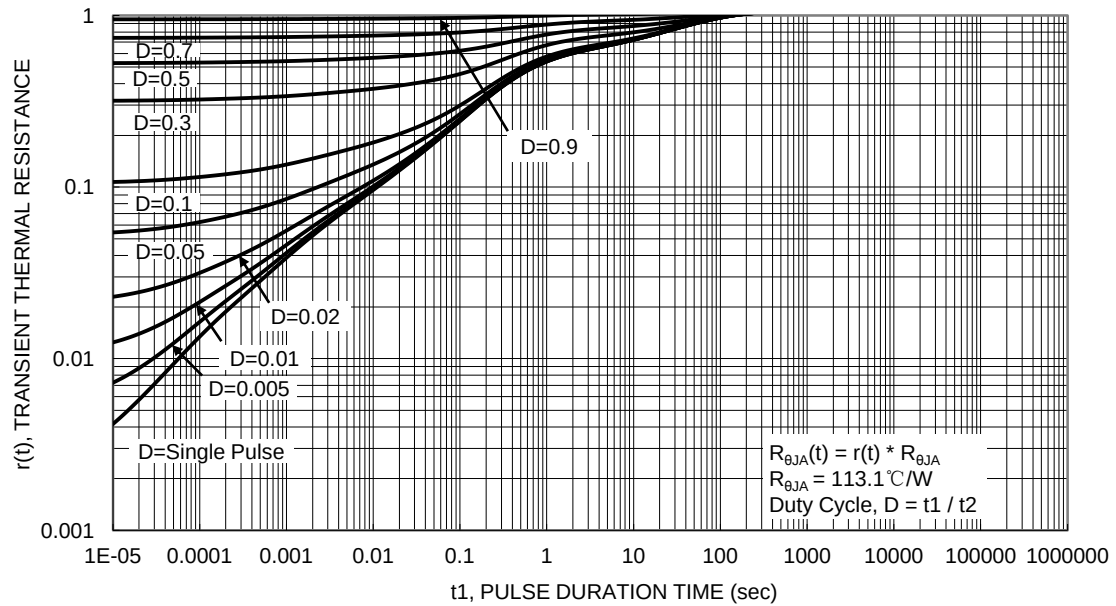
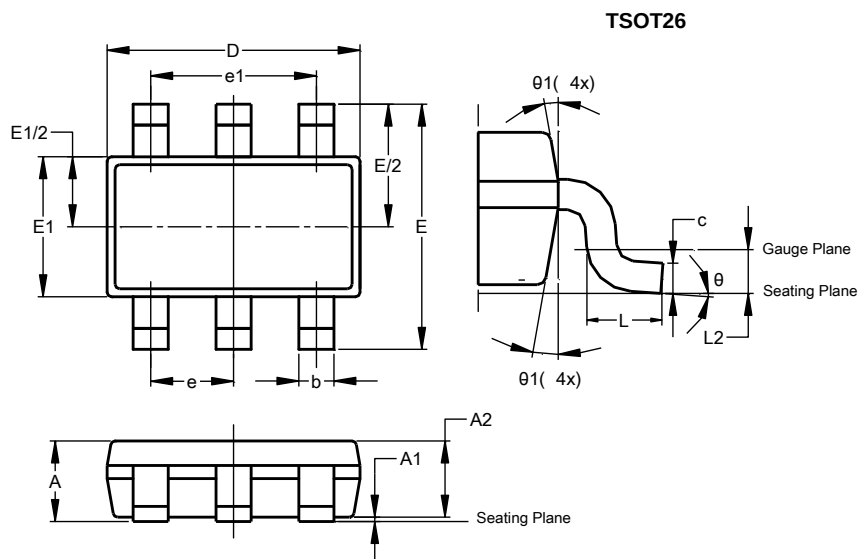


Figure 13. Transient Thermal Resistance

Package Outline Dimensions

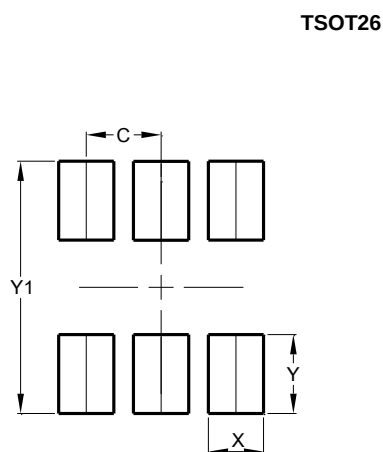
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



TSOT26			
Dim	Min	Max	Typ
A	—	1.00	—
A1	0.010	0.100	—
A2	0.840	0.900	—
D	2.800	3.000	2.900
E	2.800 BSC		
E1	1.500	1.700	1.600
b	0.300	0.450	—
c	0.120	0.200	—
e	0.950 BSC		
e1	1.900 BSC		
L	0.30	0.50	—
L2	0.250 BSC		
θ	0°	8°	4°
θ1	4°	12°	—
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value (in mm)
C	0.950
X	0.700
Y	1.000
Y1	3.199

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