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Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)						
Drain-Source Breakdown Voltage	BV_{DSS}	20	-	-	V	V_{GS} = 0V, I_D = 250µA
Zero Gate Voltage Drain Current	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 5)						
Gate Threshold Voltage	$V_{GS(th)}$	0.5	-	0.9	V	V_{DS} = V_{GS}, I_D = 250µA
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	-	19	25	mΩ	V_{GS} = 4.5V, I_D = 8.2A
			22	29		V_{GS} = 2.5V, I_D = 3.3A
			28	37		V_{GS} = 1.8V, I_D = 2.0A
Forward Transfer Admittance	$\|Y_{fs}\|$	-	7	-	S	V_{DS} = 10V, I_D = 4A
Diodes Forward Voltage	V_{SD}	-	0.7	0.9	V	Is = 2.25A, V_{GS} = 0V
DYNAMIC CHARACTERISTICS (Note 6)						
Input Capacitance	C_{iss}	-	841	-	pF	V_{DS} = 10V, V_{GS} = 0V, f = 1.0MHz
Output Capacitance	C_{oss}	-	88	-	pF	
Reverse Transfer Capacitance	C_{rss}	-	81	-	pF	
Gate Resistance	R_g	-	1.24	-	Ω	V_{DS} =0V, V_{GS} = 0V, f = 1MHz
SWITCHING CHARACTERISTICS						
Total Gate Charge	Q_g	-	9.6	-	nC	V_{GS} = 4.5V, V_{DS} = 10V, I_D = 8.2A
Gate-Source Charge	Q_{gs}	-	1.4	-	nC	
Gate-Drain Charge	Q_{gd}	-	2.1	-	nC	
Turn-On Delay Time	$t_{D(on)}$	-	7.8	-	ns	V_{DD} = 10V, V_{GS} = 4.5V, R_L = 10Ω, R_G = 6Ω
Turn-On Rise Time	t_r	-	21.1	-	ns	
Turn-Off Delay Time	$t_{D(off)}$	-	38.6	-	ns	
Turn-Off Fall Time	t_f	-	10.1	-	ns	

Notes: 5. Short duration pulse test used to minimize self-heating effects.
6. Guaranteed by design. Not subject to production testing.

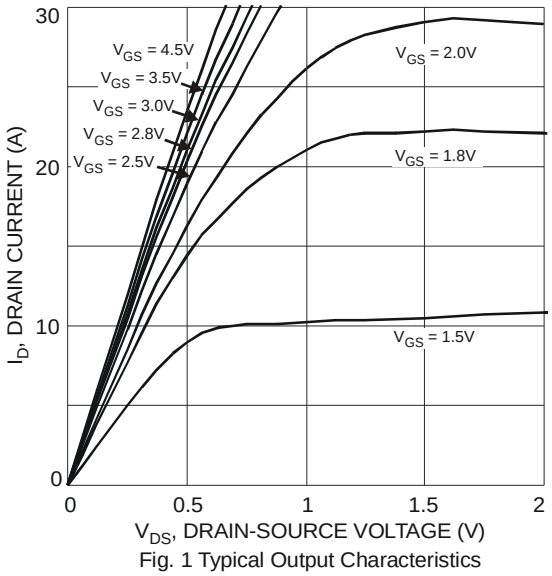

Fig. 1 Typical Output Characteristics

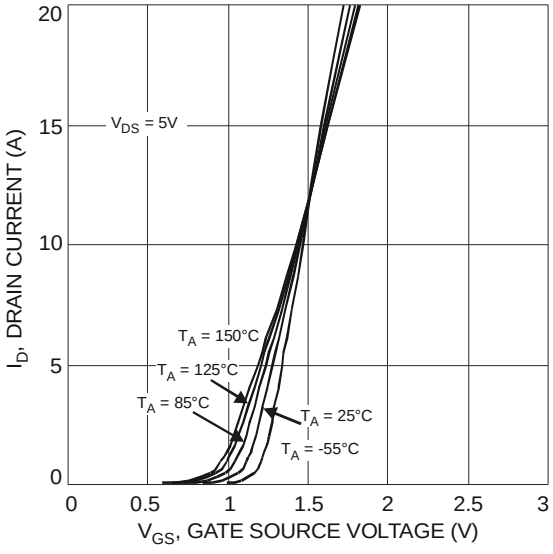

Fig. 2 Typical Transfer Characteristics

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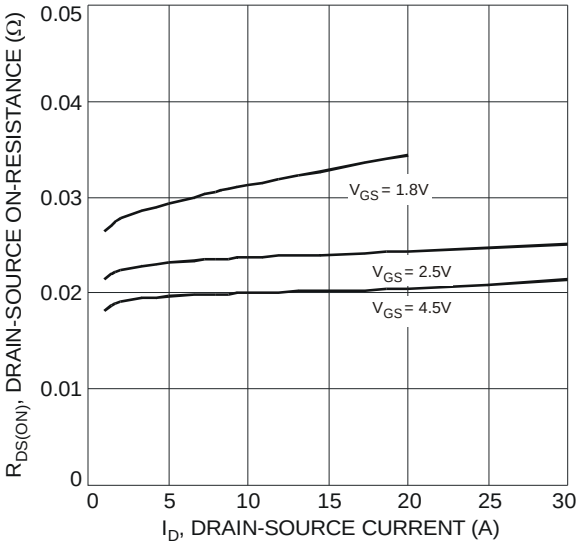

Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

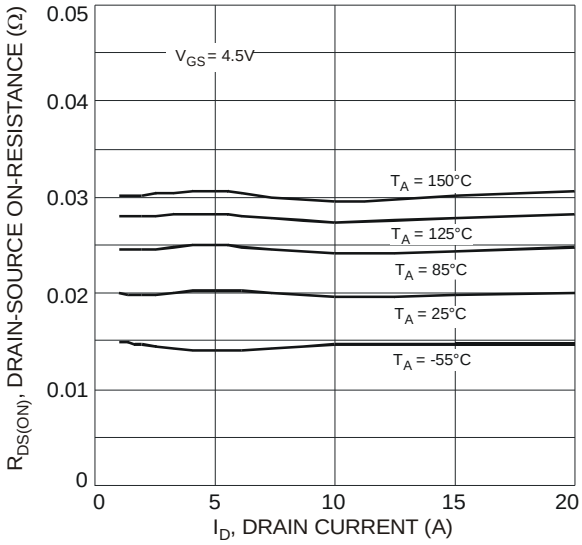

Fig. 4 Typical Drain-Source On-Resistance vs. Drain Current and Temperature

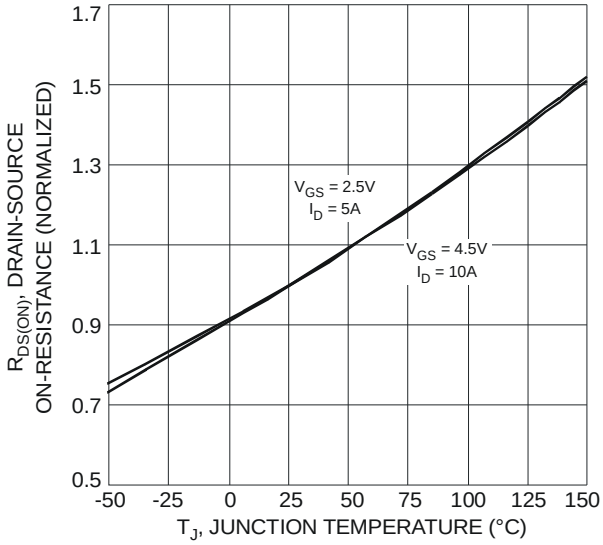

Fig. 5 On-Resistance Variation with Temperature

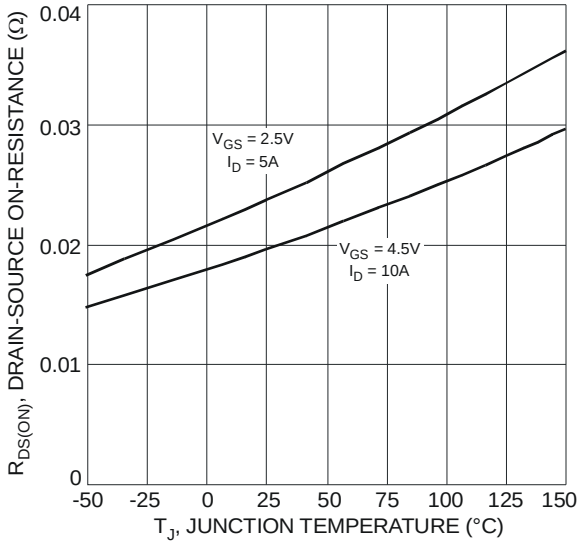

Fig. 6 On-Resistance Variation with Temperature

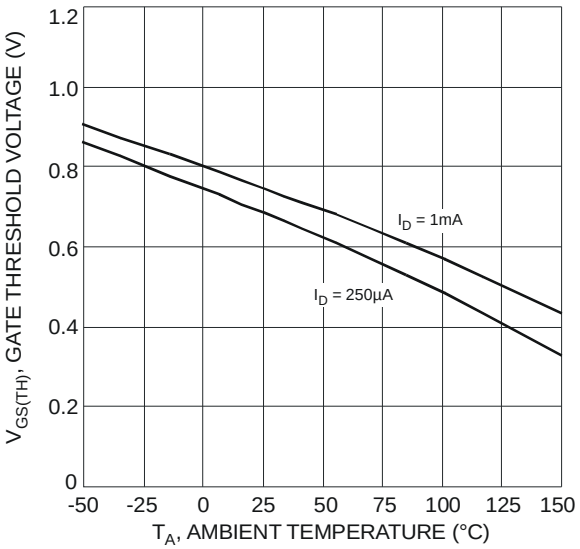

Fig. 7 Gate Threshold Variation vs. Ambient Temperature

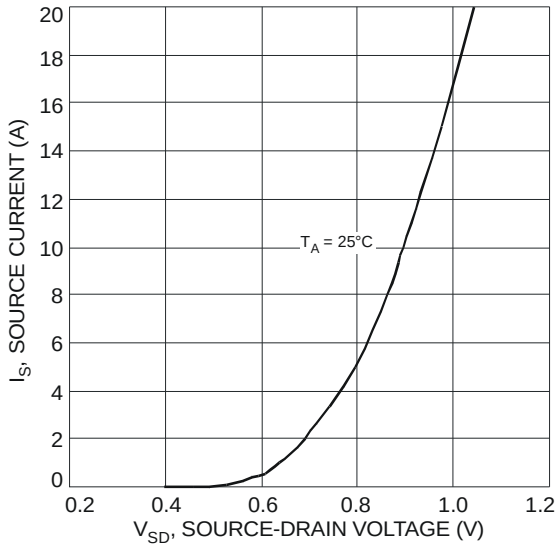

Fig. 8 Diode Forward Voltage vs. Current

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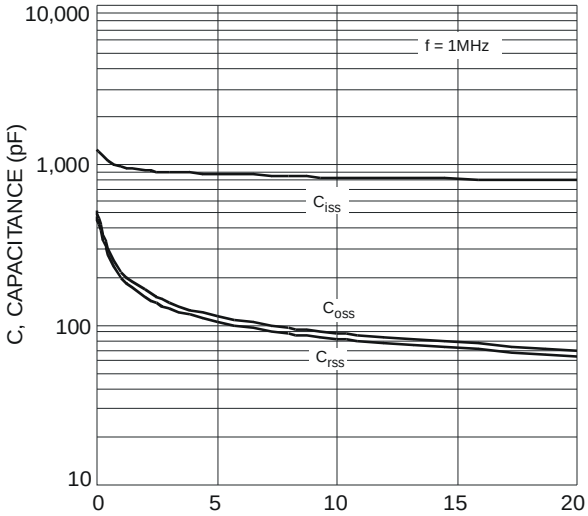


Fig. 9 Typical Capacitance

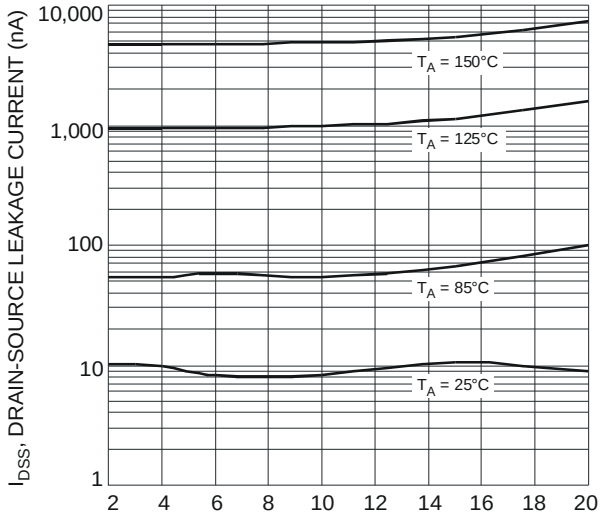


Fig. 10 Typical Drain-Source Leakage Current vs. Drain-Source Voltage

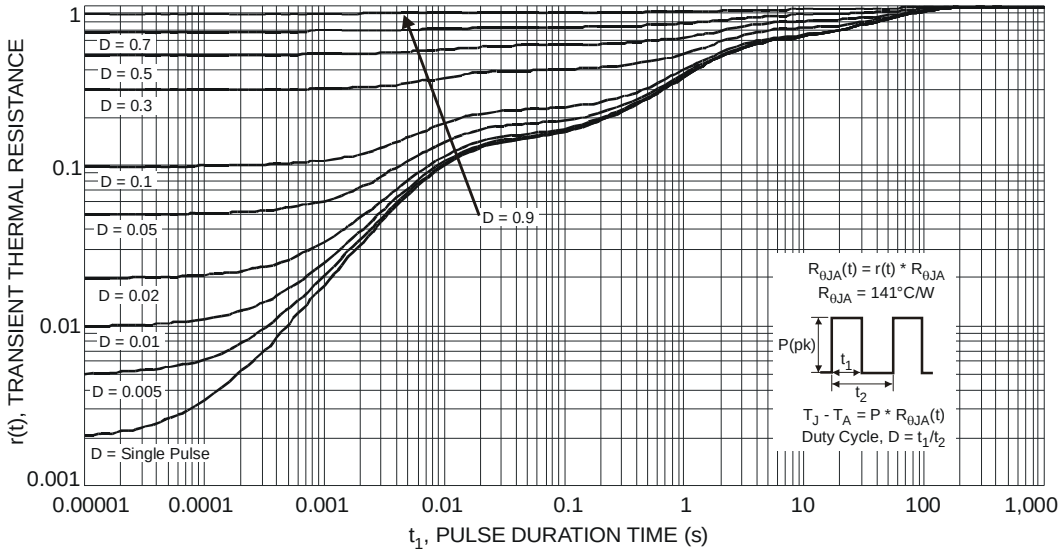


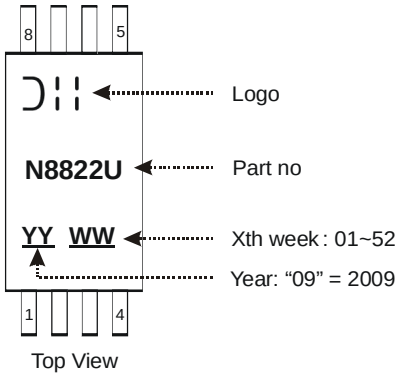
Fig. 11 Transient Thermal Response

Ordering Information (Note 7)

Part Number	Case	Packaging
DMG8822UTS-13	TSSOP-8L	2500 / Tape & Reel

Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



Top View

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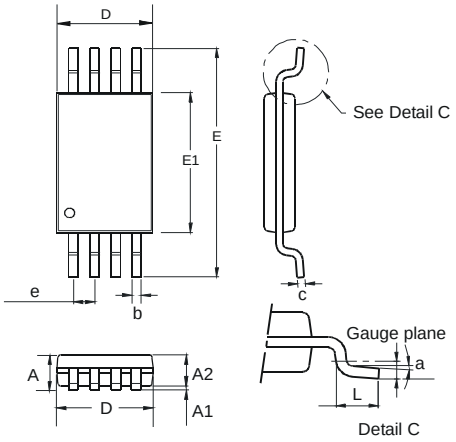
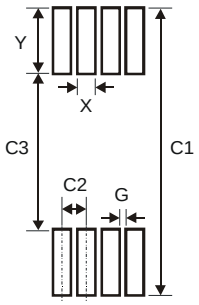
Package Outline Dimensions



TSSOP-8L			
Dim	**Min**	**Max**	**Typ**
a	0.09	–	–
A	–	1.20	–
A1	0.05	0.15	–
A2	0.825	1.025	0.925
b	0.19	0.30	–
c	0.09	0.20	–
D	2.90	3.10	3.025
e	–	–	0.65
E	–	–	6.40
E1	4.30	4.50	4.425
L	0.45	0.75	0.60
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
X	0.45
Y	1.78
C1	7.72
C2	0.65
C3	4.16
G	0.20

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