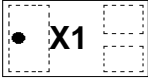
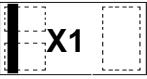
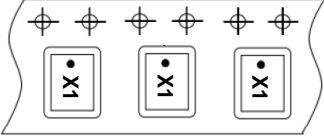
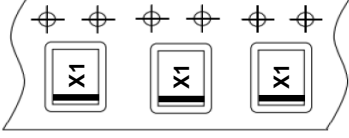
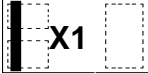
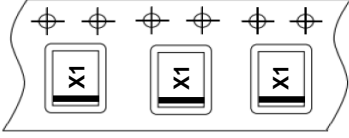


Marking Information

<p>DMN65D8LFB-7</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Top View Dot Denotes Drain Side</p> </div> <div style="text-align: center;"> <p>From date code 1527 (YYWW), this changes to:</p>  <p>Top View Bar Denotes Gate and Source Side</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>
<p>DMN65D8LFB-7B</p>	<div style="text-align: center; margin-bottom: 10px;">  <p>Top View Bar Denotes Gate and Source Side</p> </div> <div style="display: flex; justify-content: space-between; align-items: center;">  <div style="text-align: right;"> <p>X1 = Part Marking Code</p> </div> </div>

Maximum Ratings

Characteristic			Symbol	Value	Unit
Drain-Source Voltage			V_{DS}	60	V
Gate-Source Voltage			V_{GS}	± 20	V
Continuous Drain Current (Note 5) $V_{GS} = 10V$	Steady State	$T_A = +25^\circ C$	I_D	260	mA
		$T_A = +70^\circ C$		210	
Continuous Drain Current (Note 6) $V_{GS} = 10V$	Steady State	$T_A = +25^\circ C$	I_D	400	mA
		$T_A = +70^\circ C$		310	

Thermal Characteristics (@ $T_A = +25^\circ C$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	430	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	290	$^\circ C/W$
Power Dissipation (Note 6)	P_D	840	mW
Thermal Resistance, Junction to Ambient (Note 6)	$R_{\theta JA}$	147	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics (@ $T_A = +25^\circ C$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV_{DS}	60	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
Zero Gate Voltage Drain Current $T_J = +25^\circ C$	I_{DSS}	—	—	0.1	μA	$V_{DS} = 60V, V_{GS} = 0V$
Gate-Body Leakage	I_{GSS}	—	—	± 10	μA	$V_{GS} = \pm 20V, V_{DS} = 0V$
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	$V_{GS(TH)}$	1.2	—	2.0	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
Static Drain-Source On-Resistance	$R_{DS(ON)}$	—	1.9	3.0	Ω	$V_{GS} = 10V, I_D = 0.115A$
			2.2	4.0		$V_{GS} = 5V, I_D = 0.115A$
Forward Transfer Admittance	$ Y_{fs} $	80	320	—	mS	$V_{DS} = 10V, I_D = 0.115A$
Diode Forward Voltage	V_{SD}	—	0.7	1.2	V	$V_{GS} = 0V, I_S = 0.115A$
DYNAMIC CHARACTERISTICS (Note 8)						
Input Capacitance	C_{iss}	—	25	—	pF	$V_{DS} = 25V, V_{GS} = 0V, f = 1.0MHz$
Output Capacitance	C_{oss}	—	4.7	—	pF	
Reverse Transfer Capacitance	C_{rss}	—	2.5	—	pF	
Gate Resistance	R_G	—	88	—	Ω	$V_{DS} = 0V, V_{GS} = 0V, f = 1.0MHz$
Total Gate Charge ($V_{GS} = 10V$)	Q_g	—	0.87	—	nC	$V_{GS} = 10V, V_{DS} = 30V, I_D = 0.15A$
Total Gate Charge ($V_{GS} = 4.5V$)	Q_g	—	0.43	—		
Gate-Source Charge	Q_{gs}	—	0.11	—		
Gate-Drain Charge	Q_{gd}	—	0.11	—		
Turn-On Delay Time	$t_{D(ON)}$	—	3.27	—	ns	$V_{DD} = 30V, V_{GEN} = 10V, R_{GEN} = 25\Omega, I_D = 0.115A$
Turn-On Rise Time	t_R	—	3.15	—	ns	
Turn-Off Delay Time	$t_{D(OFF)}$	—	12.025	—	ns	
Turn-Off Fall Time	t_F	—	6.29	—	ns	

- Notes:
- Device mounted on FR-4 PCB with minimum recommended pad layout, single-sided.
 - Device mounted on 2" x 2" 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 production testing.

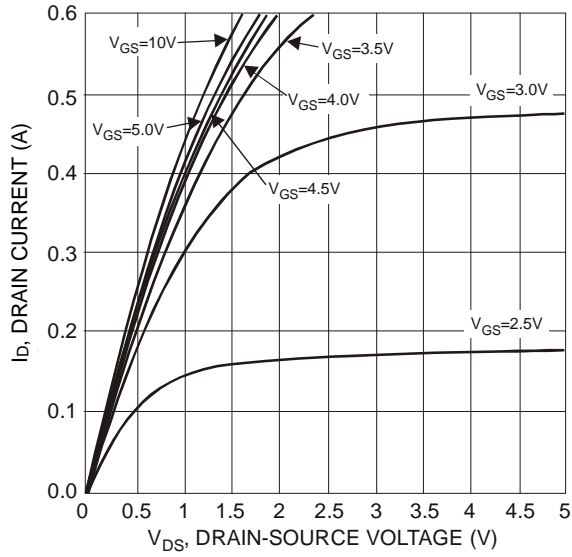


Fig. 1 Typical Output Characteristics

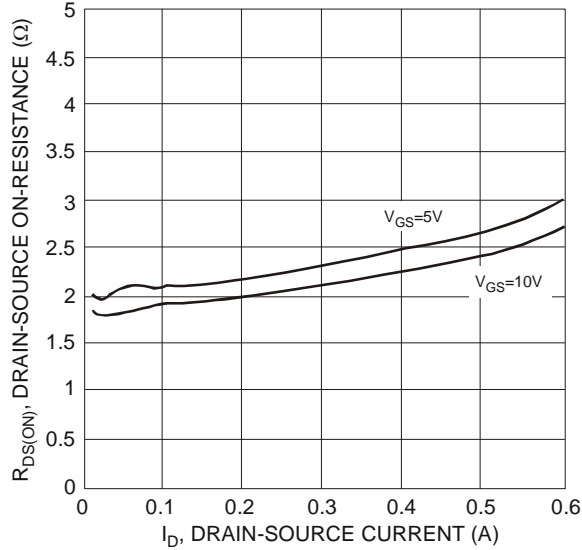


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Charge

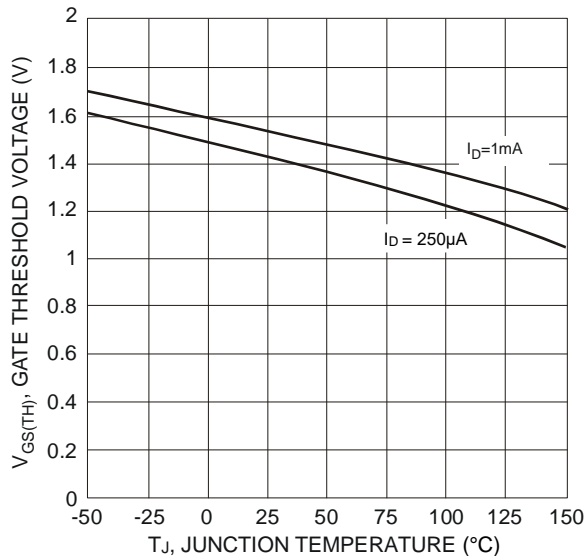


Fig. 5 Gate Threshold Variation vs. Junction Temperature

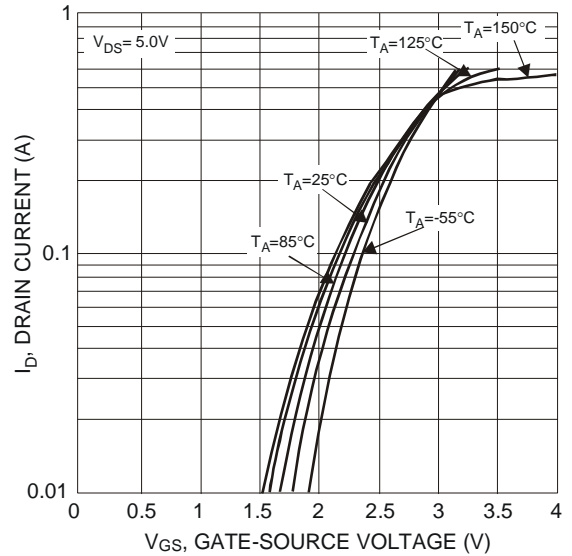


Fig. 2 Typical Transfer Characteristics

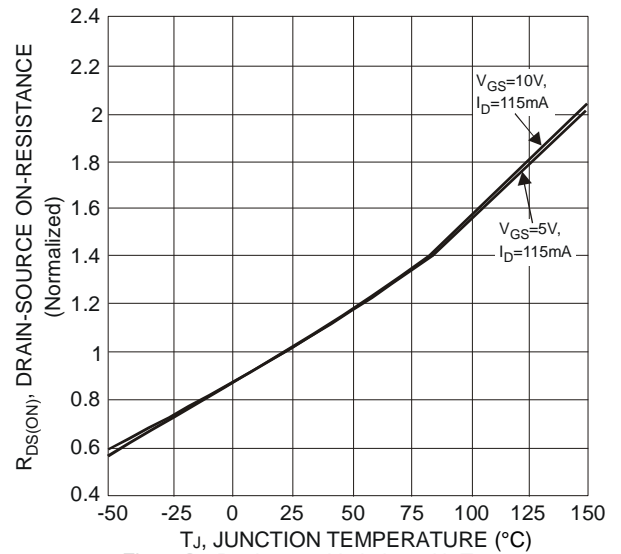


Fig. 4 On-Resistance Variation with Temperature

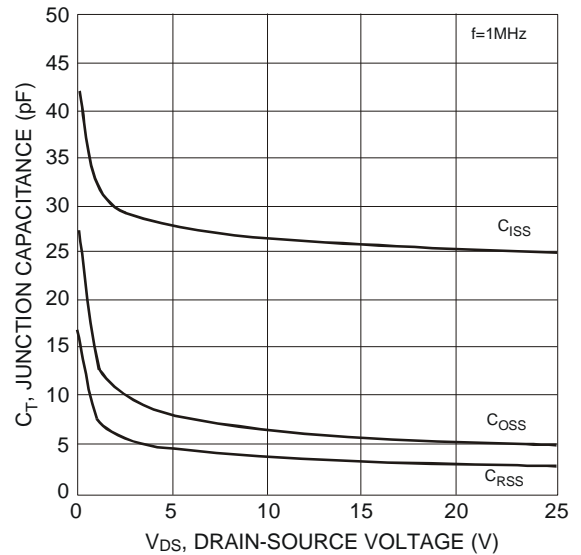
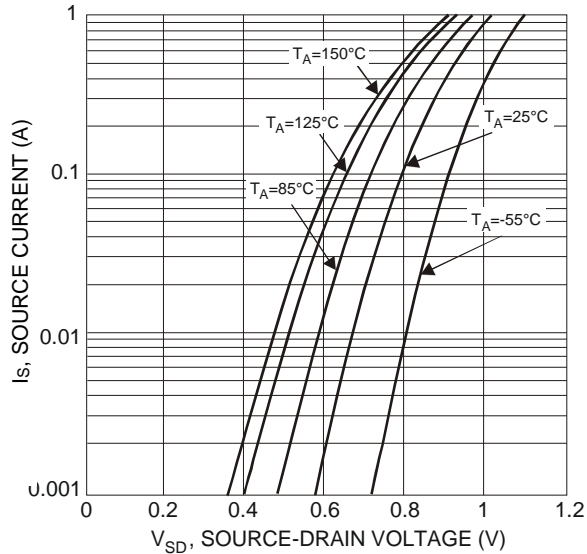


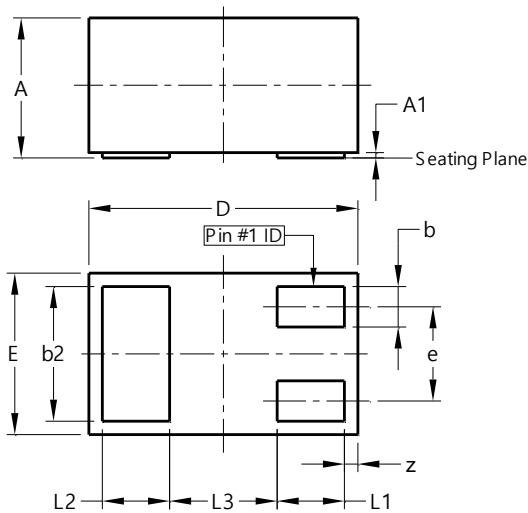
Fig. 6 Typical Junction Capacitance



Package Outline Dimensions

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

X1-DFN1006-3

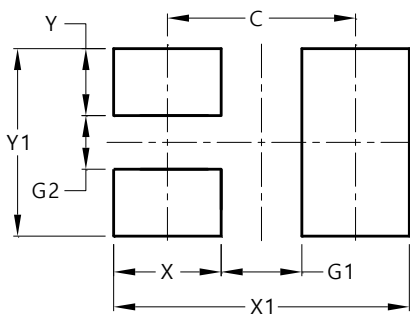


X1-DFN1006-3			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0.00	0.05	0.03
b	0.10	0.20	0.15
b2	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	-	-	0.35
L1	0.20	0.30	0.25
L2	0.20	0.30	0.25
L3	-	-	0.40
z	0.02	0.08	0.05
All Dimensions in mm			

Suggested Pad Layout

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

X1-DFN1006-3



Dimensions	Value (in mm)
C	0.70
G1	0.30
G2	0.20
X	0.40
X1	1.10
Y	0.25
Y1	0.70

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