

DMN3030LFG-7-VB Datasheet

N-Channel 30-V (D-S) MOSFET

V_{DS}		30	V
$R_{DS(on),typ}$	$V_{GS}=10V$	13	$m\Omega$
$R_{DS(on),typ}$	$V_{GS}=4.5V$	19	$m\Omega$
I_D		30	A

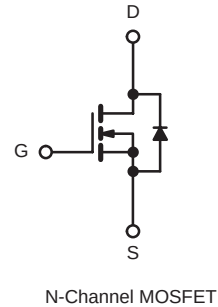
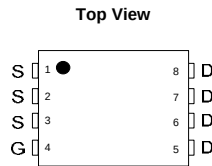
FEATURES

- Halogen-free
- Trench Power MOSFET
- 100 % R_g and UIS Tested



APPLICATIONS

- DC/DC Conversion
- Low-Side Switch
- Notebook PC
- Gaming

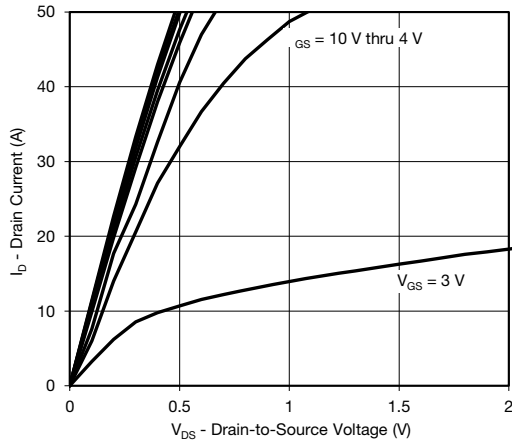


ABSOLUTE MAXIMUM RATINGS $T_A = 25^\circ\text{C}$, unless otherwise noted

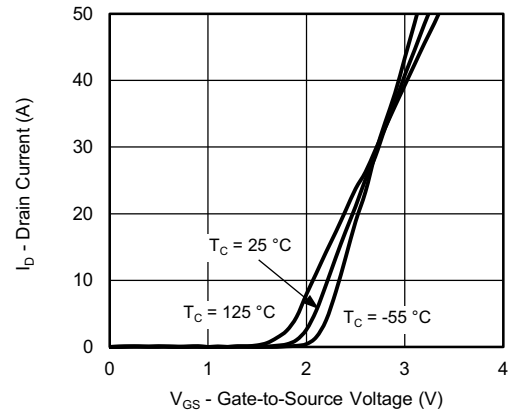
Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	30	V

SPECIFICATIONS $T_J = 25\text{ }^{\circ}\text{C}$, unless otherwise noted						
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V_{DS}	$V_{GS} = 0\text{ V}, I_D = 1\text{ mA}$	30			V
V_{DS} Temperature Coefficient	$\Delta V_{DS}/T_J$	$I_D = 250\text{ }\mu\text{A}$		27		mV/ $^{\circ}\text{C}$
$V_{GS(th)}$ Temperature Coefficient	$\Delta V_{GS(th)}/T_J$			- 5.6		
Gate-Source Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu\text{A}$	1.0		3.0	V
Gate-Source Leakage	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 20\text{ V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30\text{ V}, V_{GS} = 0\text{ V}$			1	μA
		$V_{DS} = 30\text{ V}, V_{GS} = 0\text{ V}, T_J = 55\text{ }^{\circ}\text{C}$			10	
On-State Drain Current ^a	$I_{D(on)}$	$V_{DS} \geq 5\text{ V}, V_{GS} = 10\text{ V}$	30			A
Drain-Source On-State Resistance ^a	$R_{DS(on)}$	$V_{GS} = 10\text{ V}, I_D = 15\text{ A}$		13		m Ω
		$V_{GS} = 4.5\text{ V}, I_D = 10\text{ A}$		19		

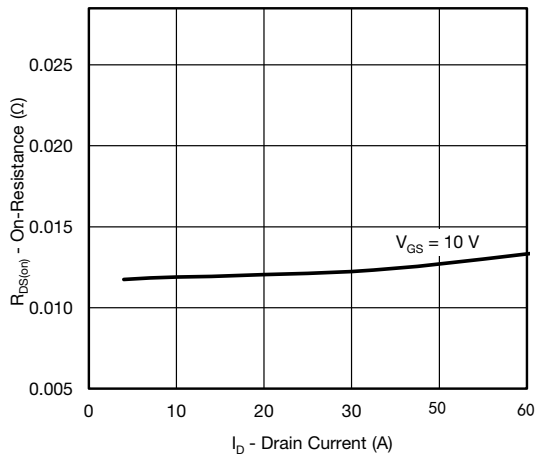
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



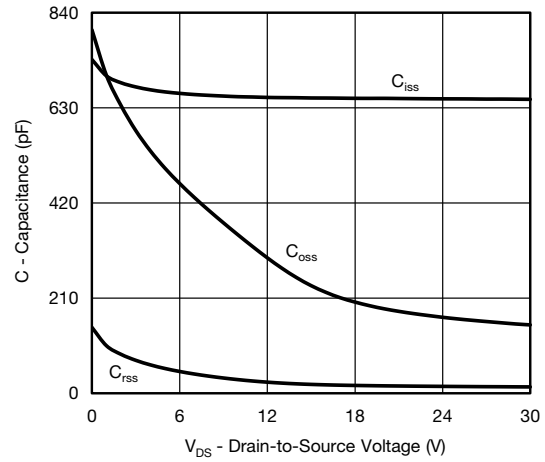
Output Characteristics



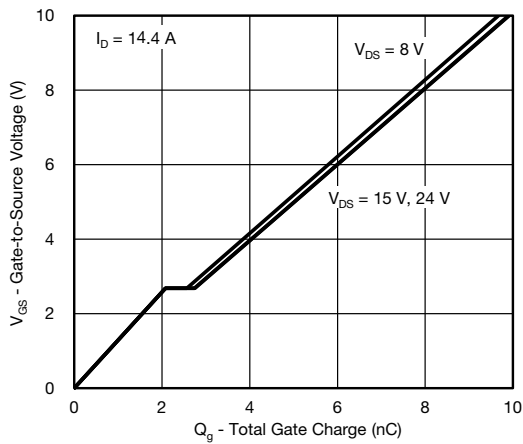
Transfer Characteristics

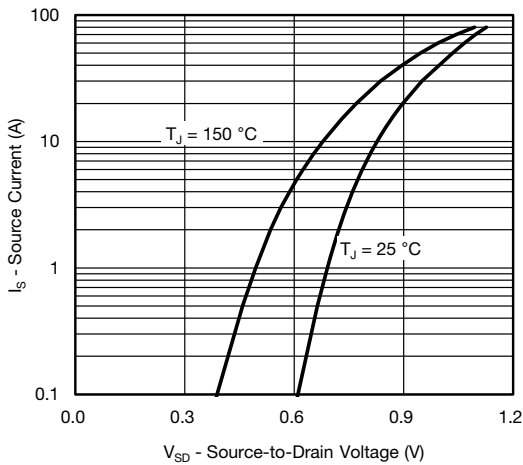
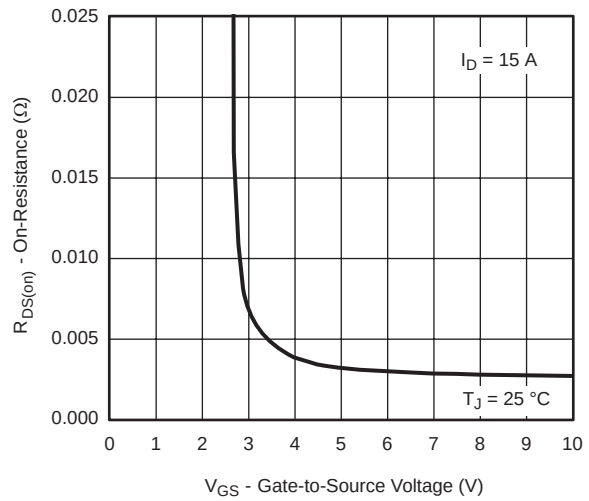
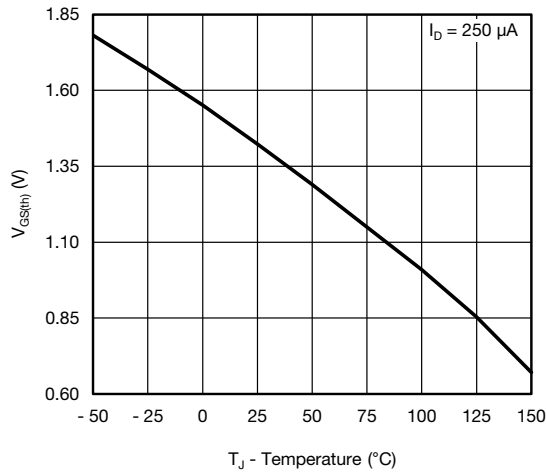
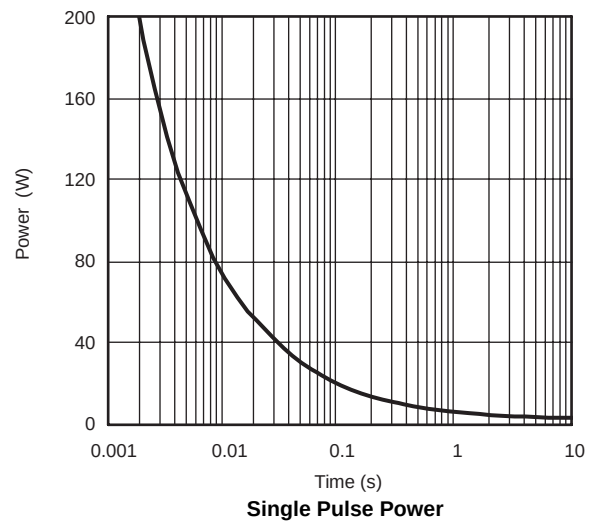
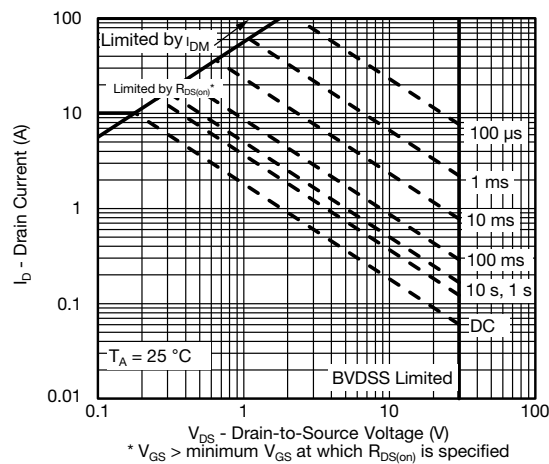


On-Resistance vs. Drain Current

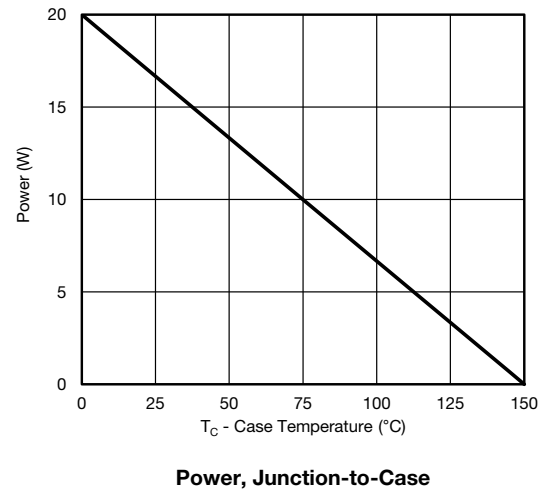
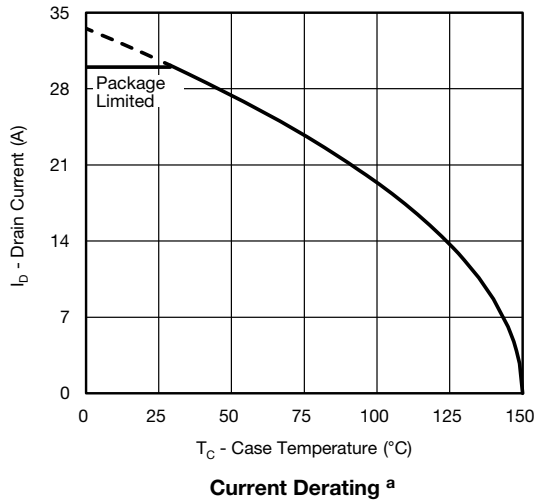


Capacitance



TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted

Source-Drain Diode Forward Voltage

On-Resistance vs. Gate-to-Source Voltage

Threshold Voltage

Single Pulse Power


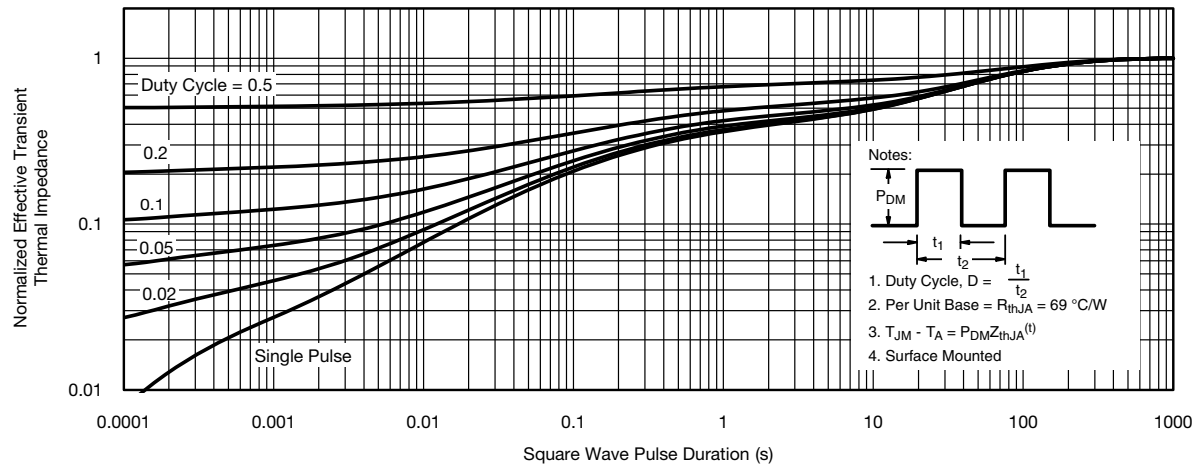
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



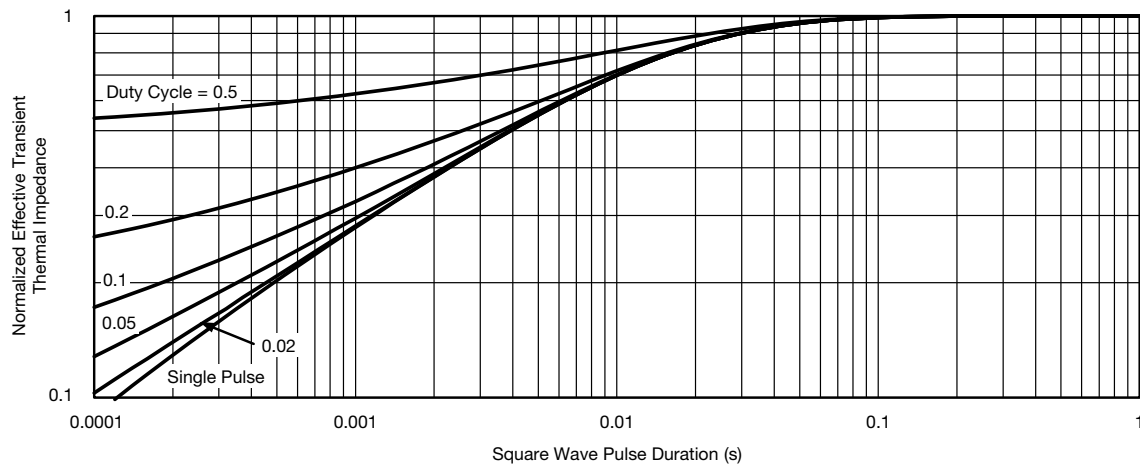
Note

- a. The power dissipation P_D is based on T_J max. = 25 °C, using junction-to-case thermal resistance, and is more useful in settling the upper dissipation limit for cases where additional heatsinking is used. It is used to determine the current rating, when this rating falls below the package limit.

TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted

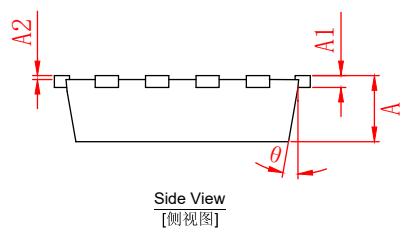
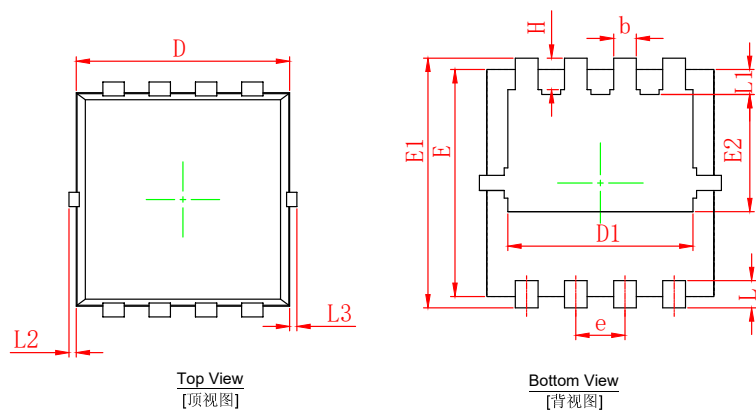


Normalized Thermal Transient Impedance, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Case

PDFNWB3×3-8L Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.650	0.850	0.026	0.033
A1	0.203REF.		0.008REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.050	2.550	0.081	0.100
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.450	1.650	0.057	0.065
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	

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