

DMN2005DLP4K

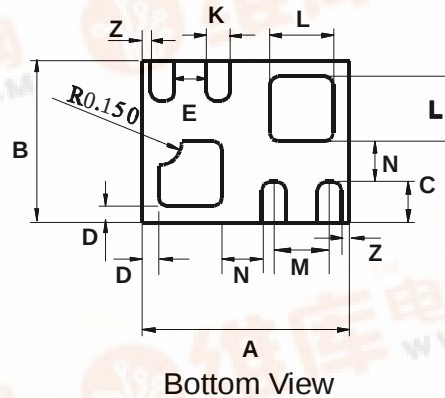
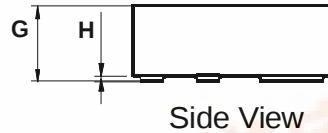
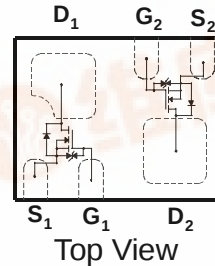
DUAL N-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

Features

- Low On-Resistance
- Very Low Gate Threshold Voltage, 0.9V Max.
- Fast Switching Speed
- Low Input/Output Leakage
- Ultra-Small Surface Mount Package
- Lead Free By Design/RoHS Compliant (Note 2)
- "Green" Device (Note 4)
- ESD Protected Gate
- Ultra Low Profile Package

Mechanical Data

- Case: DFN1310H4-6
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: See Diagram
- Terminals: Finish — NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking: See Page 4
- Ordering & Date Code Information: See Page 4



DFN1310H4-6			
Dim	Min	Max	Typ
A	1.25	1.38	1.30
B	0.95	1.08	1.00
C	0.20	0.30	0.25
D*	-	-	0.10
E**	-	-	0.20
G	-	0.40	-
H	0	0.05	0.20
K*	0.10	0.20	0.15
L*	0.30	0.50	0.40
M**	-	-	0.35
N*	-	-	0.25
Z**	-	-	0.05
All Dimensions in mm			

* Dimensions D, K, L, N Repeat 4X
** Dimensions E, M, Z Repeat 2X



Maximum Ratings @T_A = 25°C unless otherwise specified

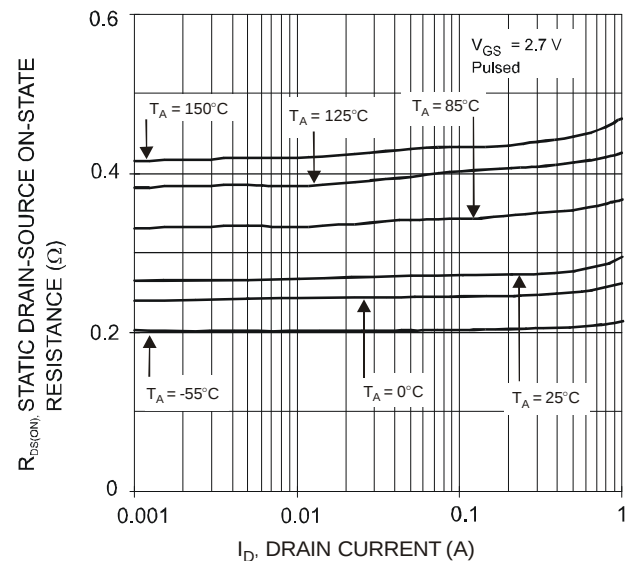
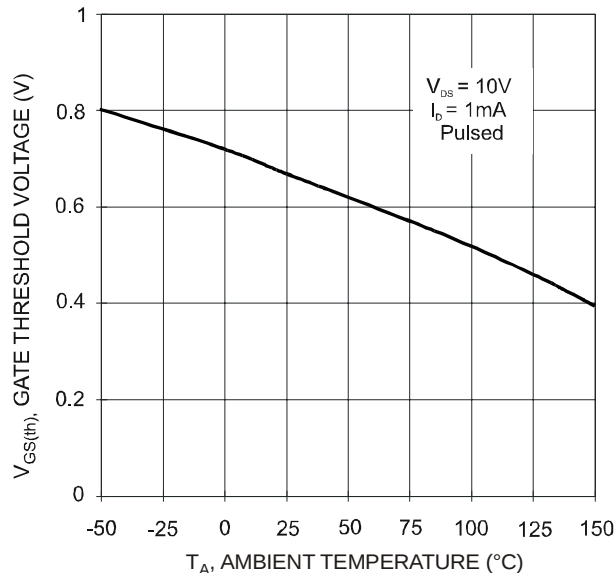
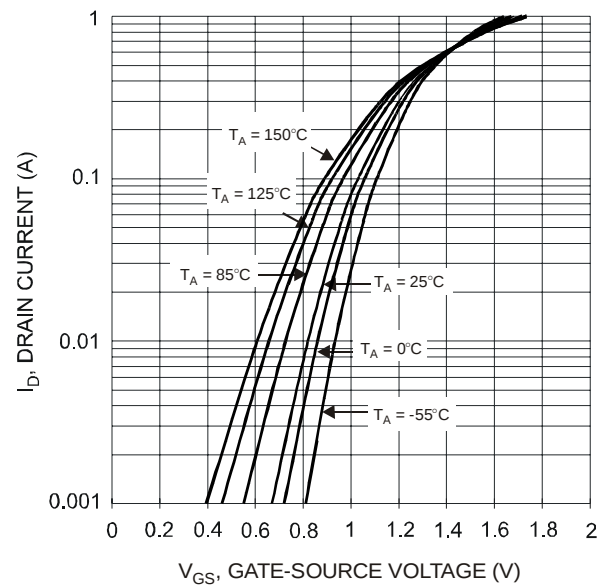
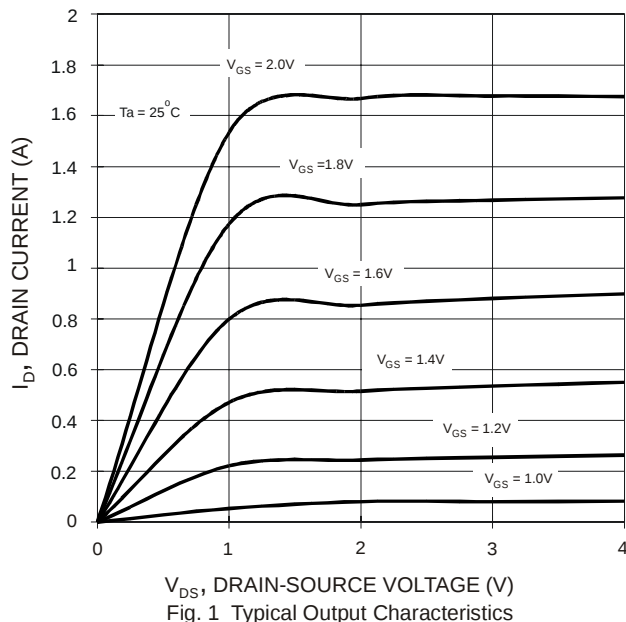
Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V _{DSS}	20	V
Gate-Source Voltage	V _{GSS}	±10	V
Drain Current per element (Note 1)	I _D	200	mA
Continuous Pulsed (Note 3)		250	
Total Power Dissipation (Note 1)	P _d	350	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	357	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

- Notes:
1. Device mounted on FR-4 PCB.
 2. No purposefully added lead.
 3. Pulse width ≤10μs, Duty Cycle ≤1%.
 4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (per element) (Note 5)						
Drain-Source Breakdown Voltage	BV _{DSS}	20	—	—	V	V _{GS} = 0V, I _D = 100μA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	10	μA	V _{DS} = 17V, V _{GS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±5	μA	V _{GS} = ±8V, V _{DS} = 0V
ON CHARACTERISTICS (per element) (Note 5)						
Gate Threshold Voltage	V _{GS(th)}	0.53	—	0.9	V	V _{DS} = V _{GS} , I _D = 100μA
Static Drain-Source On-Resistance	R _{DS(on)}	—	0.9 0.85 1.2 2.4 2.5	1.5 1.7 1.7 3.5 3.5	Ω	V _{GS} = 4V, I _D = 10mA V _{GS} = 2.7V, I _D = 200mA V _{GS} = 2.5V, I _D = 10mA V _{GS} = 1.8V, I _D = 200mA V _{GS} = 1.5V, I _D = 1mA
Forward Transfer Admittance	Y _{fs}	40	—	—	mS	V _{DS} = 3V, I _D = 10mA

Notes: 5. Short duration test pulse used to minimize self-heating effect.



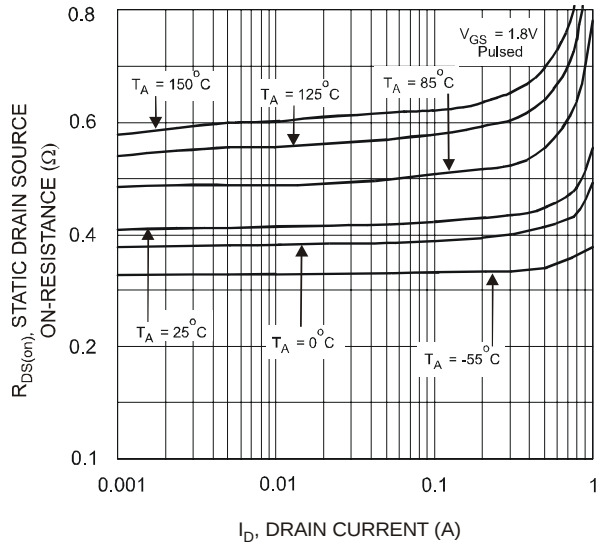


Fig. 5 Static Drain-Source On-Resistance vs. Drain Current

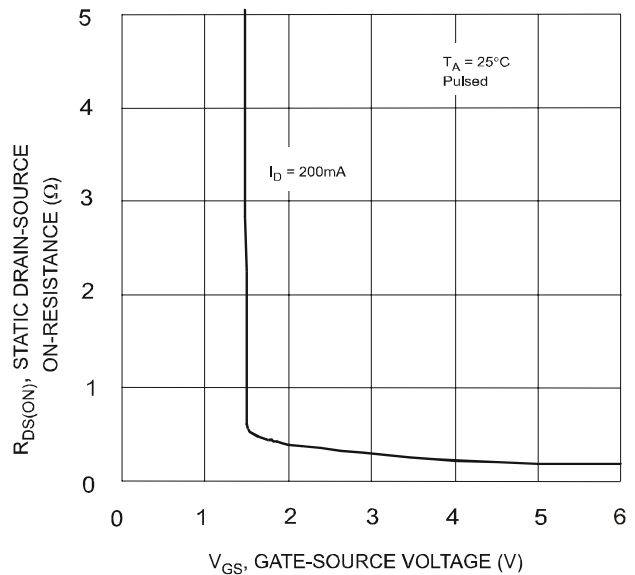


Fig. 6 Static Drain-Source, On-Resistance vs. Gate-Source Voltage

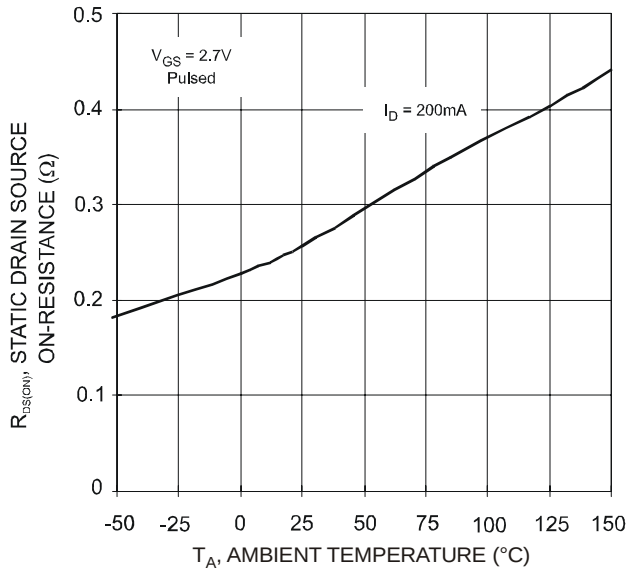


Fig. 7 Static Drain-Source, On-Resistance vs. Ambient Temperature

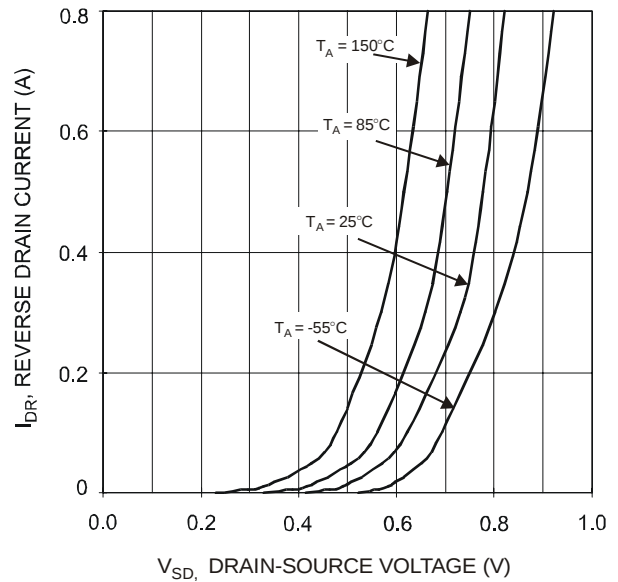


Fig. 8 Reverse Drain Current vs. Source-Drain Voltage

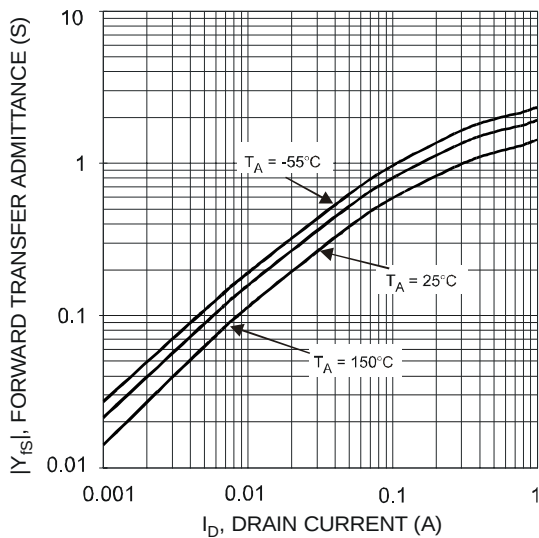


Fig. 9 Forward Transfer Admittance vs. Drain Current

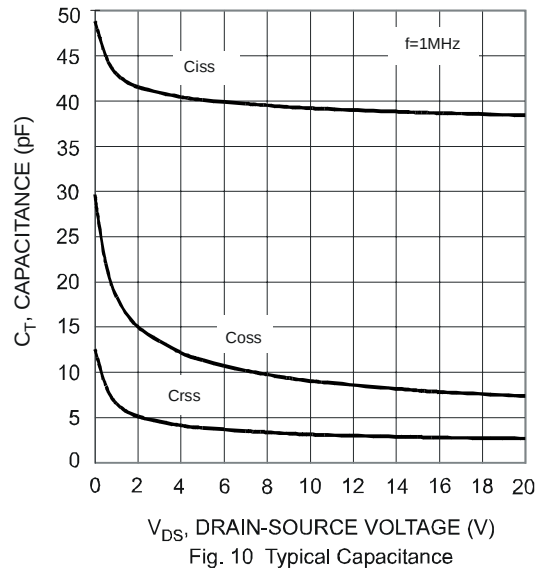


Fig. 10 Typical Capacitance



Ordering Information (Note 6)

Device	Packaging	Shipping
DMN2005DLP4K-7	DFN1310H4-6	3000/Tape & Reel

Notes: For packaging details, please go to our website at <http://www.diodes.com/ap02007.pdf>.

Marking Information



DL = Product Type Marking Code

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.