Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

P-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

NEW PRODUCT

Features

- P-Channel MOSFET
- Very Low On-Resistance
- Very Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- Ultra-Small Surface Mount Package
- **Lead Free By Design/RoHS Compliant (Note 2)**
- **"Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

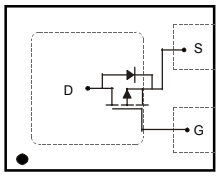
Mechanical Data

- Case: DFN1411-3
- 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 over Copper lead frame. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.003 grams (approximate)

DFN1411-3

TOP VIEW

BOTTOM VIEW



TOP VIEW
Internal Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Units
Drain-Source Voltage		V_{DSS}	-20	V
Gate-Source Voltage		V_{GSS}	±12	V
Continuous Drain Current (Note 1)	T_A = 25°C T_A = 70°C	I_D	-1.5 -1.2	A

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Units
Power Dissipation (Note 1)	P_D	500	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	250	°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 4)							
Drain-Source Breakdown Voltage		BV_{DSS}	-20	—	—	V	V_{GS} = 0V, I_D = -250μA
Zero Gate Voltage Drain Current	T_J = 25°C T_J = 125°C	I_{DSS}	—	—	-1.0 -5.0	μA	V_{DS} = -20V, V_{GS} = 0V
Gate-Source Leakage		I_{GSS}	—	—	±100	nA	V_{GS} = ±12V, V_{DS} = 0V
ON CHARACTERISTICS (Note 4)							
Gate Threshold Voltage		$V_{GS(th)}$	-0.45	—	-1.0	V	V_{DS} = V_{GS}, I_D = -250μA
Static Drain-Source On-Resistance		$R_{DS\ (ON)}$	—	92 134 180	150 200 240	mΩ	V_{GS} = -4.5V, I_D = -950mA V_{GS} = -2.5V, I_D = -670mA V_{GS} = -1.8V, I_D = -200mA
Forward Transconductance		g_{FS}	—	3.1	—	S	V_{DS} = -10V, I_D = -810mA
Diode Forward Voltage (Note 4)		V_{SD}	—	—	-0.9	V	V_{GS} = 0V, I_S = -360mA
DYNAMIC CHARACTERISTICS							
Input Capacitance		C_{iss}	—	320	—	pF	V_{DS} = -16V, V_{GS} = 0V f = 1.0MHz
Output Capacitance		C_{oss}	—	80	—	pF	
Reverse Transfer Capacitance		C_{rss}	—	60	—	pF	

Notes:
1. Device mounted on FR-4 PCB with 1 inch square pads.
2. No purposefully added lead.
3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
4. Short duration pulse test used to minimize self-heating effect.

NEW PRODUCT

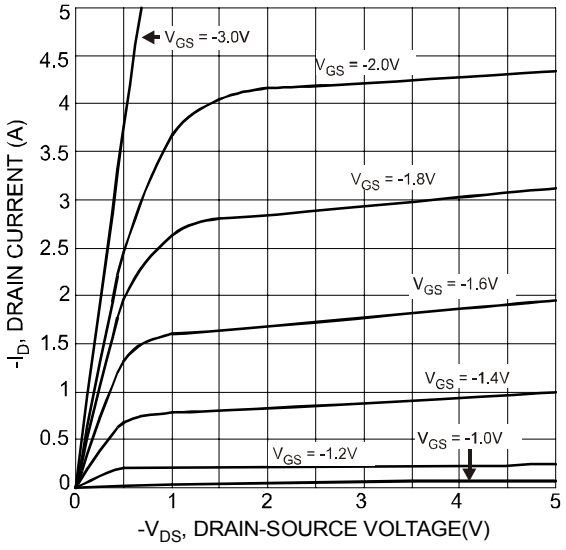


Fig.1 Typical Output Characteristics

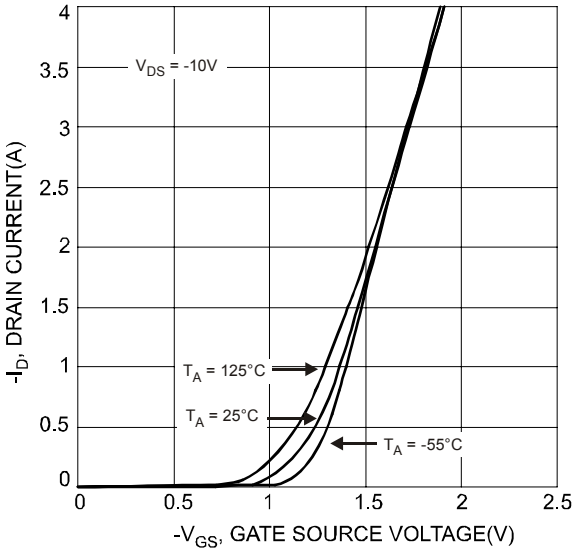


Fig. 2 Typical Transfer Characteristics

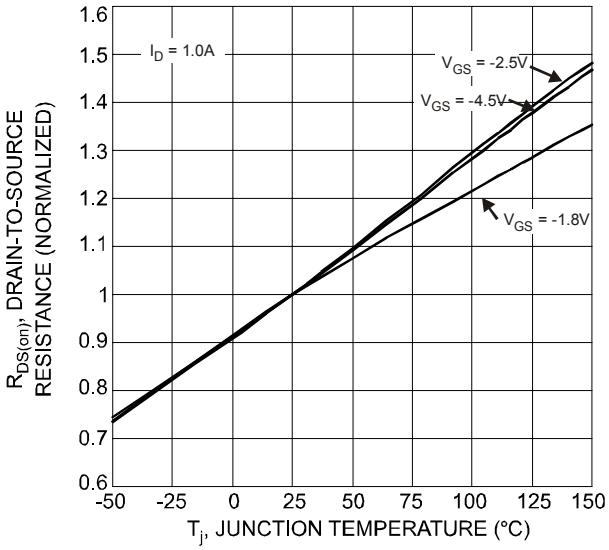


Fig. 3 On-Resistance Variation with Temperature

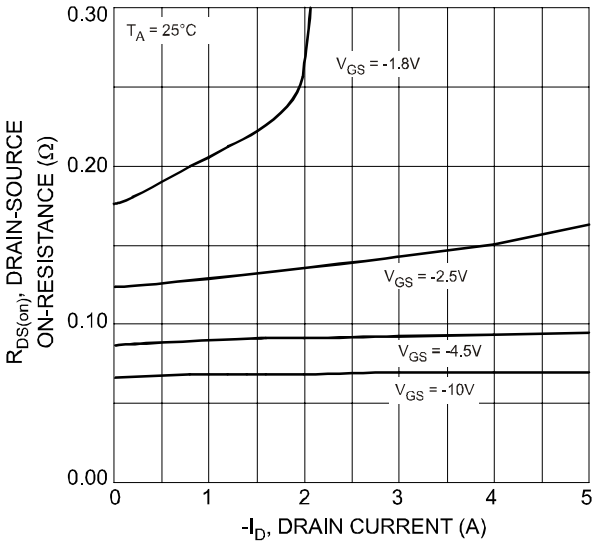


Fig. 4 On-Resistance vs. Drain Current and Gate Voltage

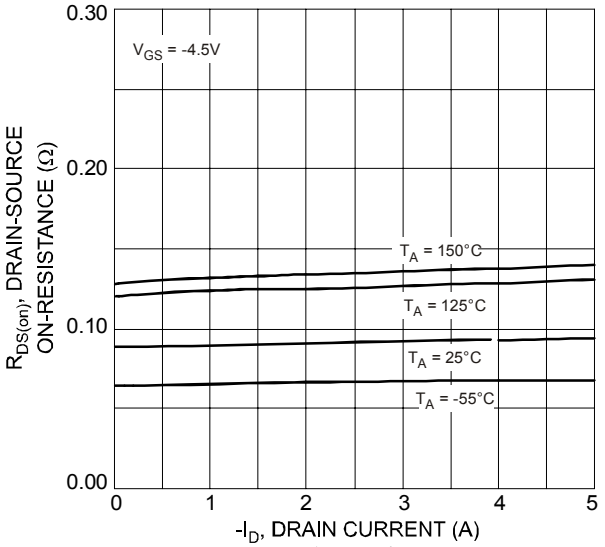


Fig. 5 Drain-Source On-Resistance vs. Drain Current and Temperature

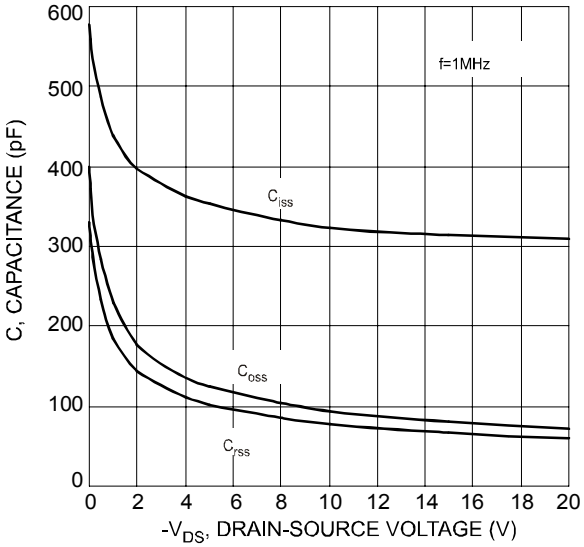


Fig. 6 Typical Capacitance

NEW PRODUCT

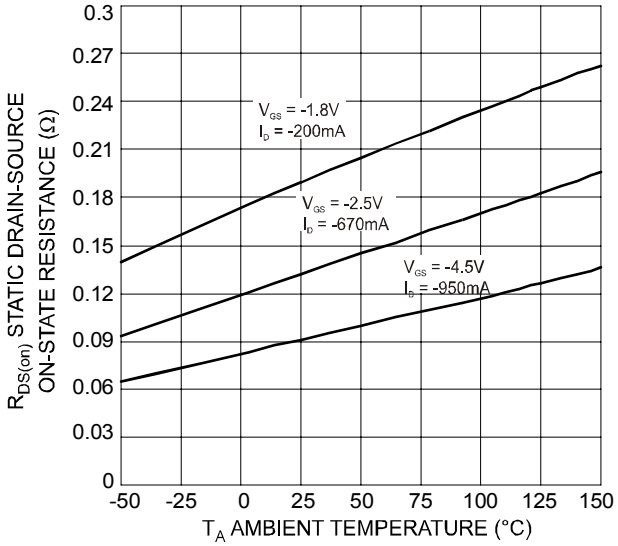


Fig. 7 Static Drain-Source On-State Resistance vs. Ambient Temperature

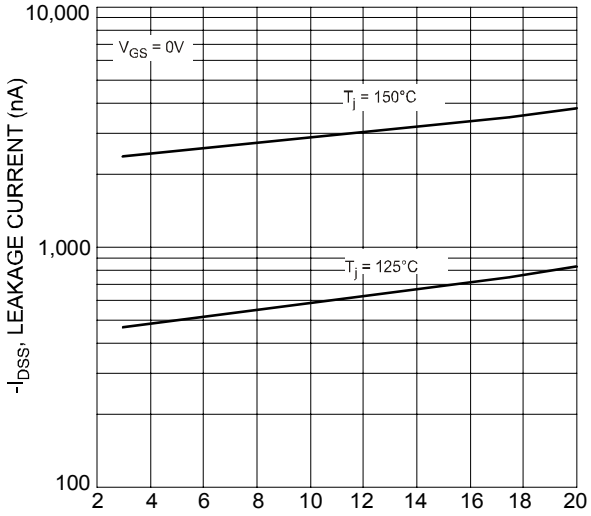


Fig. 8 Drain-Source Leakage Current vs. Voltage

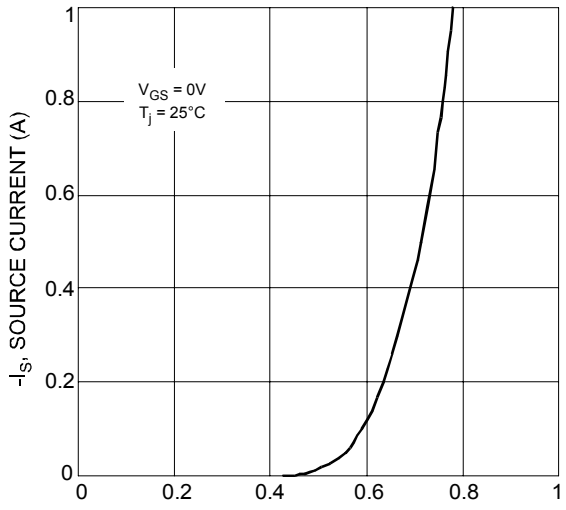


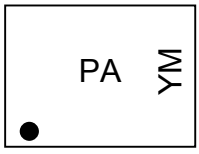
Fig. 9 Diode Forward Voltage vs. Current

Ordering Information (Note 5)

Part Number	Case	Packaging
DMP2104LP-7	DFN1411-3	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



PA = Marking Code
YM = Date Code Marking
Y = Year ex: U = 2007
M = Month ex: 9 = September

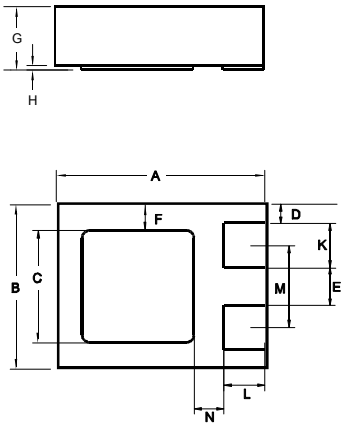
Date Code Key

Year	2007	2008	2009	2010	2011	2012
Code	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

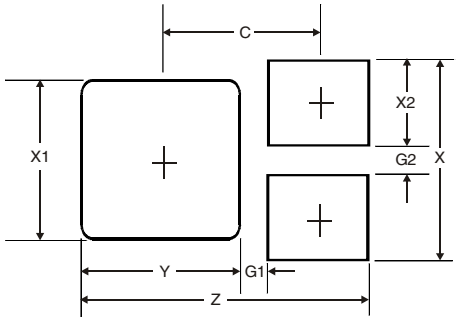
NEW PRODUCT

Package Outline Dimensions



DFN1411-3			
Dim	Min	Max	Typ
A	1.35	1.48	1.40
B	1.05	1.18	1.10
C	0.65	0.85	0.75
D	—	—	0.125
E	—	—	0.25
F	—	—	0.175
G	0.47	0.53	0.50
H	0	0.05	0.02
K	0.25	0.35	0.30
L	0.22	0.33	0.275
M	—	—	0.55
N	—	—	0.20
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.38
G1	0.15
G2	0.15
X	0.95
X1	0.75
X2	0.40
Y	0.75
C	0.76