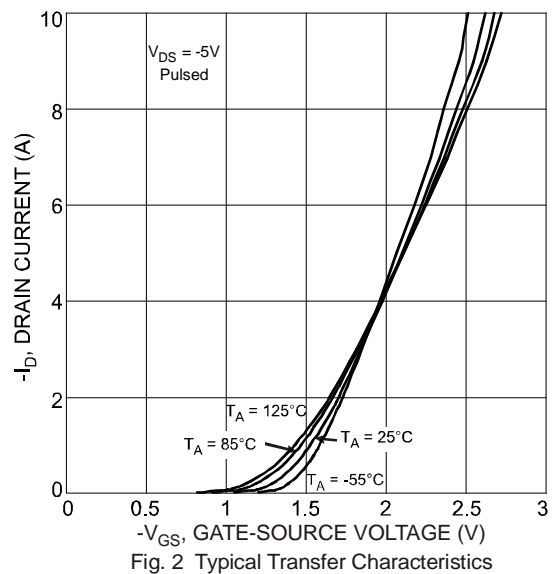
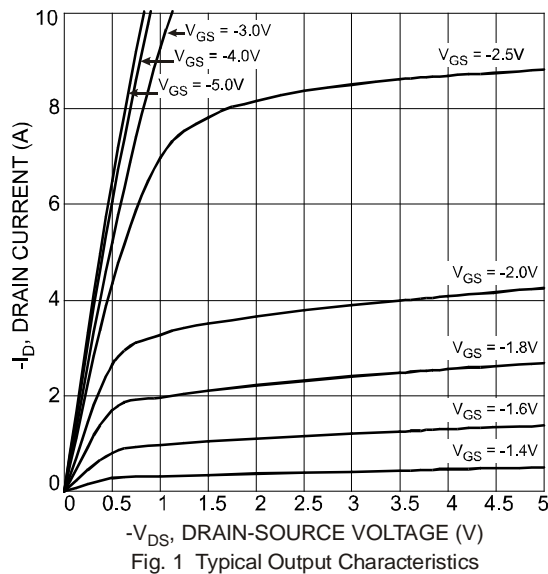


**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
<b>STATIC PARAMETERS</b>						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	-20	—	—	V	I <sub>D</sub> = -250μA, V <sub>GS</sub> = 0V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	—	—	-1	μA	V <sub>DS</sub> = -20V, V <sub>GS</sub> = 0V
Gate-Body Leakage Current	I <sub>GSS</sub>	—	—	±100	nA	V <sub>DS</sub> = 0V, V <sub>GS</sub> = ±12V
Gate Threshold Voltage	V <sub>GS(th)</sub>	-0.6	—	-1.25	V	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA
On State Drain Current (Note 5)	I <sub>D(ON)</sub>	-15	—	—	A	V <sub>GS</sub> = -4.5V, V <sub>DS</sub> = -5V
Static Drain-Source On-Resistance (Note 5)	R <sub>DS(ON)</sub>	—	51	80	mΩ	V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -4.5A
			82	110		V <sub>GS</sub> = -2.7V, I <sub>D</sub> = -3.8A
			94	130		V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -3.7A
Forward Transconductance (Note 5)	g <sub>FS</sub>	—	6.3	—	S	V <sub>DS</sub> = -10V, I <sub>D</sub> = -4.5A
Diode Forward Voltage (Note 5)	V <sub>SD</sub>	—	0.79	-1.26	V	I <sub>S</sub> = -1.7A, V <sub>GS</sub> = 0V
Maximum Body-Diode Continuous Current (Note 1)	I <sub>S</sub>	—	—	1.7	A	—
<b>DYNAMIC PARAMETERS (Note 6)</b>						
Total Gate Charge	Q <sub>g</sub>	—	7.3	—	nC	V <sub>GS</sub> = -4.5V, V <sub>DS</sub> = -10V, I <sub>D</sub> = 4.5A
Gate-Source Charge	Q <sub>gs</sub>	—	2.0	—	nC	V <sub>GS</sub> = -4.5V, V <sub>DS</sub> = -10V, I <sub>D</sub> = 4.5A
Gate-Drain Charge	Q <sub>gd</sub>	—	1.9	—	nC	V <sub>GS</sub> = -4.5V, V <sub>DS</sub> = -10V, I <sub>D</sub> = 4.5A
Turn-On Delay Time	t <sub>D(on)</sub>	—	12	—	ns	V <sub>DS</sub> = -10V, V <sub>GS</sub> = -4.5V, R <sub>L</sub> = 10Ω, R <sub>G</sub> = 6Ω
Turn-On Rise Time	t <sub>r</sub>	—	20	—	ns	
Turn-Off Delay Time	t <sub>D(off)</sub>	—	38	—	ns	
Turn-Off Fall Time	t <sub>f</sub>	—	41	—	ns	V <sub>DS</sub> = -16V, V <sub>GS</sub> = 0V f = 1.0MHz
Input Capacitance	C <sub>iss</sub>	—	443	—	pF	
Output Capacitance	C <sub>oss</sub>	—	125	—	pF	
Reverse Transfer Capacitance	C <sub>rss</sub>	—	98	—	pF	

Notes: 5. Test pulse width t = 300μs.  
 6. Guaranteed by design. Not subject to production testing.



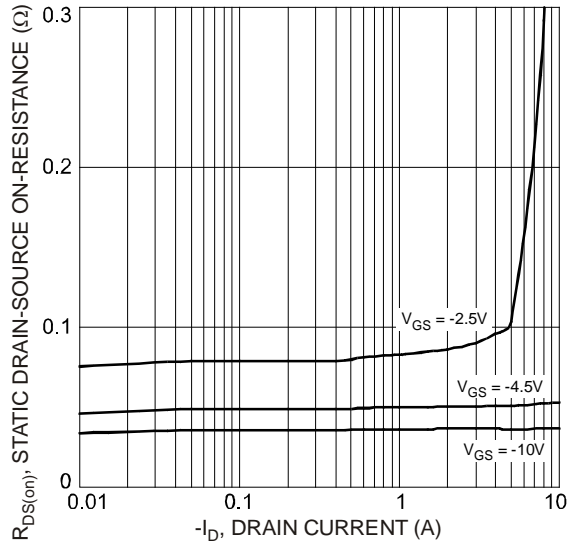


Fig. 3 On-Resistance vs. Drain Current and Gate Voltage

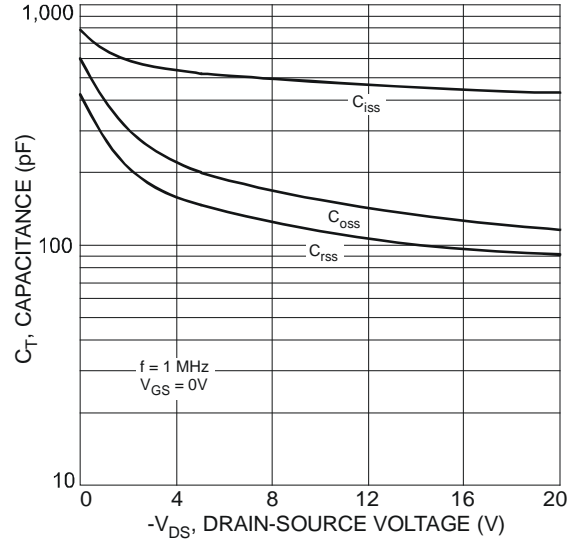


Fig. 4 Typical Total Capacitance

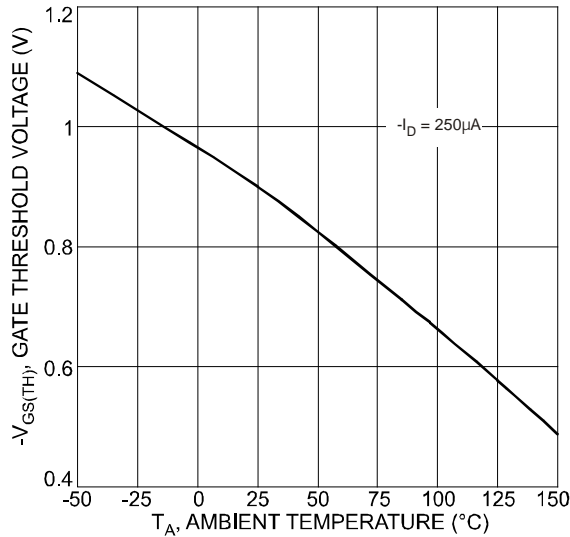


Fig. 5 Gate Threshold Voltage vs. Ambient Temperature

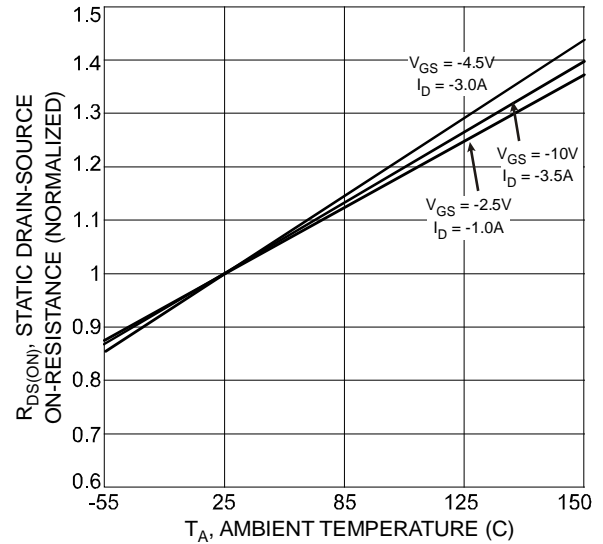


Fig. 6 Normalized Static Drain-Source On-Resistance vs. Ambient Temperature

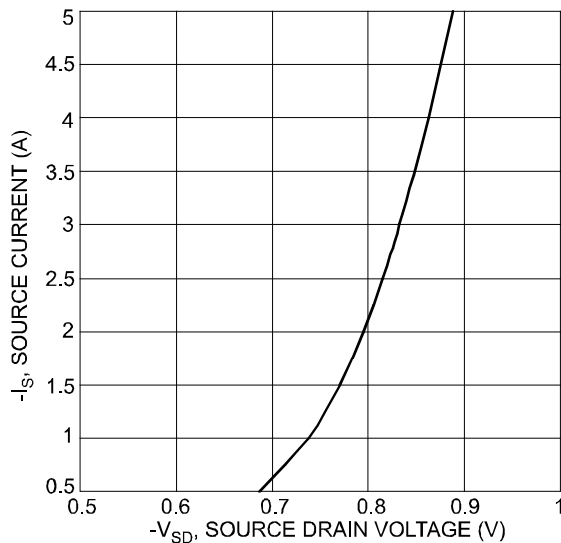


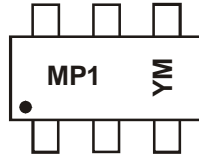
Fig. 7 Reverse Drain Current vs. Source-Drain Voltage

## Ordering Information (Note 7)

Part Number	Case	Packaging
DMP2130LDM-7	SOT-26	3000/Tape & Reel

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

## Marking Information



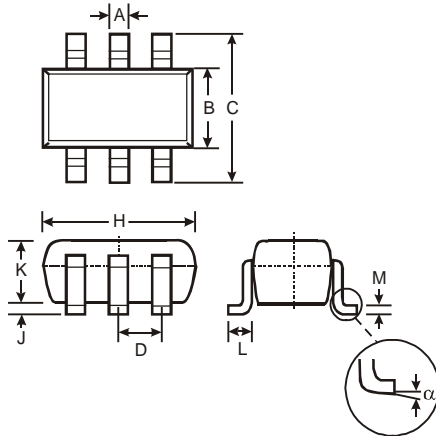
MP1 = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year ex: U = 2007  
 M = Month ex: 9 = September

### Date Code Key

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

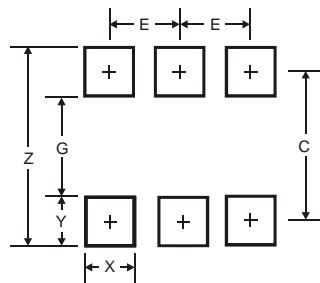
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

## Package Outline Dimensions



SOT-26			
Dim	Min	Max	Typ
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
$\alpha$	0°	8°	—
All Dimensions in mm			

## Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.20
G	1.60
X	0.55
Y	0.80
C	2.40
E	0.95

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