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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.

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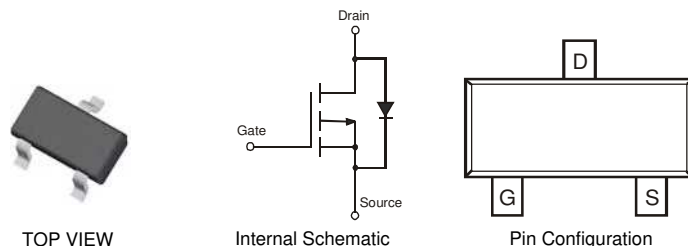
Features

- Low $R_{DS(ON)}$:
 - 40 m Ω @ $V_{GS} = -4.5V$
 - 70 m Ω @ $V_{GS} = -2.5V$
- Low Input/Output Leakage
- **Lead Free By Design/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**
- **"Green" Device (Note 4)**

Mechanical Data

- Case: SC-59
- Case Material – Molded Plastic. UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish - Matte Tin Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking Information: See Page 4
- Ordering Information: See page 4
- Weight: 0.014 grams (approximate)

SC-59



Maximum Ratings @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-Source Voltage	V_{GSS}	± 12	V
Drain Current (Note 1) Continuous	I_D	$T_A = 25^\circ C$ -4.6	A
		$T_A = 70^\circ C$ -3.7	
Pulsed Drain Current (Note 2)	I_{DM}	-18	A
Body-Diode Continuous Current (Note 1)	I_S	2.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Total Power Dissipation (Note 1)	P_D	1.25	W
Thermal Resistance, Junction to Ambient (Note 1); Steady-State	$R_{\theta JA}$	100	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

- Notes:
1. Device mounted on 1"x1", FR-4 PC board with 2 oz. Copper and test pulse width $t \leq 10s$.
 2. Repetitive Rating, pulse width limited by junction temperature.
 3. No purposefully added lead.
 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
STATIC PARAMETERS						
Drain-Source Breakdown Voltage	BV _{DSS}	-20	—	—	V	I _D = -250μA, V _{GS} = 0V
Zero Gate Voltage Drain Current	I _{DSS}	—	—	-1	μA	V _{DS} = -20V, V _{GS} = 0V
Gate-Body Leakage Current	I _{GSS}	—	—	±100	nA	V _{DS} = 0V, V _{GS} = ±12V
Gate Threshold Voltage	V _{GS(th)}	-0.6	-0.96	-1.2	V	V _{DS} = V _{GS} , I _D = -250μA
On State Drain Current (Note 5)	I _{D(ON)}	-15	—	—	A	V _{GS} = -4.5V, V _{DS} = -5V
Static Drain-Source On-Resistance (Note 5)	R _{DS(ON)}	—	29 55	40 70	mΩ	V _{GS} = -4.5V, I _D = -4.6A V _{GS} = -2.5V, I _D = -3.8A
Forward Transconductance (Note 5)	g _{FS}	—	9	—	S	V _{DS} = -10V, I _D = -4.5A
Diode Forward Voltage (Note 5)	V _{SD}	-0.5	-0.72	-1.4	V	I _S = -2.1A, V _{GS} = 0V
Maximum Body-Diode Continuous Current (Note 1)	I _S	—	—	1.7	A	—
DYNAMIC PARAMETERS (Note 6)						
Input Capacitance	C _{iss}	—	820	—	pF	V _{DS} = -15V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	200	—	pF	
Reverse Transfer Capacitance	C _{rss}	—	160	—	pF	
Gate Resistance	R _G	—	2.5	—	Ω	V _{DS} = 0V, V _{GS} = 0V f = 1.0MHz
SWITCHING CHARACTERISTICS						
Total Gate Charge	Q _G	—	10.1	—	nC	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -4.5A
Gate-Source Charge	Q _{GS}	—	1.5	—		
Gate-Drain Charge	Q _{GD}	—	4.3	—		
Turn-On Delay Time	t _{d(on)}	—	4.4	—	ns	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -1A, R _G = 6.0Ω
Rise Time	t _r	—	9.9	—		
Turn-Off Delay Time	t _{d(off)}	—	28.0	—		
Fall Time	t _f	—	23.4	—		

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

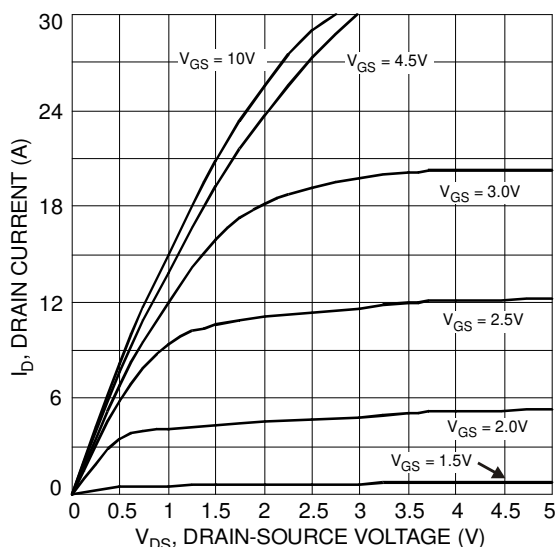


Fig. 1 Typical Output Characteristic

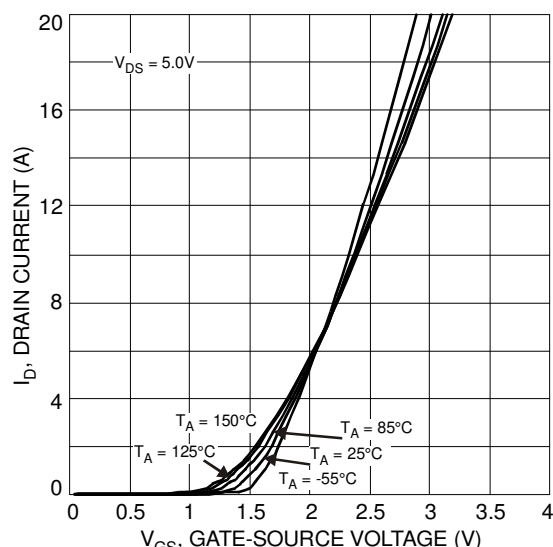


Fig. 2 Typical Transfer Characteristic

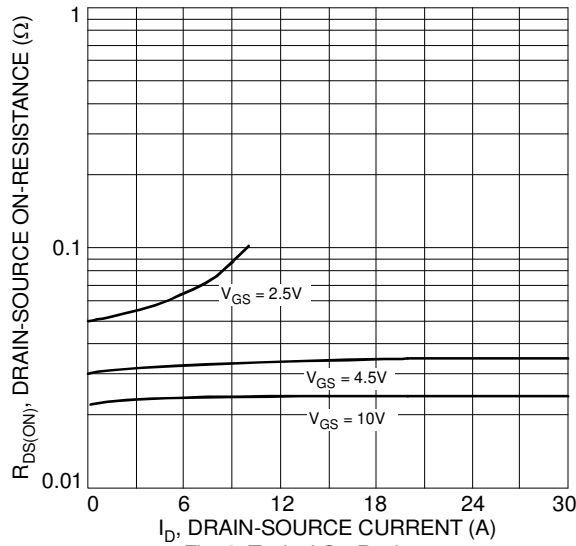


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

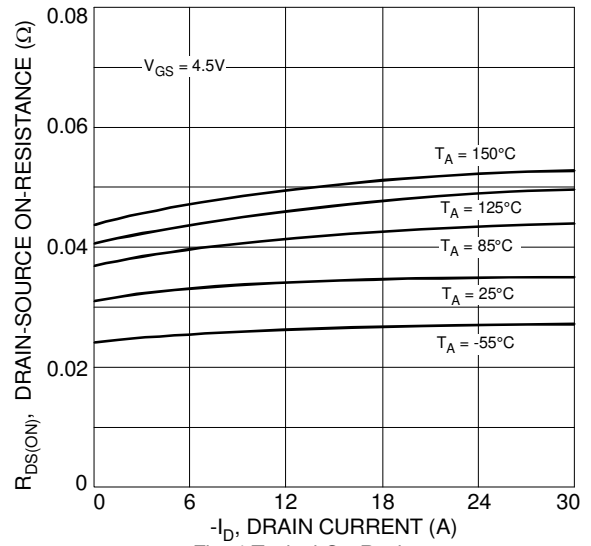


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

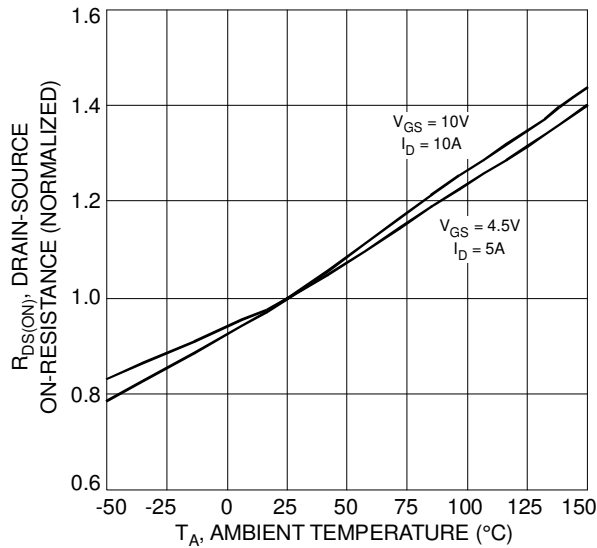


Fig. 5 Normalized On-Resistance vs. Ambient Temperature

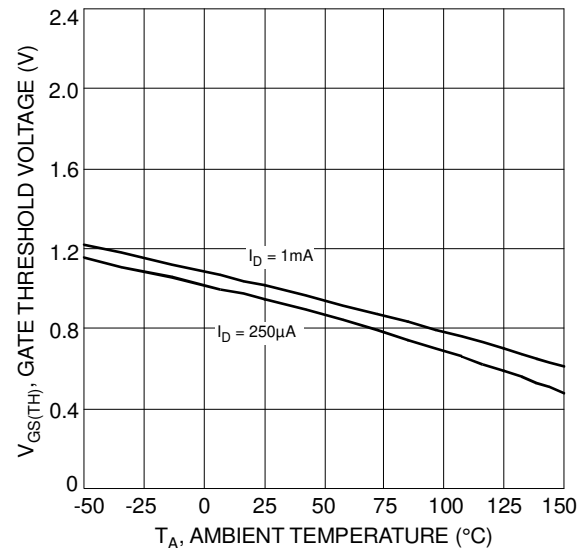


Fig. 6 Gate Threshold Variation vs. Ambient Temperature

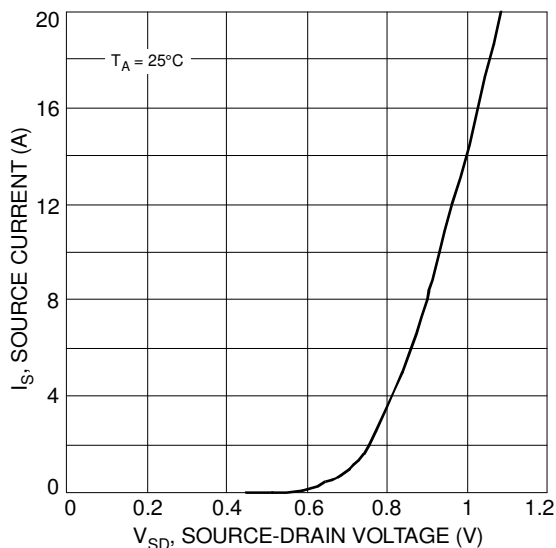


Fig. 7 Diode Forward Voltage vs. Current

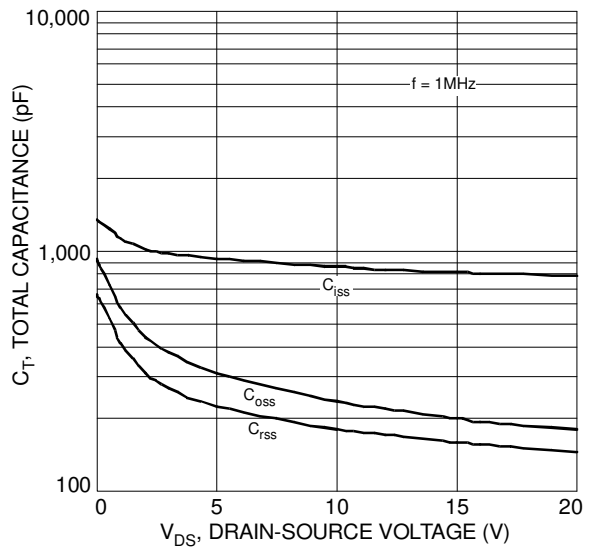


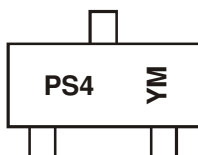
Fig. 8 Typical Total Capacitance

Ordering Information (Note 7)

Part Number	Case	Packaging
DMP2066LSN-7	SC-59	3000/Tape & Reel

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

Marking Information



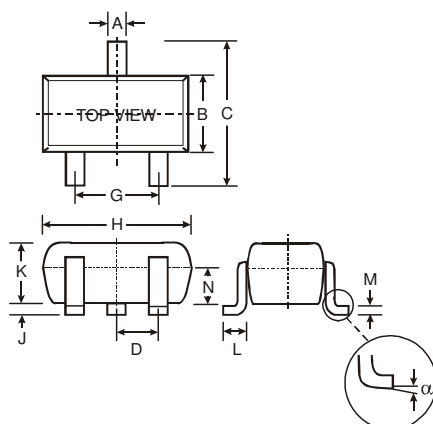
PS4 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: V = 2008
 M = Month ex: 9 = September

Date Code Key

Year	2008	2009	2010	2011	2012	2013	2014	2015
Code	V	W	X	Y	Z	A	B	C

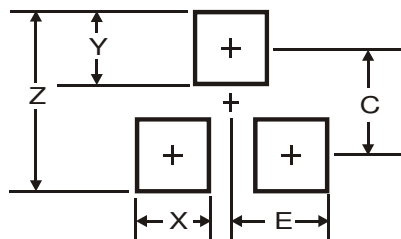
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SC-59		
Dim	Min	Max
A	0.35	0.50
B	1.50	1.70
C	2.70	3.00
D	0.95	
G	1.90	
H	2.90	3.10
J	0.013	0.10
K	1.00	1.30
L	0.35	0.55
M	0.10	0.20
N	0.70	0.80
α	0°	8°
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.4
X	0.8
Y	1.0
C	2.4
E	1.35

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