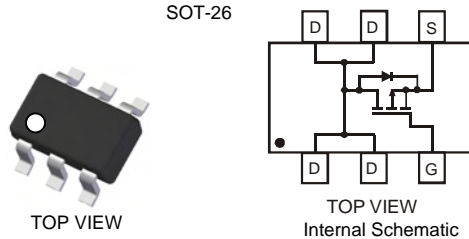


Features

- Low $R_{DS(ON)}$:
 - 65m Ω @ $V_{GS} = -10V$
 - 115m Ω @ $V_{GS} = -4.5V$
- 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: SOT-26, Molded Plastic
- Case Material - UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Terminals: Finish - Matte Tin Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking Information: See Page 3
- Ordering Information: See page 3
- Weight: 0.008 grams (approximate)



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

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current (Note 1) Continuous	I_D	-4.0 -3.0	A
		$T_A = 25^\circ C$ $T_A = 70^\circ C$	
Pulsed Drain Current (Note 2)	I_{DM}	-14	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	$^\circ C$

Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
STATIC PARAMETERS						
Drain-Source Breakdown Voltage	BV_{DSS}	-30	—	—	V	$I_D = -250\mu A, V_{GS} = 0V$
Zero Gate Voltage Drain Current	I_{DSS}	—	—	-1	μA	$V_{DS} = -30V, V_{GS} = 0V$
Gate-Body Leakage Current	I_{GSS}	—	—	± 100	nA	$V_{DS} = 0V, V_{GS} = \pm 20V$
Gate Threshold Voltage	$V_{GS(th)}$	-1.0	—	-2.1	V	$V_{DS} = V_{GS}, I_D = -250\mu A$
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)	$R_{DS(ON)}$	—	56 98	65 115	m Ω	$V_{GS} = -10V, I_D = -4.0A$ $V_{GS} = -4.5V, I_D = -3.0A$
Forward Transconductance (Note 5)	g_{FS}	—	5.3	—	S	$V_{DS} = -10V, I_D = -4.0A$
Diode Forward Voltage (Note 5)	V_{SD}	—	0.79	-1.2	V	$I_S = -1.7A, V_{GS} = 0V$
DYNAMIC PARAMETERS (Note 6)						
Input Capacitance	C_{iss}	—	336	—	pF	$V_{DS} = -25V, V_{GS} = 0V$ $f = 1.0MHz$
Output Capacitance	C_{oss}	—	70	—	pF	
Reverse Transfer Capacitance	C_{rss}	—	49	—	pF	

- Notes:
- Device mounted on 1"x1", FR-4 PC board on 0.1in.² pads on 2 oz. Copper pads and test pulse width $t \leq 10s$.
 - Repetitive Rating, pulse width limited by junction temperature.
 - No purposefully added lead.
 - Diodes Inc's "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 - Test pulse width $t = 300\mu s$.
 - Guaranteed by design. Not subject to production testing.

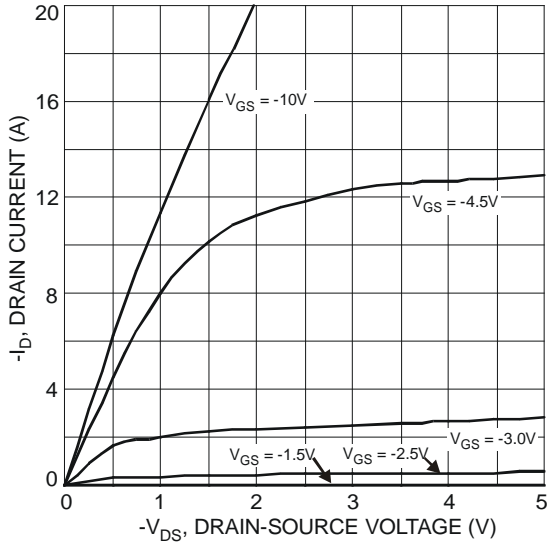


Fig. 1 Typical Output Characteristics

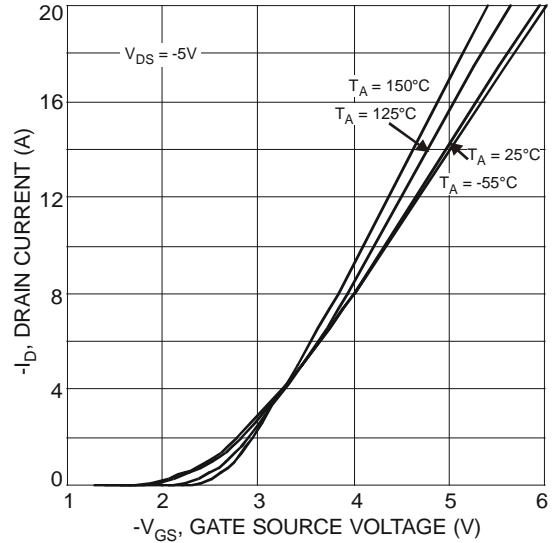


Fig. 2 Typical Transfer Characteristics

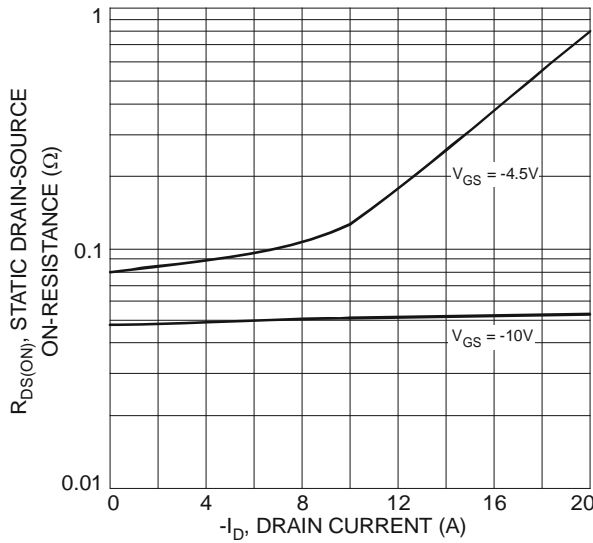


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

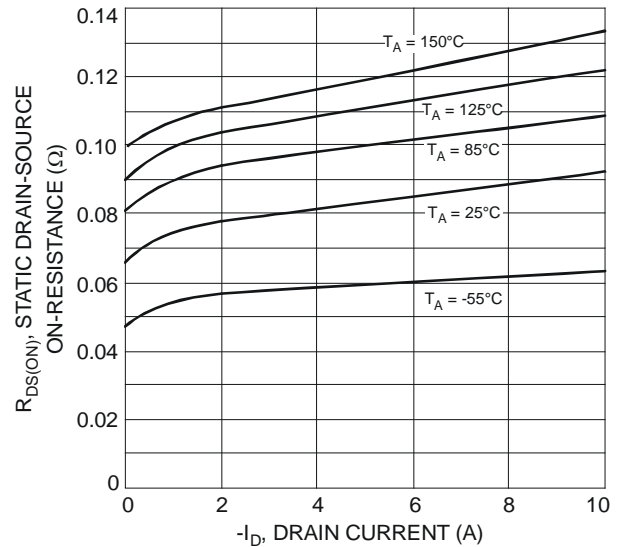


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

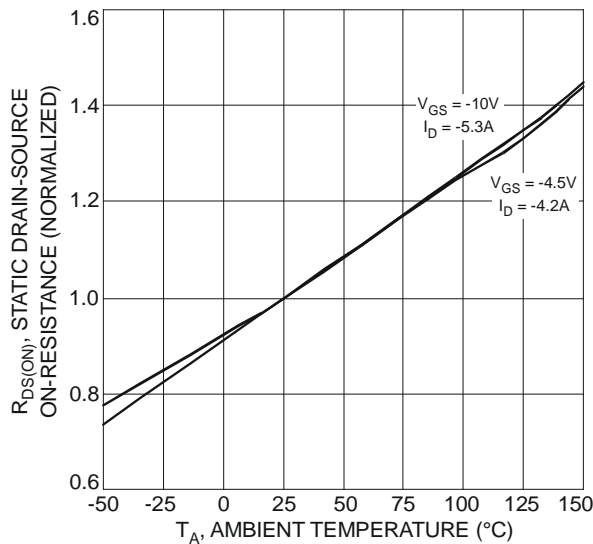


Fig. 5 On-Resistance Variation with Temperature

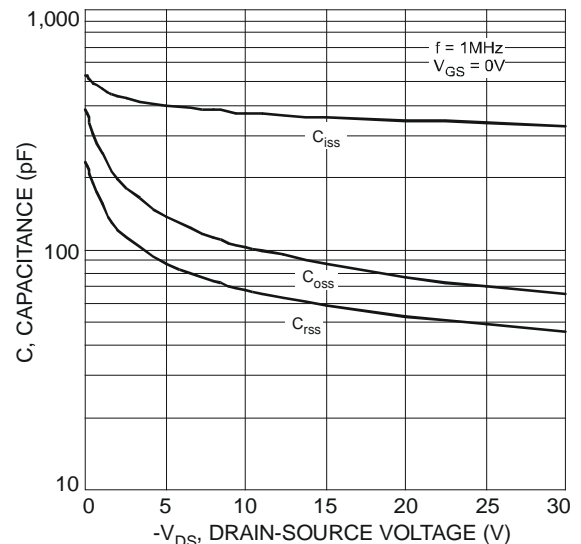


Fig. 6 Typical Capacitance

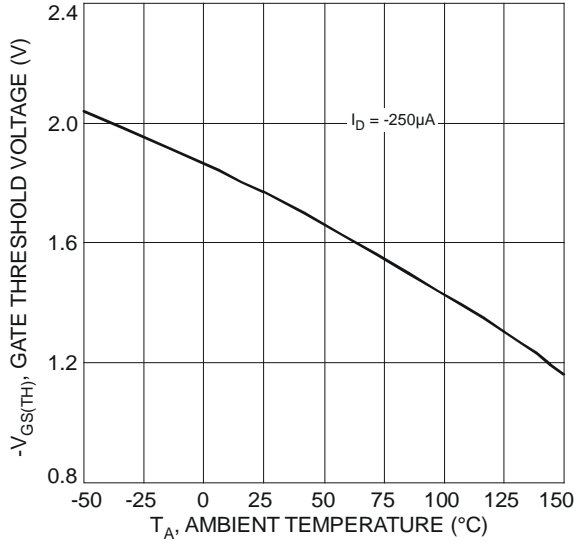


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

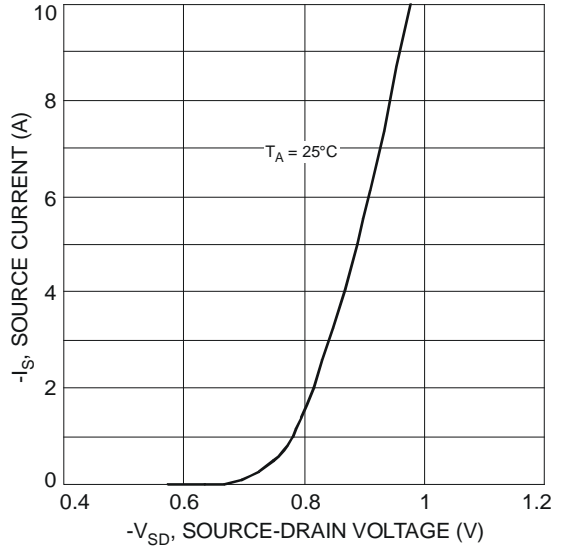


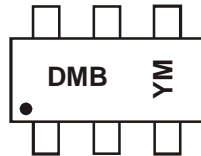
Fig. 8 Diode Forward Voltage vs. Current

Ordering Information (Note 7)

Part Number	Case	Packaging
DMP3098LDM-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



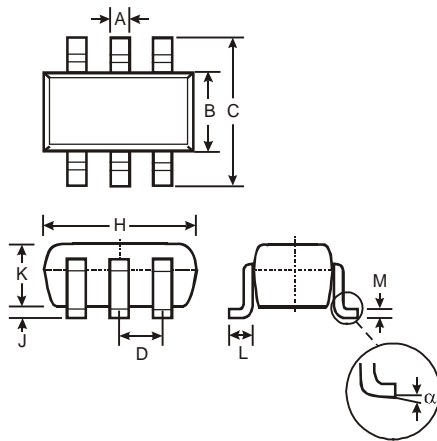
DMB = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: V = 2008
 M = Month ex: 9 = September

Date Code Key

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

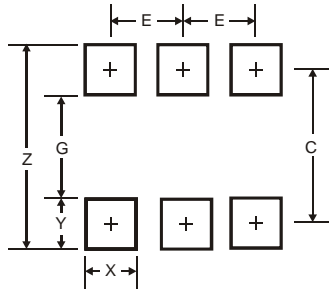
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



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
α	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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