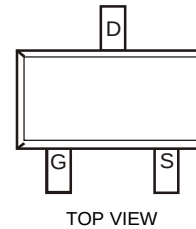
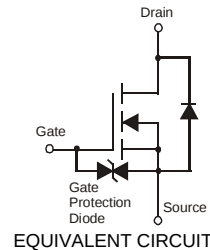


Features

- Low On-Resistance:
 - 3.0 Ω @ 4.5V
 - 4.0 Ω @ 2.5V
 - 6.0 Ω @ 1.8V
 - 10 Ω @ 1.5V
- Very Low Gate Threshold Voltage, 1.0V max
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- Ultra-Small Surface Mount Package
- ESD Protected Gate
- Lead, Halogen, and Antimony Free By Design/RoHS Compliant (Note 2)**
- "Green" Device (Note 3)**
- Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOT-523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Diagram
- Terminals: Finish – Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 4
- Ordering Information: See Page 4
- Weight: 0.002 grams (approximate)



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 (Note 1)	I _D	230	mA
Pulsed Drain Current T _P = 10μs	I _{DM}	805	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

Total Power Dissipation (Note 1)	P _D	300	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{θJA}	417	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

- Notes:
- Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 - 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.

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 = 100μA
Zero Gate Voltage Drain Current @ T _C = 25°C	I _{DSS}	—	—	500	nA	V _{DS} = 20V, V _{GS} = 0V
Gate-Body Leakage	I _{GSS}	—	—	±1 ±500 ±100	μA nA nA	V _{GS} = ±10V, V _{DS} = 0V V _{GS} = ±8V, V _{DS} = 0V V _{GS} = ±5V, V _{DS} = 0V
ON CHARACTERISTICS (Note 4)						
Gate Threshold Voltage	V _{GS(th)}	0.5	—	1.0	V	V _{DS} = V _{GS} , I _D = 250μA
Static Drain-Source On-Resistance	R _{DS (ON)}	— — — — —	1.8 2.4 2.9 3.7 5.4	3.0 4.0 6.0 10.0 15.0	Ω	V _{GS} = 4.5V, I _D = 100mA V _{GS} = 2.5V, I _D = 50mA V _{GS} = 1.8V, I _D = 20mA V _{GS} = 1.5V, I _D = 10mA V _{GS} = 1.2V, I _D = 1mA
Forward Transconductance	Y _{fs}	—	242	—	mS	V _{DS} =10V, I _D = 0.1A
Source-Drain Diode Forward Voltage	V _{SD}	0.5	—	1.0	V	V _{GS} = 0V, I _S = 115mA
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{iss}	—	14.1	—	pF	V _{DS} = 15V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	2.9	—	pF	
Reverse Transfer Capacitance	C _{rss}	—	1.6	—	pF	
SWITCHING CHARACTERISTICS, V _{GS} = 4.5V (Note 5)						
Turn-On Delay Time	t _{d(on)}	—	3.8	—	ns	V _{GS} = 4.5V, V _{DD} = 10V I _D = 200mA, R _G = 2.0Ω
Rise Time	t _r	—	7.9	—		
Turn-Off Delay Time	t _{d(off)}	—	13.4	—		
Fall Time	t _f	—	15.2	—		

- Notes: 4. Short duration pulse test used to minimize self-heating effect.
5. Switching characteristics are independent of operating junction temperature.

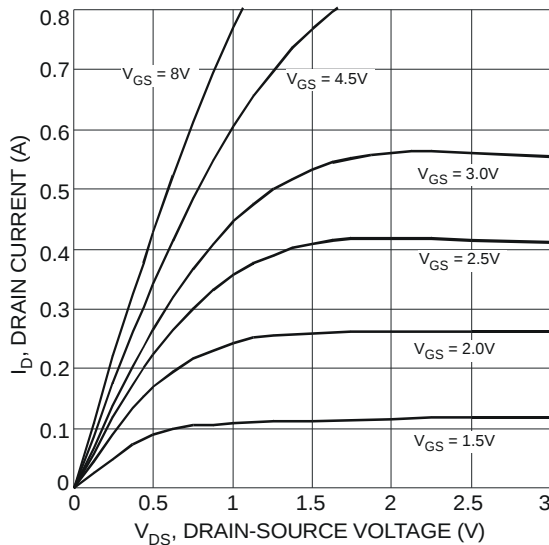


Fig. 1 Typical Output Characteristic

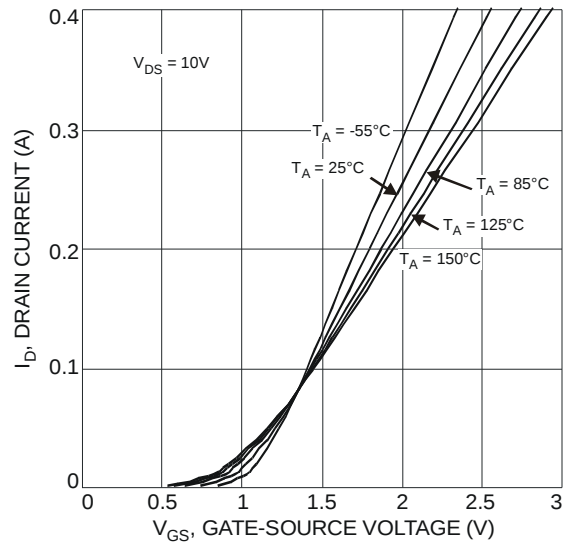


Fig. 2 Typical Transfer Characteristic

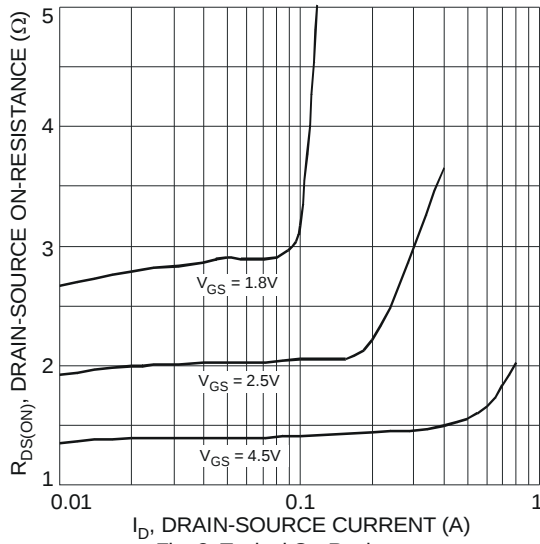


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

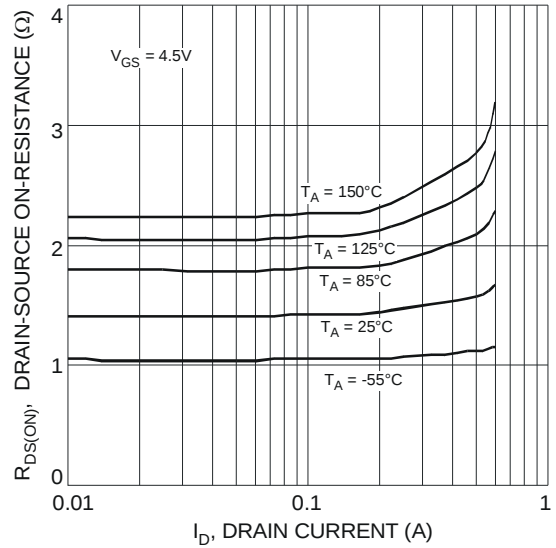


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

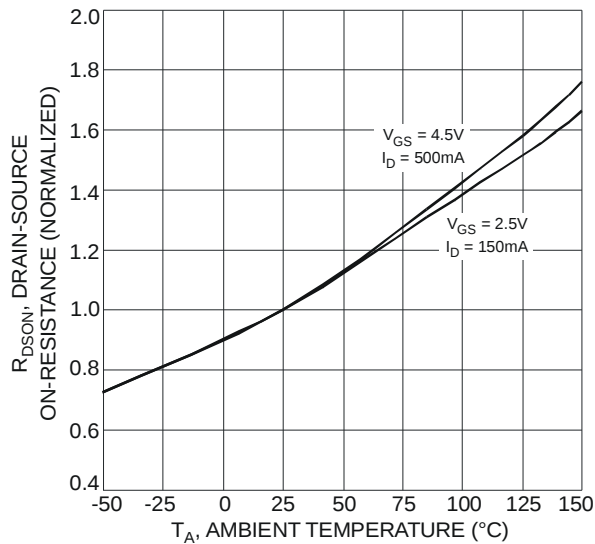


Fig. 5 On-Resistance Variation with Temperature

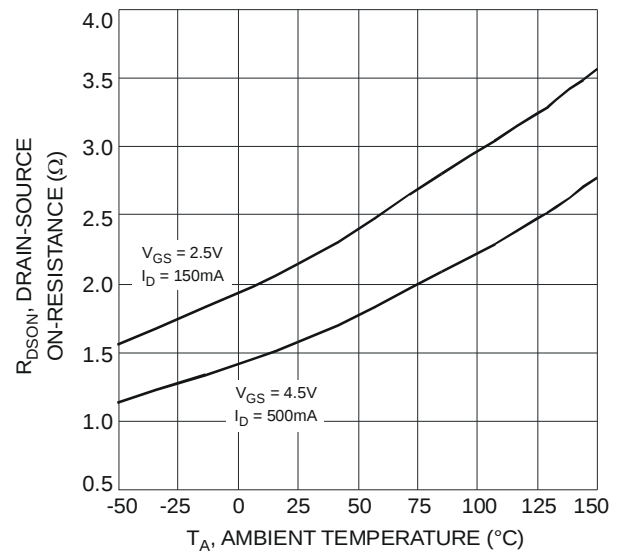


Fig. 6 On-Resistance Variation with Temperature

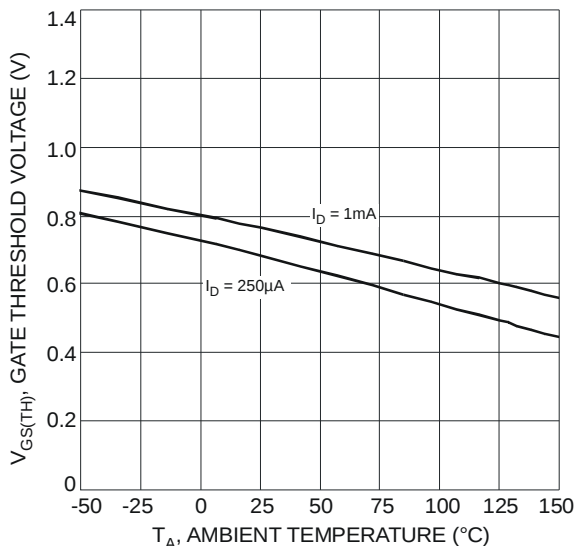


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

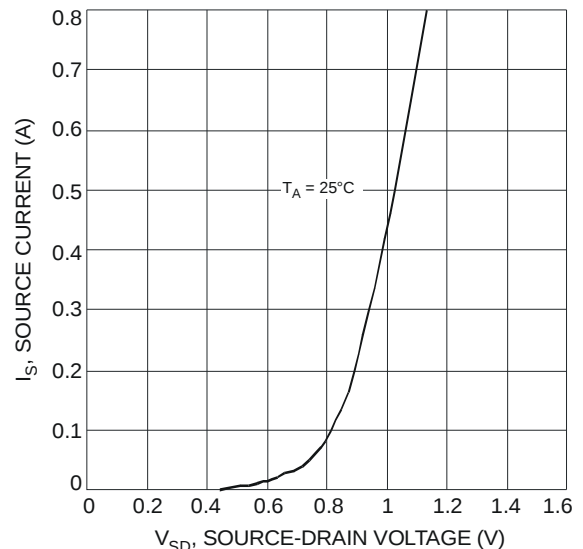


Fig. 8 Diode Forward Voltage vs. Current

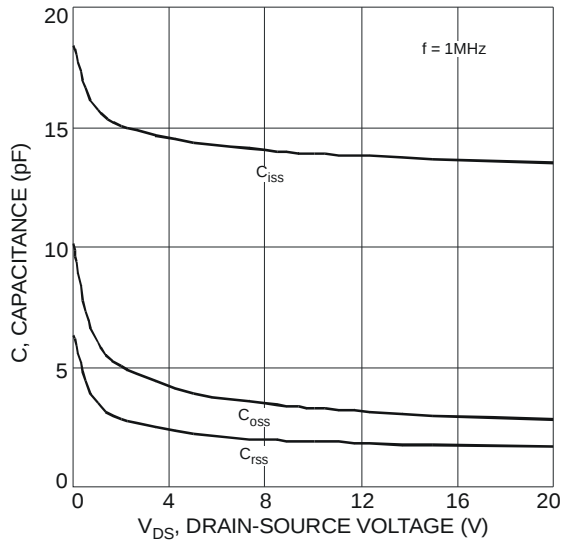


Fig. 9 Typical Total Capacitance

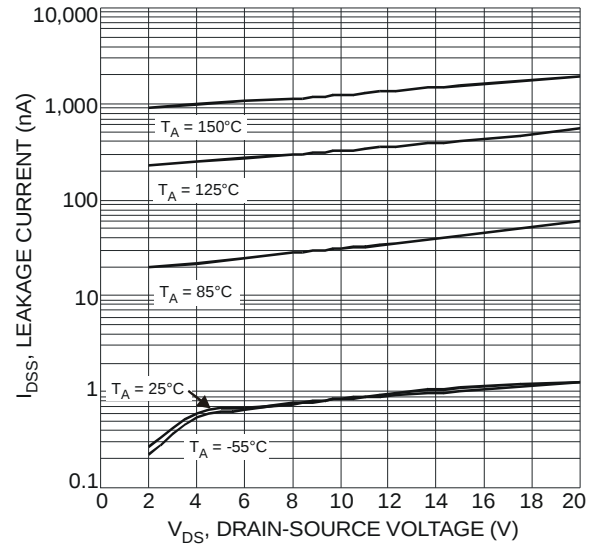


Fig. 10 Typical Leakage Current vs. Drain-Source Voltage

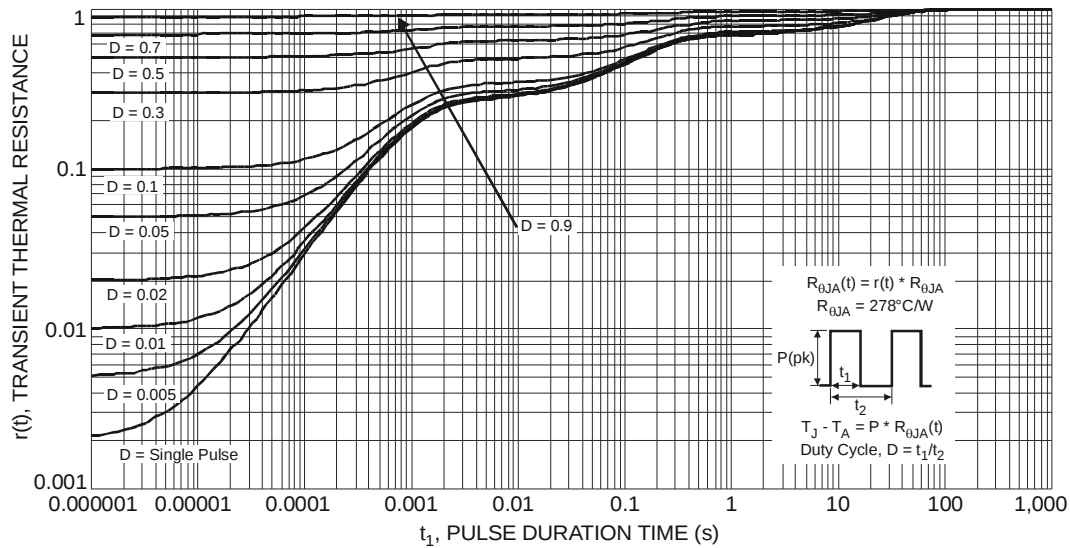


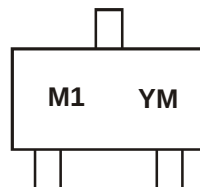
Fig. 11 Transient Thermal Response

Ordering Information (Note 6)

Part Number	Case	Packaging
DMN26D0UT-7	SOT-523	3,000/Tape & Reel

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



M1 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: W = 2009)
M = Month (ex: 9 = September)

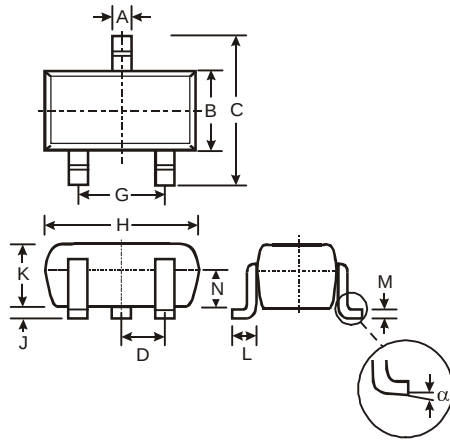
Date Code Key

Date Code Key

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

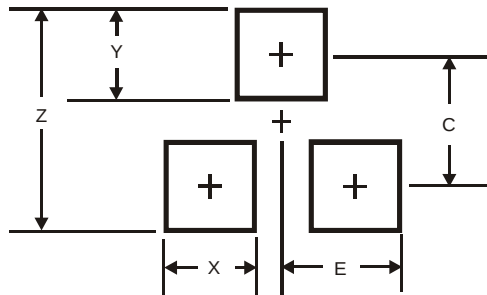
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
α	0°	8°	—
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.8
X	0.4
Y	0.51
C	1.3
E	0.7

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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