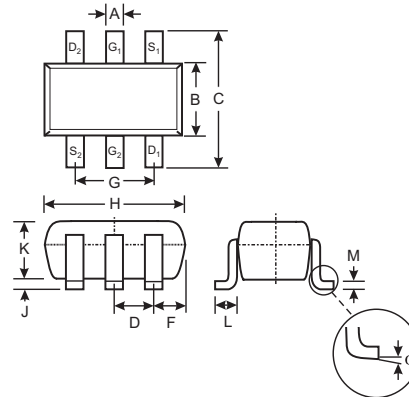


Features

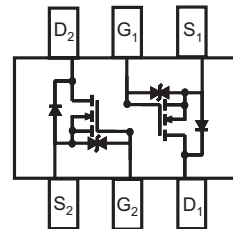
- Dual N-Channel MOSFET
- Low On-Resistance
- Very Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- Ultra-Small Surface Mount Package
- **Lead Free By Design/RoHS Compliant (Note 2)**
- **ESD Protected Up To 2kV**
- **"Green" Device (Note 4)**
- **Qualified to AEC-Q101 Standards for High Reliability**



SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
α	0°	8°
All Dimensions in mm		

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals Connections: See Diagram
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking: See Page 2
- Ordering & Date Code Information: See Page 2
- Weight: 0.006 grams (approximate)



ESD protected up to 2kV

Maximum Ratings @ T_A = 25°C unless otherwise specified

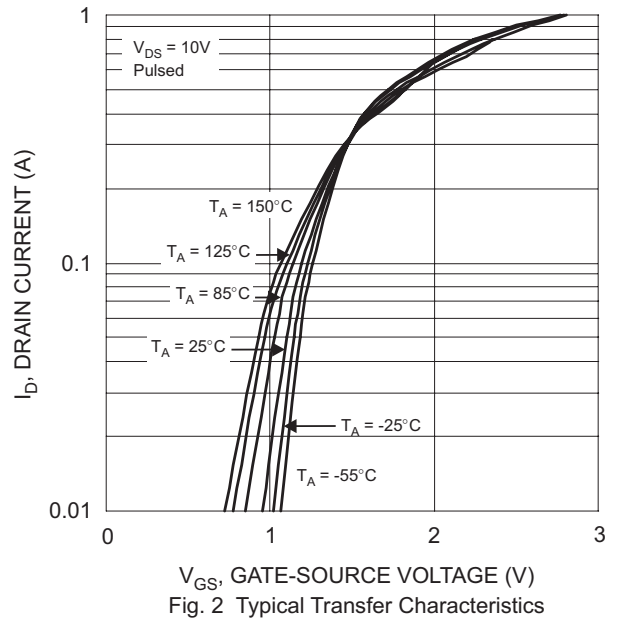
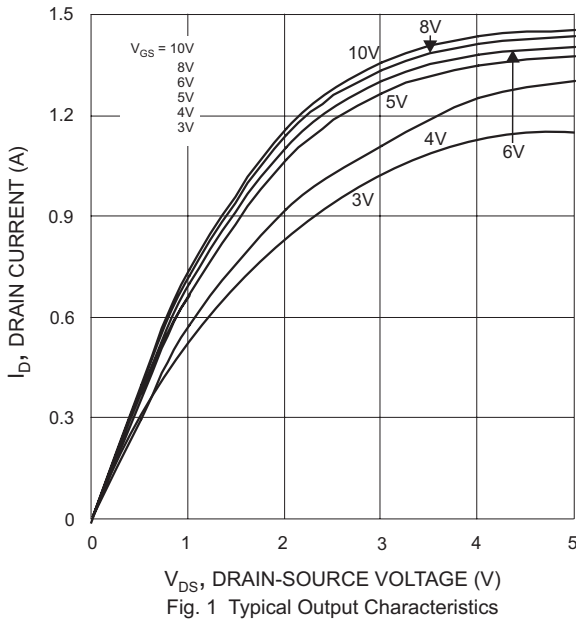
Characteristic	Symbol	Value	Units
Drain-Source Voltage	V _{DSS}	50	V
Gate-Source Voltage	V _{GSS}	±20	V
Drain Current (Note 1)	I _D	305	mA
		800	
Total Power Dissipation (Note 1)	P _d	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

- Note:
1. Device mounted on FR-4 PCB.
 2. No purposefully added lead.
 3. Pulse width ≤10μS, Duty Cycle ≤1%.
 4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)						
Drain-Source Breakdown Voltage	BV_{DSS}	50	—	—	V	$V_{GS} = 0V, I_D = 10\mu A$
Zero Gate Voltage Drain Current @ $T_C = 25^\circ\text{C}$	I_{DSS}	—	—	60	nA	$V_{DS} = 50V, V_{GS} = 0V$
Gate-Body Leakage	I_{GSS}	—	—	1	μA	$V_{GS} = \pm 12V, V_{DS} = 0V$ $V_{GS} = \pm 10V, V_{DS} = 0V$ $V_{GS} = \pm 5V, V_{DS} = 0V$
				500	nA	
ON CHARACTERISTICS (Note 5)						
Gate Threshold Voltage	$V_{GS(th)}$	0.49	—	1.2	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
Static Drain-Source On-Resistance	$R_{DS(on)}$	—	—	3.0	Ω	$V_{GS} = 1.8V, I_D = 50mA$ $V_{GS} = 2.5V, I_D = 50mA$ $V_{GS} = 5.0V, I_D = 50mA$
				2.5		
				2.0		
On-State Drain Current	$I_{D(ON)}$	0.5	1.4	—	A	$V_{GS} = 10V, V_{DS} = 7.5V$
Forward Transconductance	$ Y_{fs} $	200	—	—	mS	$V_{DS} = 10V, I_D = 0.2A$
Source-Drain Diode Forward Voltage	V_{SD}	0.5	—	1.4	V	$V_{GS} = 0V, I_S = 115mA$
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{iss}	—	—	50	pF	$V_{DS} = 25V, V_{GS} = 0V$ $f = 1.0MHz$
Output Capacitance	C_{oss}	—	—	25	pF	
Reverse Transfer Capacitance	C_{rss}	—	—	5.0	pF	

Notes: 5. Short duration test pulse used to minimize self-heating effect.



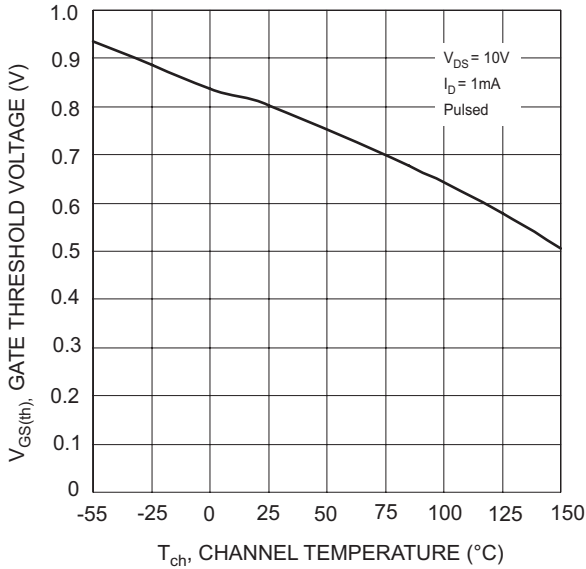


Fig. 3 Gate Threshold Voltage vs. Channel Temperature

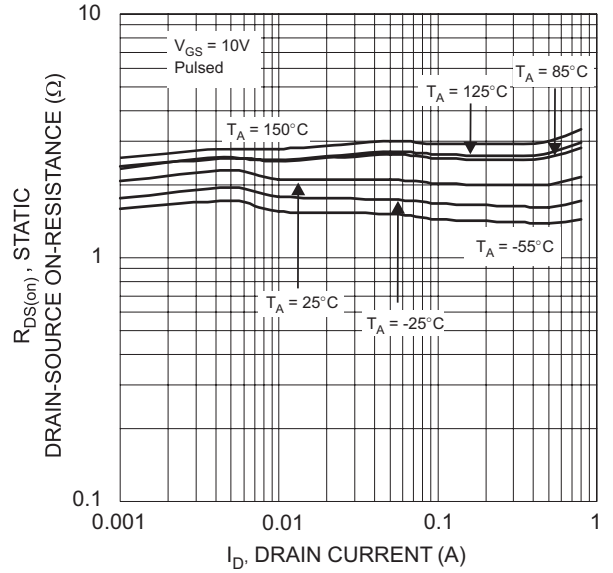


Fig. 4 Static Drain-Source On-Resistance vs. Drain Current

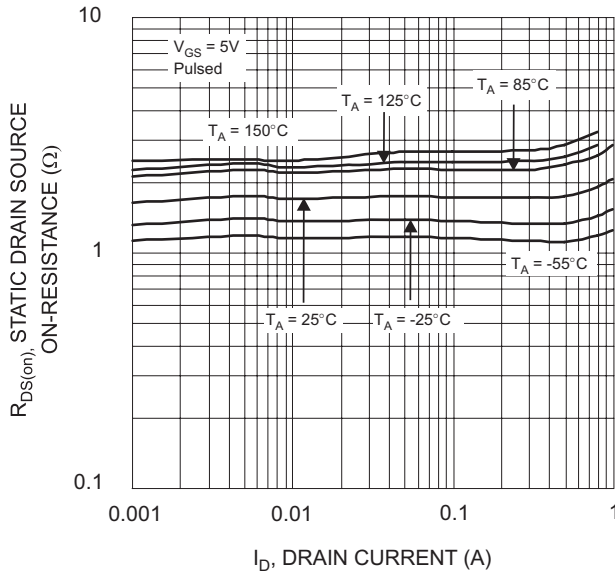


Fig. 5 Static Drain-Source On-Resistance vs. Drain Current

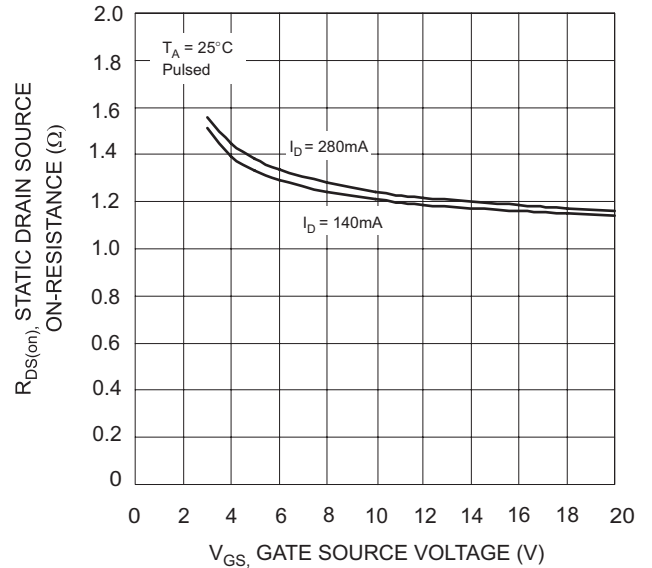


Fig. 6 Static Drain-Source On-Resistance vs. Gate-Source Voltage

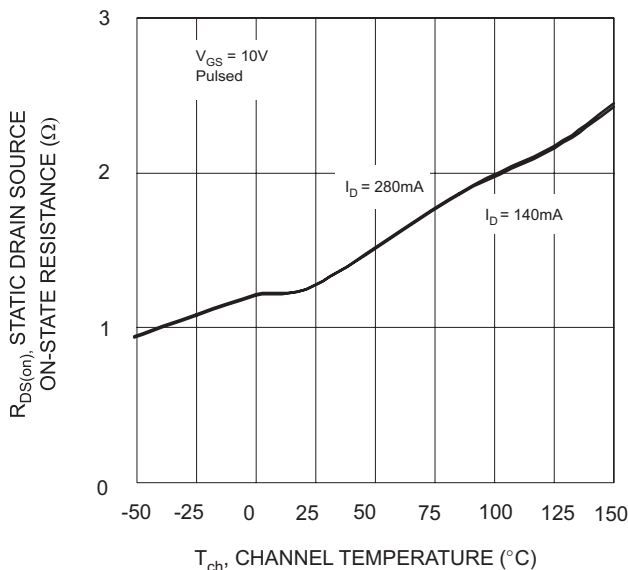


Fig. 7 Static Drain-Source On-State Resistance vs. Channel Temperature

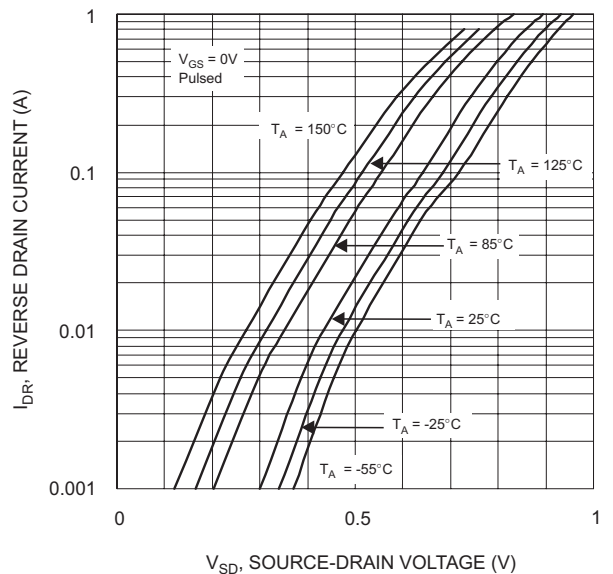


Fig. 8 Reverse Drain Current vs. Source-Drain Voltage

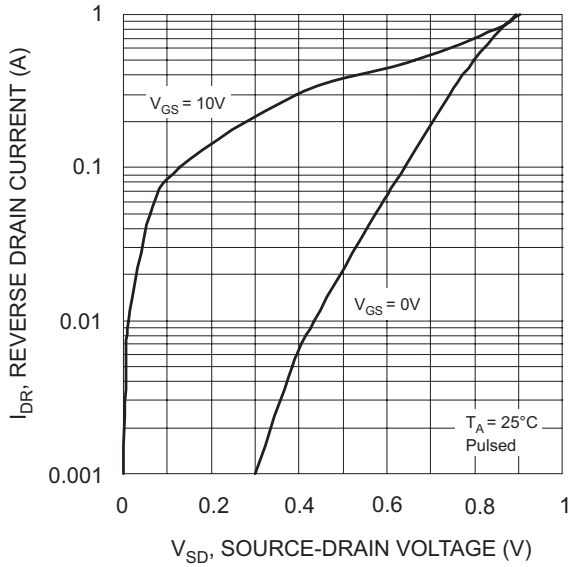


Fig. 9 Reverse Drain Current vs. Source-Drain Voltage

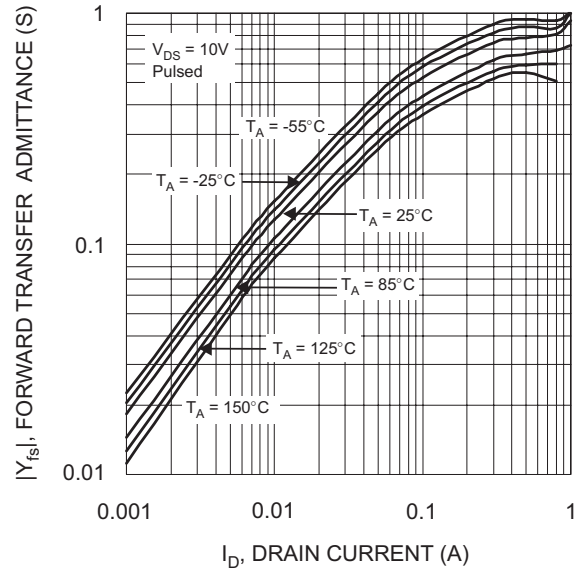


Fig. 10 Forward Transfer Admittance vs. Drain Current

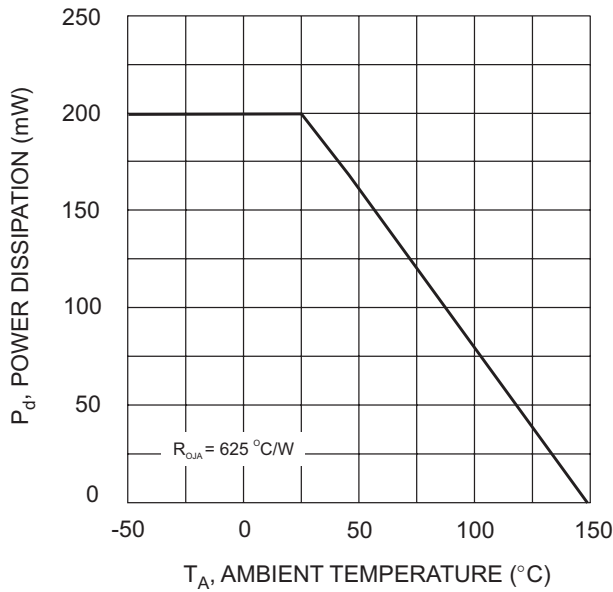


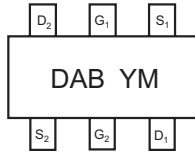
Fig. 11 Derating Curve - Total

Ordering Information (Note 6)

Device	Packaging	Shipping
DMN5L06DWK-7	SOT-363	3000/Tape & Reel

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

Marking Information



DAB = Marking Code
 YM = Date Code Marking
 Y = Year ex: T = 2006
 M = Month ex: 9 = September

Date Code Key

Year	2006			2007			2008			2009		
Code	T			U			V			W		

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

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