



DUAL P-CHANNEL ENHANCEMENT MODE MOSFET

Features

- Dual P-Channel MOSFET
- Low On-Resistance
- Low Gate Threshold Voltage V_{GS(TH)} <1V
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- Lead Free By Design/RoHS Compliant (Note 1)
- ESD Protected
- "Green" Device (Note 2)
- Qualified to AEC-Q101 standards for High Reliability

Mechanical Data

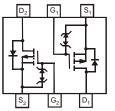
- Case: SOT363
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals Connections: See Diagram
- Terminals: Finish Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.006 grams (approximate)





SOT363

Top View



Top View Internal Schematic

Ordering Information (Note 3)

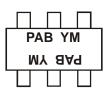
Part Number	Case	Packaging
DMP2004DWK-7	SOT363	3000/Tape & Reel

Notes: 1. No purposefully added lead.

2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.

3. For packaging details, go to our website at http://www.diodes.com.

Marking Information



 $\begin{array}{l} \mathsf{PAB}=\mathsf{Marking}\ \mathsf{Code}\\ \mathsf{YM}=\mathsf{Date}\ \mathsf{Code}\ \mathsf{Marking}\\ \mathsf{Y}=\mathsf{Year}\ (\mathsf{ex:}\ \mathsf{U}=2007)\\ \mathsf{M}=\mathsf{Month}\ (\mathsf{ex:}\ 9=\mathsf{September}) \end{array}$

Date Code Key

Year	2007	2008	20	09	2010	2011	2012	2013	20	14	2015	2016
Code	U	V	V	V	Х	Y	Z	A		3	С	D
Month	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D



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

Characteristic	Symbol	Value	Units	
Drain-Source Voltage		V _{DSS}	-20	V
Gate-Source Voltage		V _{GSS}	±8	V
Drain Current (Note 4)	T _A = 25°C T _A = 85°C	ID	-430 -310	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

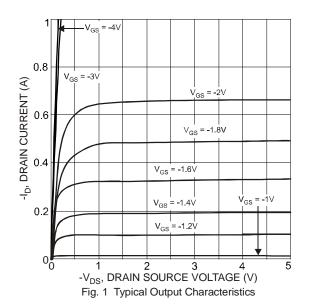
Characteristic	Symbol	Value	Units
Total Power Dissipation (Note 4)	PD	250	mW
Thermal Resistance, Junction to Ambient	$R_{ ext{ heta}JA}$	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

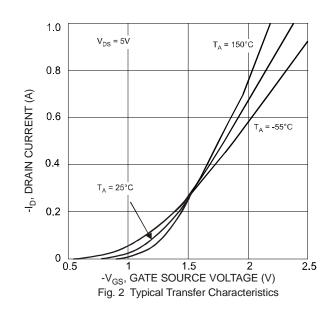
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)						
Drain-Source Breakdown Voltage	BV _{DSS}	-20	_	_	V	$V_{GS} = 0V, I_D = -250 \mu A$
Zero Gate Voltage Drain Current	I _{DSS}	_	_	-1.0	μA	$V_{DS} = -20V, V_{GS} = 0V$
Gate-Source Leakage	I _{GSS}	_	_	±1.0	μA	$V_{GS} = \pm 4.5 V, V_{DS} = 0 V$
ON CHARACTERISTICS (Note 5)						
Gate Threshold Voltage	V _{GS(th)}	-0.5	_	-1.0	V	$V_{DS} = V_{GS}, I_{D} = -250 \mu A$
			0.7	0.9		$V_{GS} = -4.5V, I_{D} = -430mA$
Static Drain-Source On-Resistance	RDS (ON)		1.1	1.4	Ω	$V_{GS} = -2.5V, I_D = -300mA$
			1.7	2.0		V _{GS} = -1.8V, I _D = -150mA
Forward Transfer Admittance	Y _{fs}	200	_	_	ms	$V_{DS} = 10V, I_D = 0.2A$
Diode Forward Voltage (Note 5)	V _{SD}	-0.5	_	-1.2	V	$V_{GS} = 0V, I_{S} = 115mA$
DYNAMIC CHARACTERISTICS	•					•
Input Capacitance	Ciss	_	_	175	pF	
Output Capacitance	Coss	_	_	30	pF	V _{DS} = -16V, V _{GS} = 0V f = 1.0MHz
Reverse Transfer Capacitance	Crss			20	pF	

Notes:

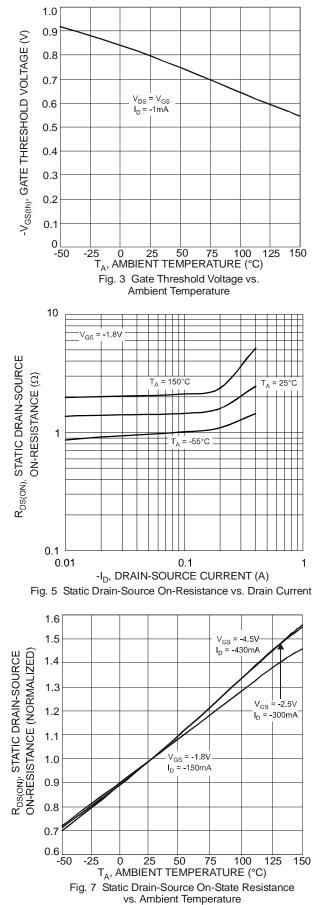
Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.
Short duration pulse test used to minimize self-heating effect.

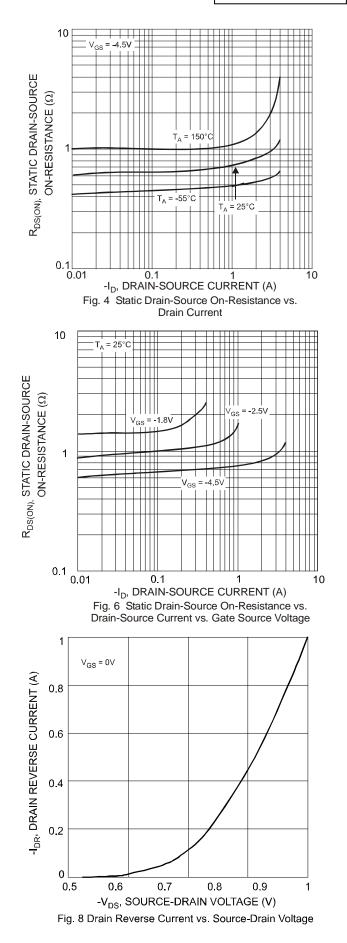




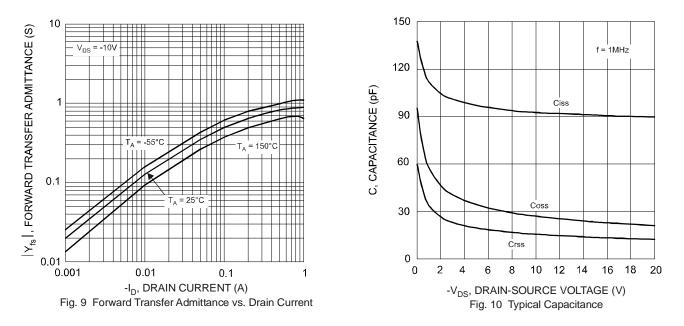
DMP2004DWK



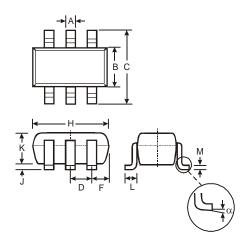






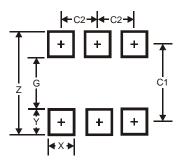


Package Outline Dimensions



SOT363						
Dim	Min	Max				
Α	0.10	0.30				
В	1.15	1.35				
С	2.00	2.20				
D	0.65 Typ					
F	0.40	0.45				
Н	1.80	2.20				
J	0	0.10				
κ	0.90	1.00				
L	0.25	0.40				
Μ	0.10	0.22				
α	0°	8°				
All Di	All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
Х	0.42
Y	0.6
C1	1.9
C2	0.65



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