DMP22D6UT

P-CHANNEL ENHANCEMENT MODE MOSFET

Please click here to visit our online spice models database.

Features

- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- **Lead Free By Design/RoHS Compliant (Note 2)**
- **ESD Protected Gate**
- **"Green" Device (Note 4)**
- **Qualified to AEC-Q101 standards for High Reliability**

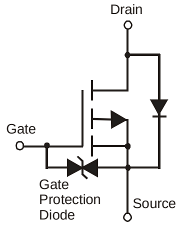
Mechanical Data

- Case: SOT-523
- Case Material: Molded Plastic, “Green” Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish - Matte Tin annealed over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.002 grams (approximate)

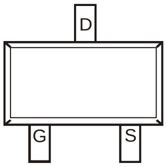

ESD PROTECTED

SOT-523


TOP VIEW



Equivalent Circuit



TOP VIEW

Maximum Ratings @T_A = 25°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 1) Steady State	T_A = 25°C	I_D	-430	mA
	T_A = 85°C		-310	
Pulsed Drain Current (Note 3)		I_{DM}	-750	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Units
Total Power Dissipation (Note 1)	P_D	150	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)						
Drain-Source Breakdown Voltage	BV_{DSS}	-20	—	—	V	V_{GS} = 0V, I_D = -250mA
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} = ±4.5V, V_{DS} = 0V
ON CHARACTERISTICS (Note 5)						
Gate Threshold Voltage	$V_{GS(th)}$	-0.5	—	-1.0	V	V_{DS} = V_{GS}, I_D = -250μA
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	—	0.7	1.1	Ω	V_{GS} = -4.5V, I_D = -430mA
			1.1	1.6		V_{GS} = -2.5V, I_D = -300mA
			1.7	2.6		V_{GS} = -1.8V, I_D = -150mA
Forward Transfer Admittance	$\lvert Y_{fs}\rvert$	200	—	—	ms	V_{DS} =10V, I_D = 0.2A
Diode Forward Voltage (Note 5)	V_{SD}	—	—	-1.4	V	V_{GS} = 0V, I_S = -115mA
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{iss}	—	—	175	pF	V_{DS} = -16V, V_{GS} = 0V f = 1.0MHz
Output Capacitance	C_{oss}	—	—	30	pF	
Reverse Transfer Capacitance	C_{rss}	—	—	20	pF	

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

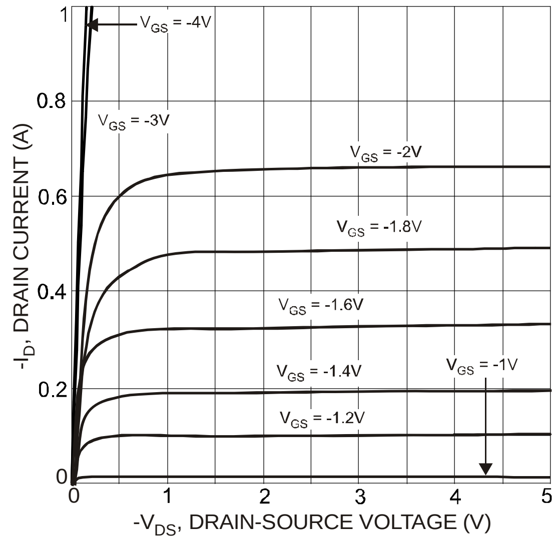


Fig. 1 Typical Output Characteristics

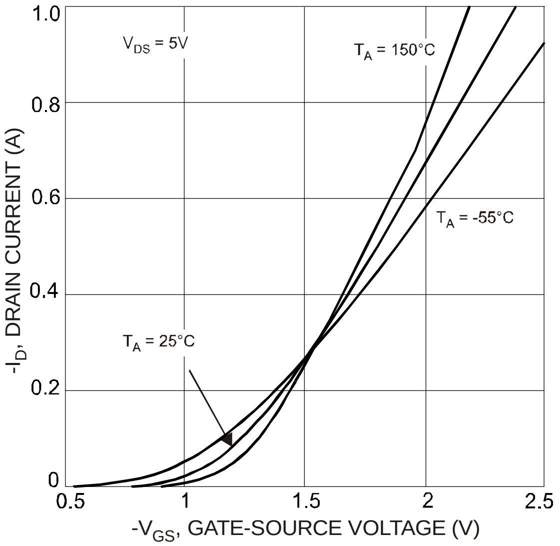


Fig. 2 Typical Transfer Characteristics

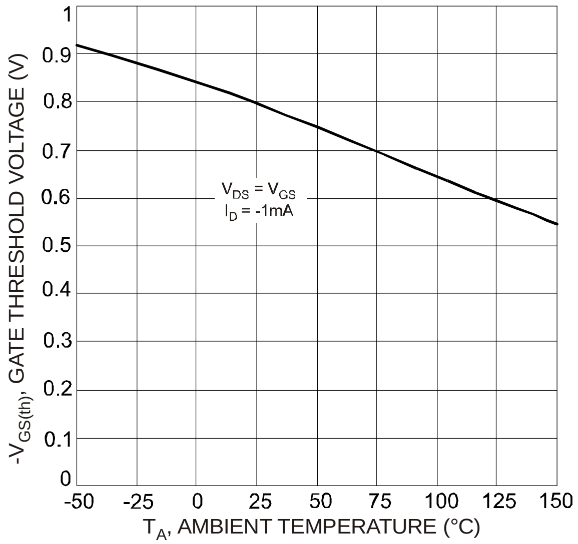


Fig. 3 Gate Threshold Voltage vs. Ambient Temperature

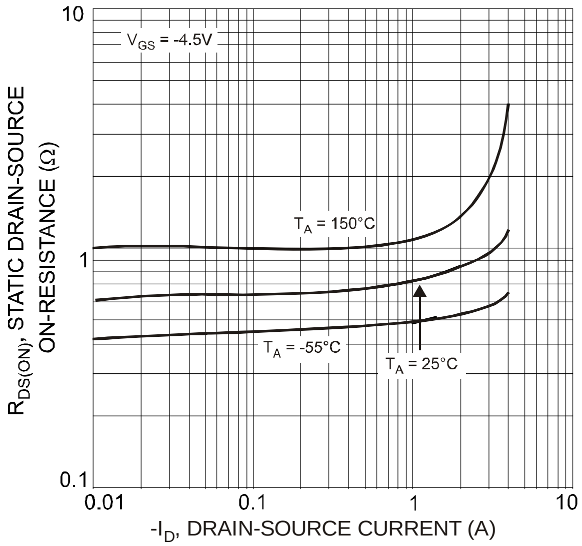


Fig. 4 Static Drain-Source On-Resistance vs. Drain Current

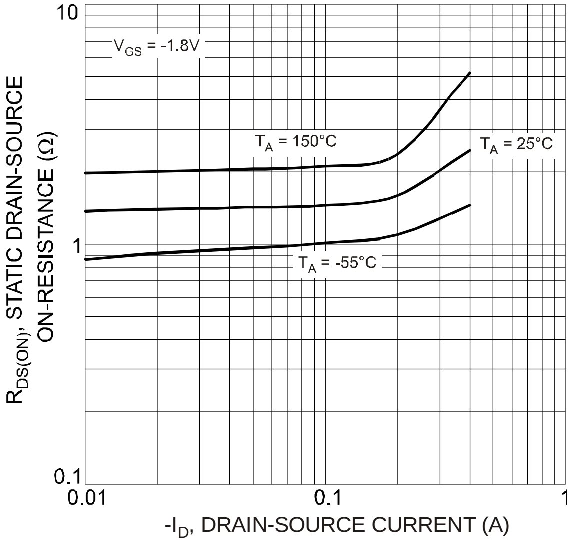


Fig. 5 Static Drain-Source On-Resistance vs. Drain Current

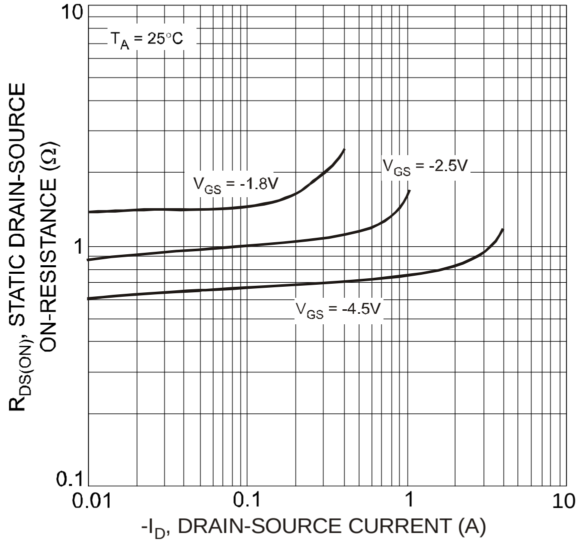


Fig. 6 Static Drain-Source On-Resistance vs. Drain-Source Current

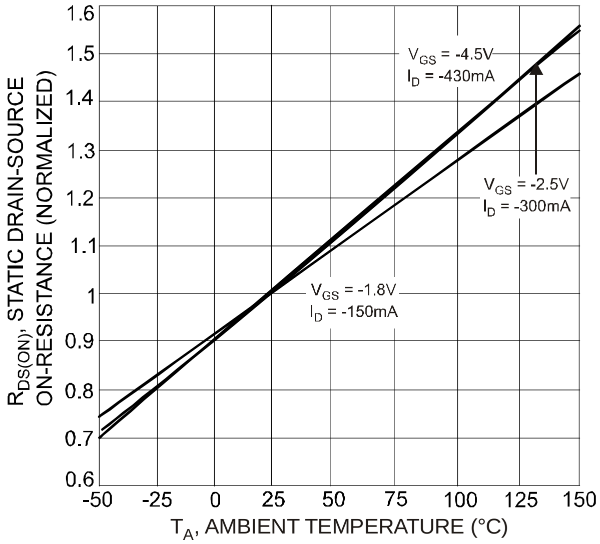


Fig. 7 Static Drain-Source On-State Resistance vs. Ambient Temperature

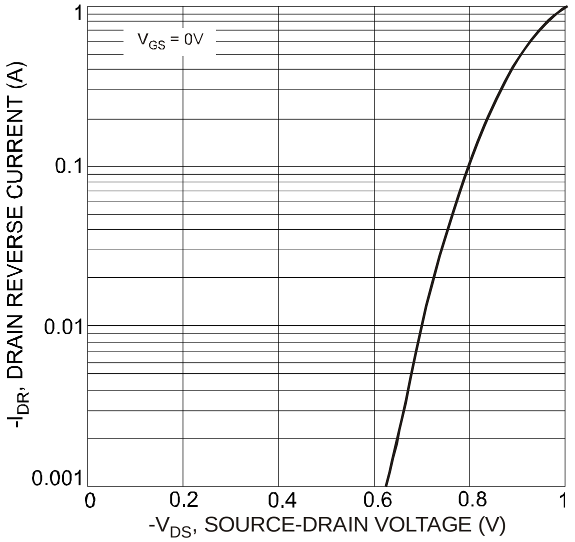


Fig. 8 Reverse Drain Current vs. Source-Drain Voltage

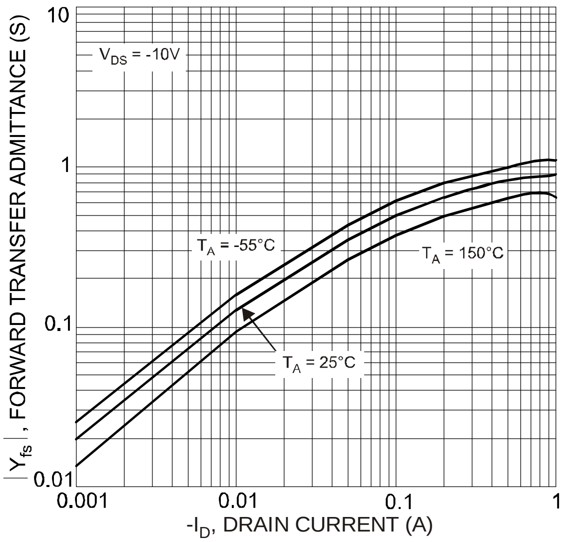


Fig. 9 Forward Transfer Admittance vs. Drain Current

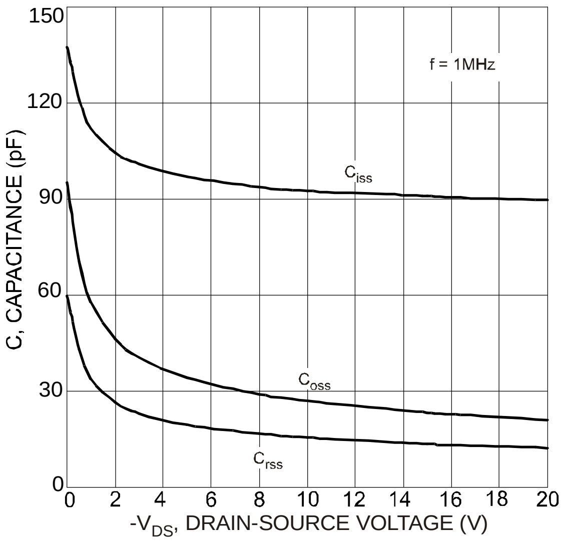


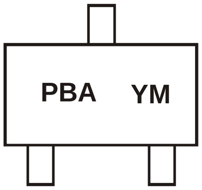
Fig. 10 Typical Capacitance

Ordering Information (Note 6)

Part Number	Case	Packaging
DMP22D6UT-7	SOT-523	3000/Tape & Reel

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

Marking Information



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

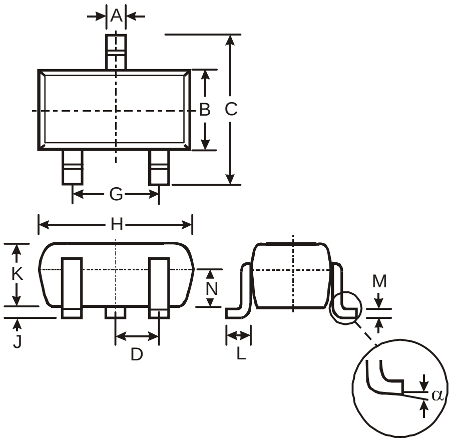
Date Code Key

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

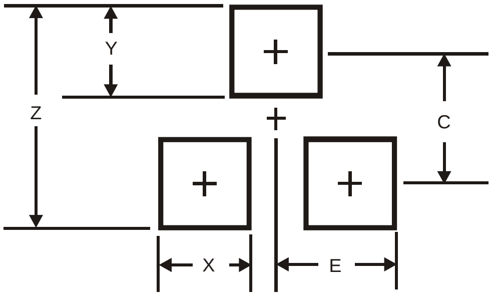
NEW PRODUCT

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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http://moschip.ru/get-element

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