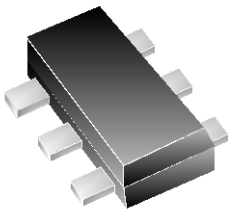
WM02DP06T

Dual P-Channel MOSFET

Features

- V_{DS}= -20 V, I_D = -0.66 A
  $R_{DS(on)}$ < 0.52Ω @ V_{GS} = -4.5 V
  $R_{DS(on)}$ < 0.78Ω @ V_{GS} = -2.5 V
- Enables High Density PCB Manufacturing
- Low Voltage Drive Makes this Device Ideal for Portable Equipment
- Advanced Trench Process Technology
- ESD Protected

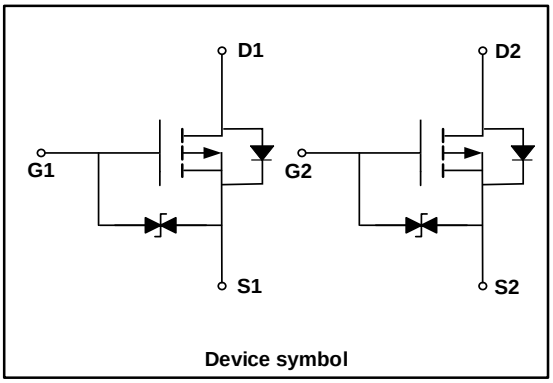


SOT-563

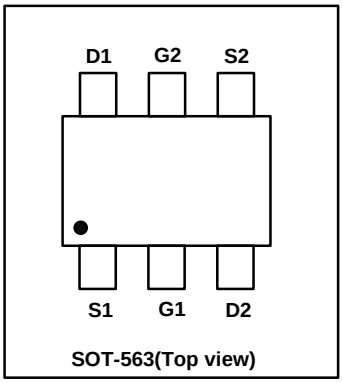
Mechanical Characteristics

- SOT-563 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Device symbol



SOT-563(Top view)

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	-0.66	A
Pulsed Drain Current	I_{DM}	-2.64	A
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance from Junction to Ambient[1]	$R_{\theta JA}$	833	°C/W

Electrical Characteristics (T_{amb}=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0 V, I_D = -250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -20V, V_{GS} = 0 V	-	-	-1	μA
Gate-body Leakage Current	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±10V	-	-	±20	μA
Drain-Source On-state Resistance[1]	$R_{DS(on)}$	V_{GS} = -4.5V, I_D = -1.0A	-	450	520	mΩ
		V_{GS} = -2.5V, I_D = -0.8A	-	650	780	
		V_{GS} = -1.8V, I_D = -0.5A	-	950	-	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250μA	-0.3	-0.65	-1.1	V
Forward transconductance[1]	g_{fs}	V_{DS} =10V, I_D = -0.54A	-	0.8	-	S
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = -16V, f = 1MHz	-	113	-	pF
Output Capacitance	C_{oss}		-	15	-	
Reverse Transfer Capacitance	C_{rss}		-	9	-	
Switching Characteristics						
Turn-On Delay Time[2]	$t_{d(on)}$	V_{DS} = -10V, V_{GS} = -4.5V I_D = -0.2A, R_G=10Ω	-	9	-	ns
Turn-On Rise Time[2]	t_r		-	5.7	-	
Turn-Off Delay Time[2]	$t_{d(off)}$		-	32.6	-	
Turn- Off Fall Time[2]	t_f		-	20.3	-	
Source-Drain Diode Characteristics						
Body Diode Voltage	V_{DS}	I_S= -0.5A, V_{GS} = 0V	-	-	-1.2	V

Notes :

1. Pulse Test: Pulse Width < 300μs, Duty Cycle ≤2%.
2. Guaranteed by design, not subject to production testing

Typical Characteristics

Figure 1. Output Characteristics

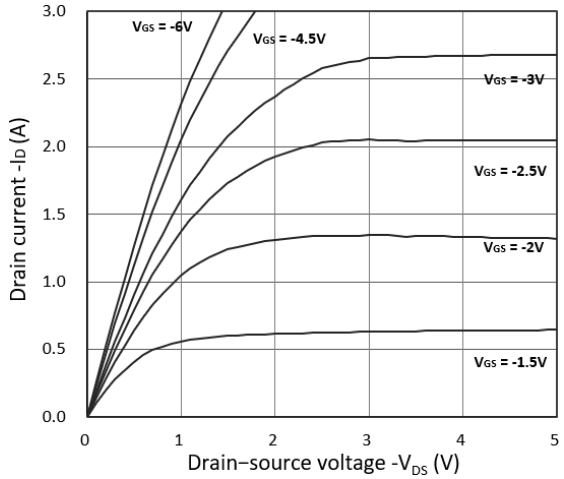


Figure 2. Transfer Characteristics

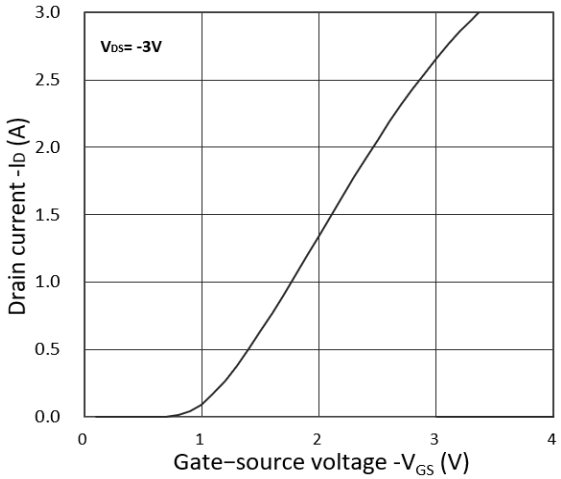


Figure 3. $R_{DS(ON)}$ vs. I_D

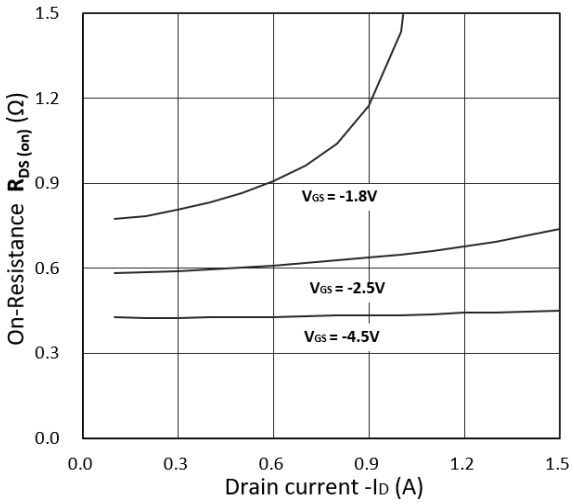


Figure 4. $R_{DS(ON)}$ vs. V_{GS}

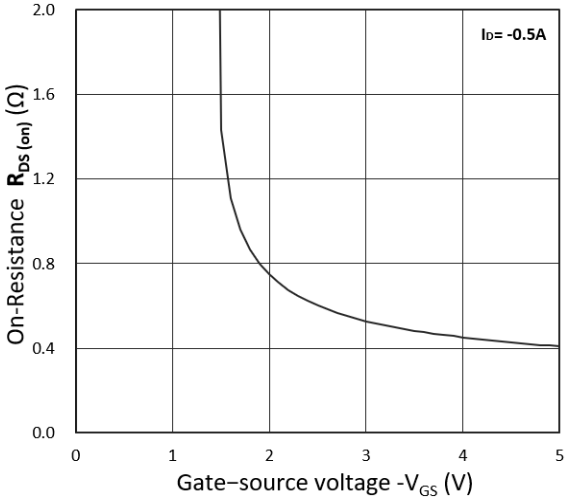


Figure 5. I_S vs. V_{SD}

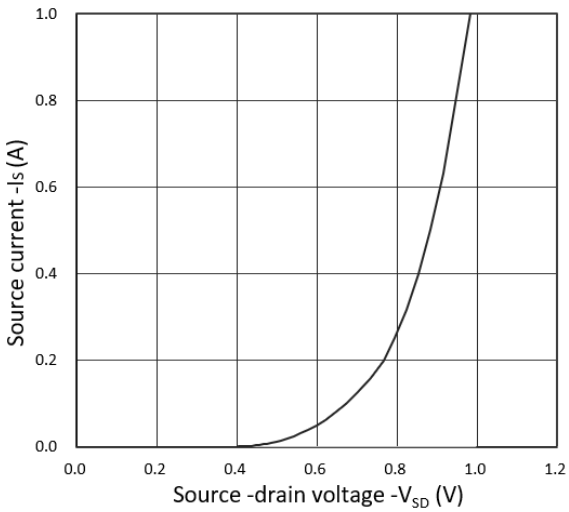
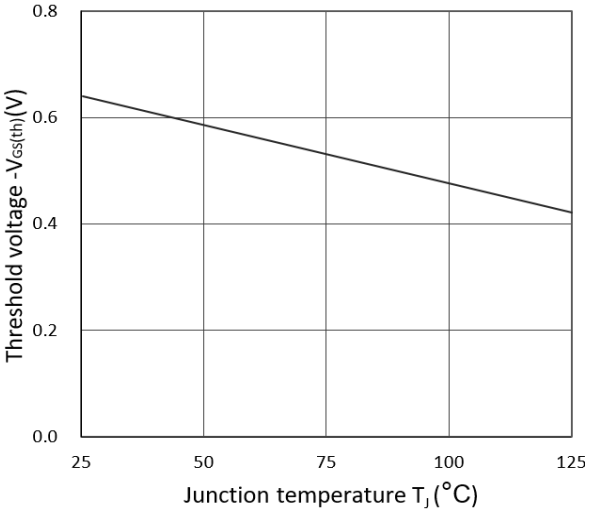
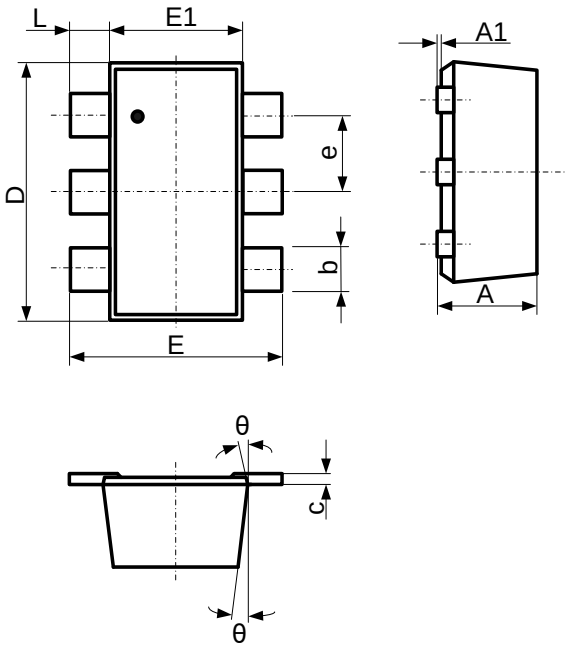


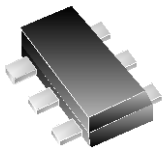
Figure 6. Threshold Voltage vs.T_J



Outline Drawing – SOT-563

PACKAGE OUTLINE





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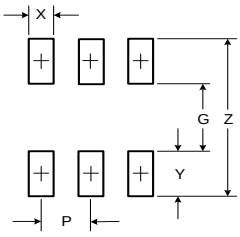
DIMENSIONS				
SYMBOL	INCHES		MILLIMETER	
	MIN	MAX	MIN	MAX
A	0.021	0.024	0.525	0.600
A1	0.000	0.002	0.000	0.050
e	0.018	0.022	0.450	0.550
c	0.004	0.006	0.090	0.160
D	0.059	0.067	1.500	1.700
b	0.007	0.011	0.170	0.270
E1	0.043	0.051	1.100	1.300
E	0.059	0.067	1.500	1.700
L	0.004	0.012	0.100	0.300
θ	7°REF		7°REF	



DIMENSIONS		
DIM	INCHES	MILLIMETERS
Z	0.0752	1.91
G	0.0350	0.89
P	0.020TYP	0.51 TYP
X	0.0118	0.3
Y	0.0201	0.51

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes

Part Number	WM02DP06D
Marking Code	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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For additional information, please contact your local Sales Representative.