WM02P06H

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} = -2.5V
- Enables High Density PCB Manufacturing
- Low Voltage Drive Makes this Device Ideal for Portable Equipment
- Advanced Trench Process Technology
- ESD Protected
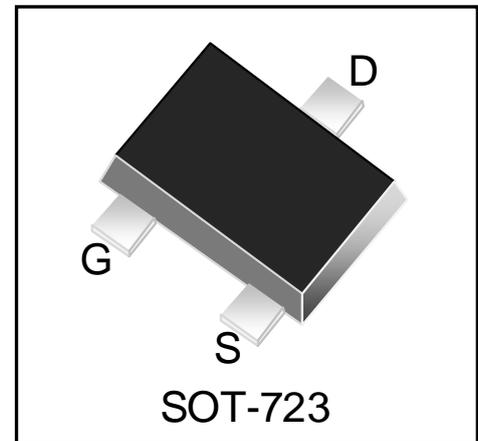
SOT-723

Mechanical Characteristics

- SOT-723 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration

Device symbol

SOT-723(Top View)
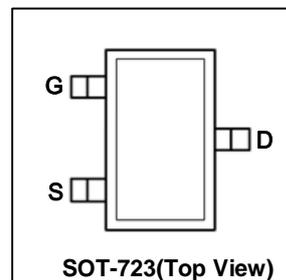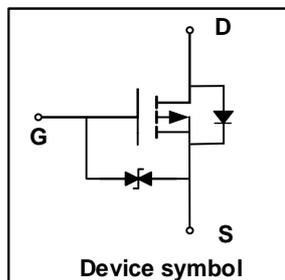
Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	-0.66	A
Pulsed Drain Current	I_{DM}	-1.2	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	$R_{\theta JA}$	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$_{GS}$ = 0V, I$_D$ = - 250µA	-20	-	-	V
Zero Gate Voltage Drain Current	**I$_{DSS}$**	V$_{DS}$ = -20V, V$_{GS}$ = 0V	-	-	-1	µA
Gate-Body Leakage Current	**I$_{GSS}$**	V$_{DS}$ = 0V, V$_{GS}$ = ±10V	-	-	±20	µA
Drain-Source On-State Resistance[1]	**R$_{DS(on)}$**	V$_{GS}$ = -4.5V, I$_D$ = -0.66A	-	450	520	mΩ
		V$_{GS}$ = -2.5V, I$_D$ = -0.60A	-	650	780	
		V$_{GS}$ = -1.8V, I$_D$ = -0.50A	-	950	-	
Gate Threshold Voltage[1]	**V$_{GS(th)}$**	V$_{DS}$ = V$_{GS}$, I$_D$ = -250µA	-0.3	-0.65	-1.1	V
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
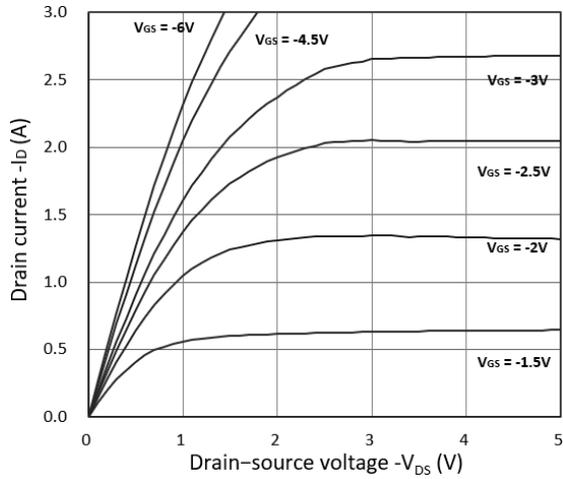
Figure 2. Transfer Characteristics
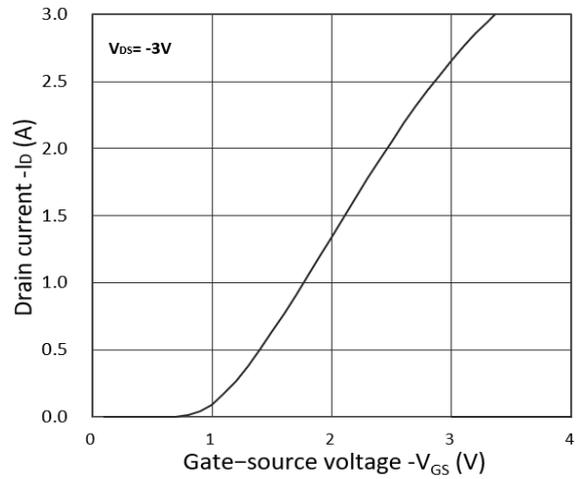
Figure 3. $R_{DS(ON)}$ vs. I_D
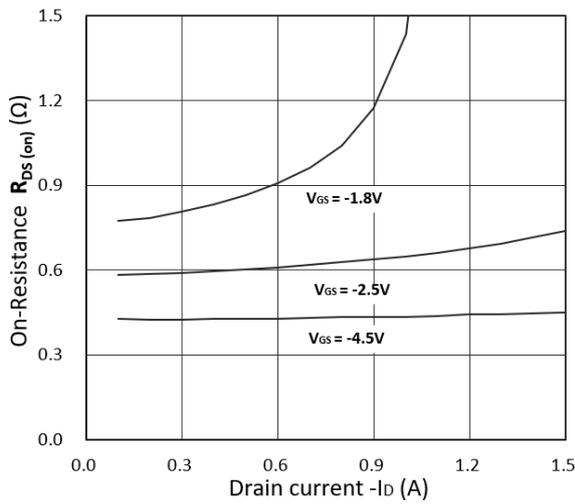
Figure 4. $R_{DS(ON)}$ vs. V_{GS}
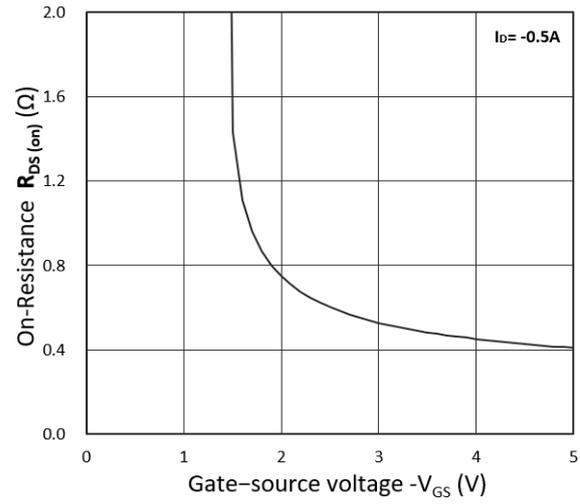
Figure 5. I_S vs. V_{SD}
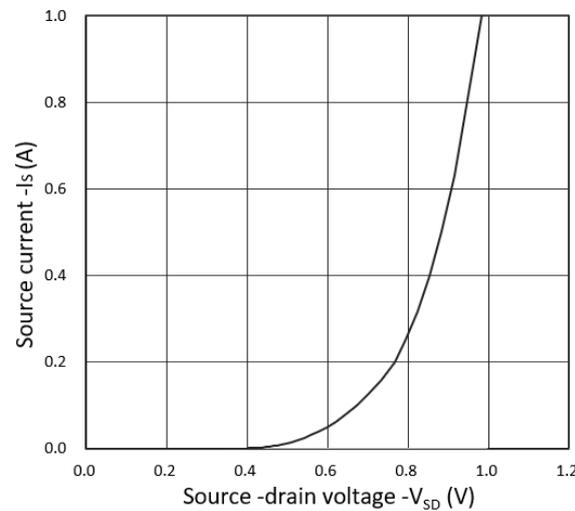
Figure 6. Threshold Voltage
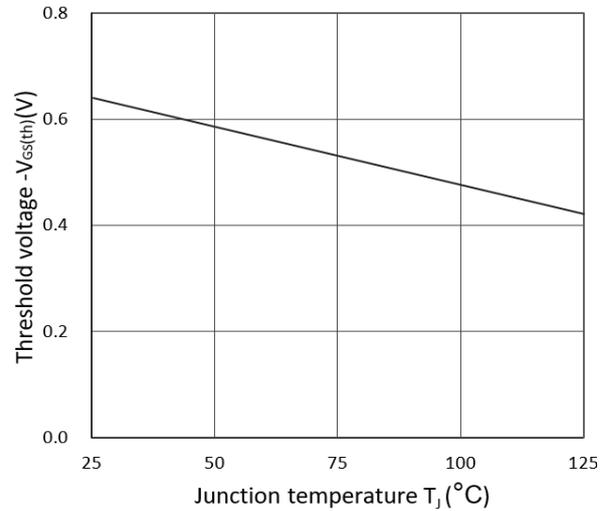
## Outline Drawing – SOT-723

PACKAGE OUTLINE

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.430	0.500	0.017	0.020
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
C	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.400BSC		0.016 BSC	
θ	7°REF		7°REF	

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.0118	0.30
M	0.0390	1.00
e	0.0157	0.40
e1	0.0314	0.80
b	0.0165	0.42

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Millimeters.

Marking Codes

Part Number	WM02P06H
Marking Code	06K

Package Information

Qty：8k/Reel

CONTACT INFORMATION

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