

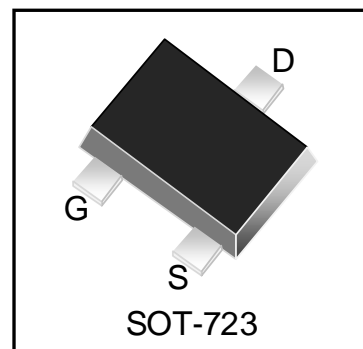


WM06N03H

N-Channel MOSFET

Features

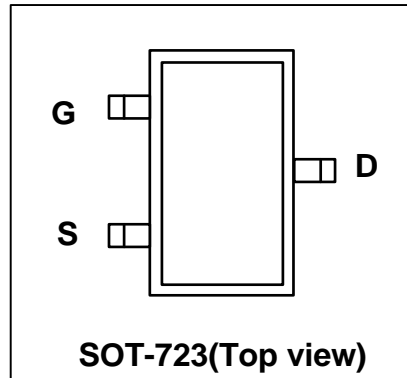
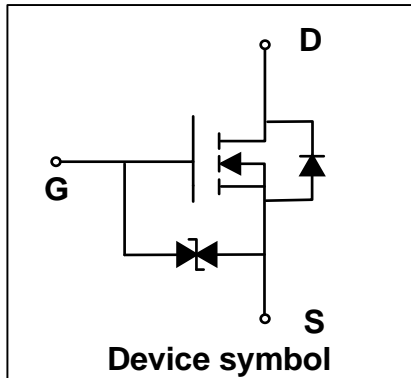
- $V_{DS} = 60V$, $I_D = 0.34A$
 $R_{DS(on)} < 2.1\Omega @ V_{GS} = 10V$
 $R_{DS(on)} < 2.8\Omega @ V_{GS} = 4.5V$
- Voltage Controlled Small Signal Switch
- Rugged and Reliable
- High Saturation Current Capability
- ESD Protected



Mechanical Characteristics

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

Schematic & PIN Configuration



Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Continuous Drain Current ($T_C = 25^\circ C$)	I_D	340	mA
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation ($T_C = 25^\circ C$)	P_D	150	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$
Thermal Resistance from Junction to Ambient ¹	$R_{\theta JA}$	833	$^\circ C/W$

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	60	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	1.3	2.0	V
Drain Cut-off Current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0V$	-	-	1	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$	-	-	± 10	μA
Drain-Source on-State Resistance ²	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 0.5A$	-	1.3	2.1	Ω
		$V_{GS} = 4.5V, I_D = 0.2A$	-	1.4	2.8	
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0V,$ $f = 1MHz$	-	29	-	pF
Output Capacitance	C_{oss}		-	7.5	-	
Reverse Transfer Capacitance	C_{rss}		-	2	-	
Switching Characteristics						
Total Gate Charge	Q_g	$V_{GS} = 4.5V, I_D = 0.25A,$ $V_{DS} = 10V$	-	0.3	-	nC
Gate-Source Charge	Q_{gs}		-	0.2	-	
Gate-Drain Charge	Q_{gd}		-	0.08	-	
Turn-on Time ³	$t_{d(on)}$	$V_{DD} = 30V, I_D = 200mA,$ $R_G = 25\Omega, V_{GEN} = 10V$	-	3.9	-	nS
Rise Time ³	t_r		-	3.4	-	
Turn-off Time ³	$t_{d(off)}$		-	15.7	-	
Fall Time ³	t_f		-	9.9	-	
Reverse Diode Characteristics						
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_F=0.3A$	-	-	1.5	V

Notes:

1. Surface mounted on FR4 board , $t \leq 10s$.
2. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
3. Guaranteed by design, not subject to producing.

Typical Characteristics

Figure 1. Output Characteristics

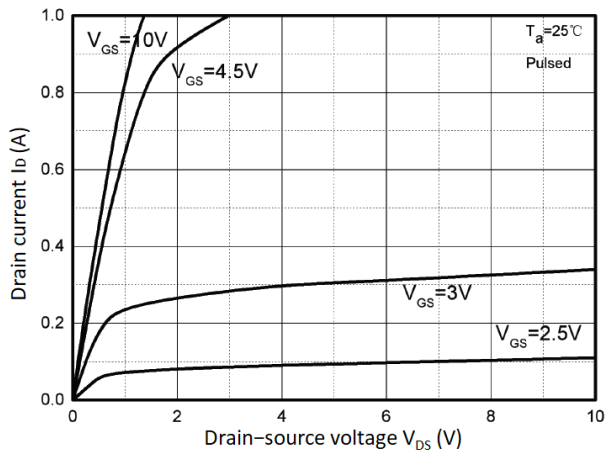


Figure 2. Transfer Characteristics

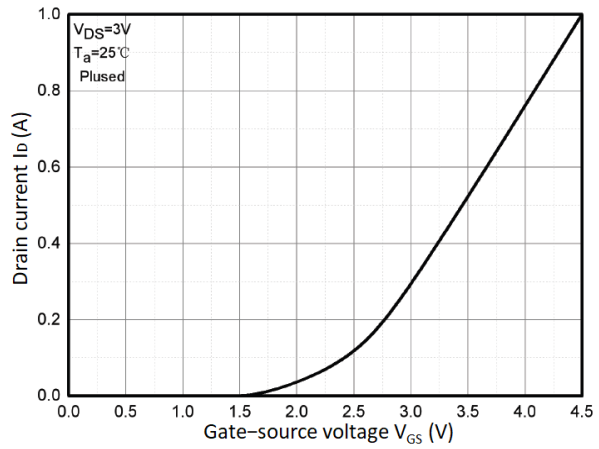


Figure 3. $R_{DS(on)}$ vs. I_D

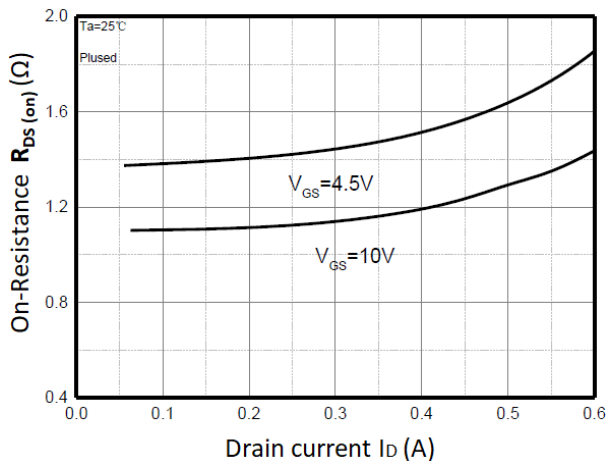


Figure 4. $R_{DS(on)}$ vs. V_{GS}

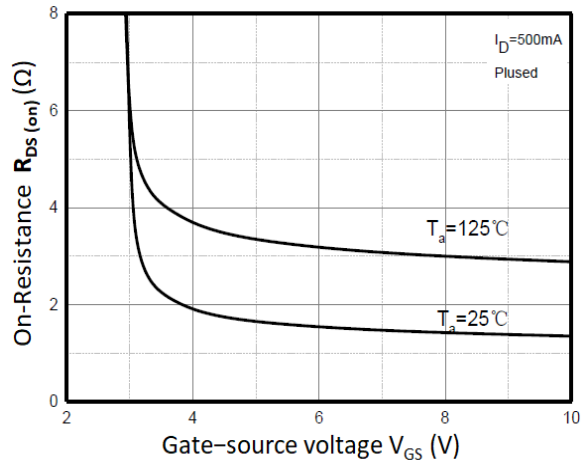


Figure 5. I_S vs. V_{SD}

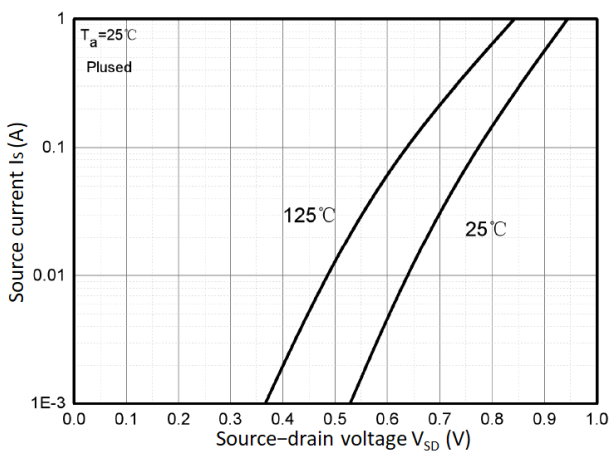
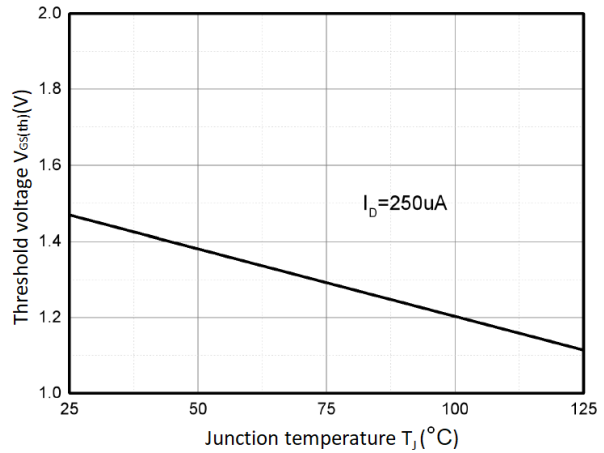


Figure 6. Threshold Voltage



Outline Drawing – SOT-723

PACKAGE OUTLINE

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.450	0.550	0.018	0.022
b	0.150	0.270	0.0059	0.0106
b1	0.250	0.370	0.010	0.015
L	0.150	0.250	0.006	0.010
C	0.070	0.170	0.0028	0.0067
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°	11°	7°	11°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.0157	0.40
M	0.039	1.0
e	0.0157	0.40
e1	0.0314	0.80
b	0.0157	0.40

Notes

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

Marking Codes

Part Number	WM06N03H
Marking Code	

Package Information

Qty: 8k/Reel

CONTACT INFORMATION

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For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.