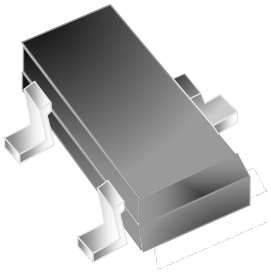
WM01P60M

P-Channel MOSFET

Features

- V_{DS}= -12 V, I_D = -6A
  $R_{DS(on)}$ < 28mΩ @ V_{GS} = -4.5V
  $R_{DS(on)}$ < 40mΩ @ V_{GS} = -2.5V
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Trench Power LV MOSFET Technology

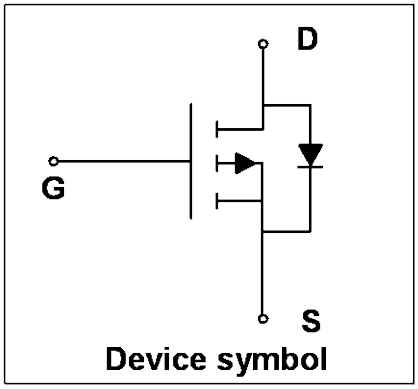


SOT-23

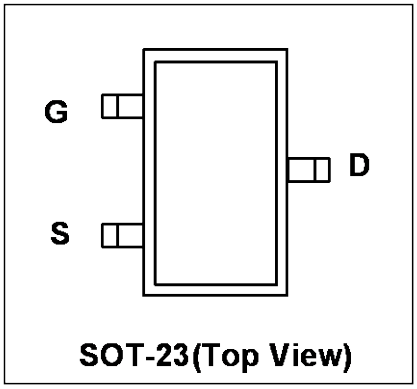
Mechanical Characteristics

- SOT-23 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Device symbol



SOT-23(Top View)

Absolute Maximum Rating (T_{amb}=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	±8	V
Continuous Drain Current	I_D	-6	A
Pulsed Drain Current[1]	I_{DM}	-20	A
Power Dissipation[1]	P_D	1.8	W
Junction and Storage Temperature Range	T_J ,T_{STG}	-55 to +150	°C
Thermal Resistance from Junction to Ambient[2]	$R_{\theta JA}$	69	°C/W

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = -250μA	-12	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -12V, V_{GS} = 0V	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	V_{DS} = 0V, V_{GS} = ±8V	-	-	±100	nA
Gate-Threshold Voltage[3]	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250μA	-0.4	-	-1	V
Drain-Source on-Resistance[3]	$R_{DS(on)}$	V_{GS}= -4.5V,I_D= -5A	-	20	28	mΩ
		V_{GS}= -2.5V,I_D= -4.3A	-	30	40	
		V_{GS}= -1.8V,I_D= -1A	-	42	63	
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{GS} =0V ,V_{DS} = -6V, f=1.0MHz	-	1620	-	pF
Output Capacitance	C_{oss}		-	445	-	
Reverse Transfer Capacitance	C_{rss}		-	420	-	
Switching Characteristics						
Total Gate Charge[4]	Q_g	V_{GS} = -4.5V, V_{DS} = -6V, I_D = -5A	-	14	-	nC
Gate−Source Charge[4]	Q_{gs}		-	2.3	-	
Gate−Drain Charge[4]	Q_{gd}		-	3.6	-	
Turn-on Delay Time[4]	$t_{d(on)}$	V_{GS} = -4.5V, V_{DS} = -6V, I_D= -4A, R_{GEN} = 1Ω	-	26	-	ns
Rise Time[4]	t_r		-	24	-	
Turn-off Delay Time[4]	$t_{d(off)}$		-	45	-	
Fall Time[4]	t_f		-	20	-	
Drain-Source Diode Characteristics						
Diode Forward Voltage [3]	V_{SD}	I_S = -1A, V_{GS} = 0V	-	-	-1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface mounted on FR4 board using 1 square inch pad size,1oz single-side copper.
3. Pulse Test: Pulse width≤300μs, duty cycle≤2%.
4. Guaranteed by design, not subject to product.

Typical Characteristics

Figure 1. Output Characteristics

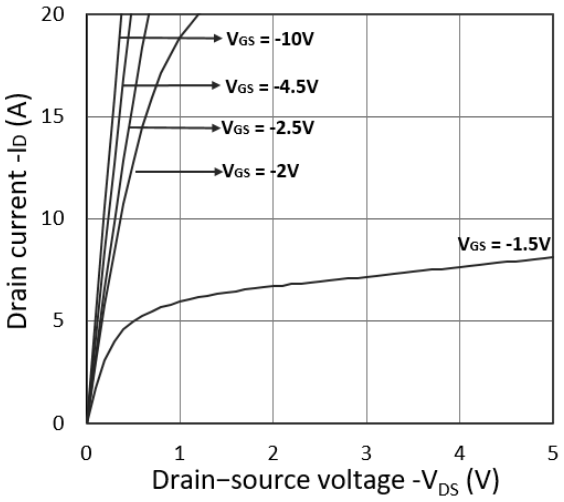


Figure 2. Transfer Characteristics

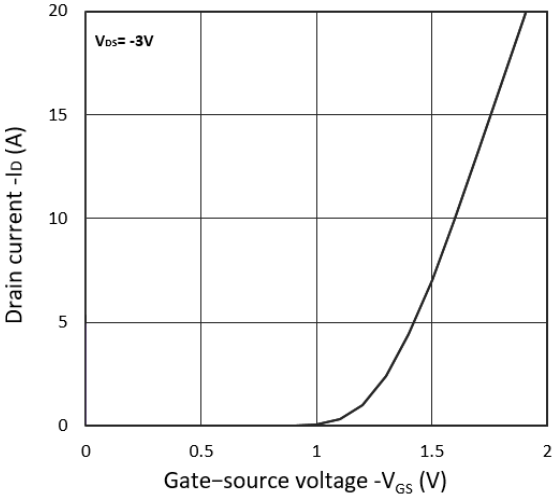


Figure 3. $R_{DS(on)}$ vs. I_D

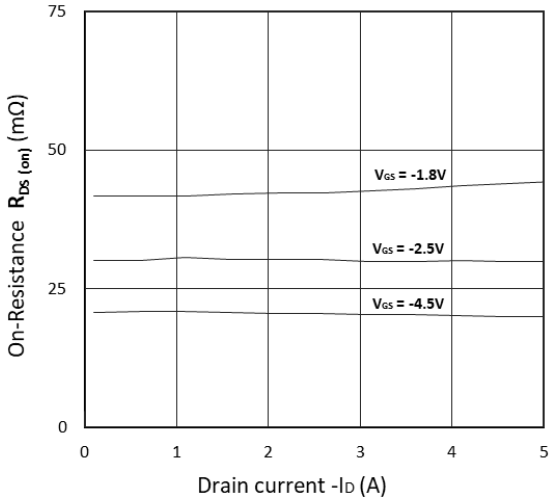


Figure 4. $R_{DS(on)}$ vs. V_{GS}

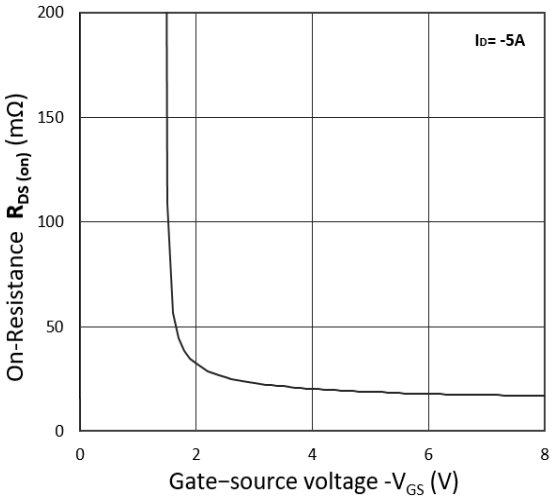


Figure 5. I_S vs. V_{SD}

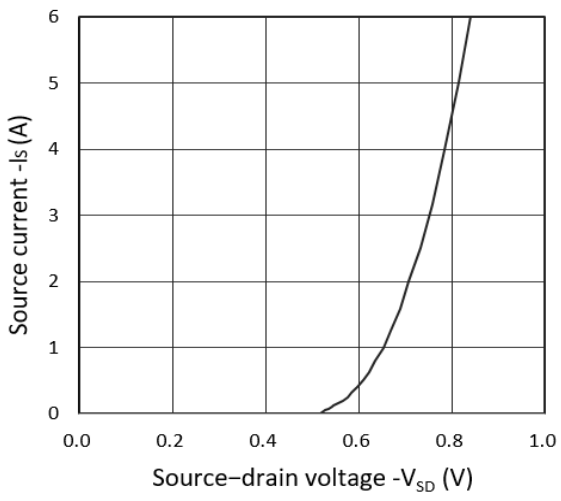
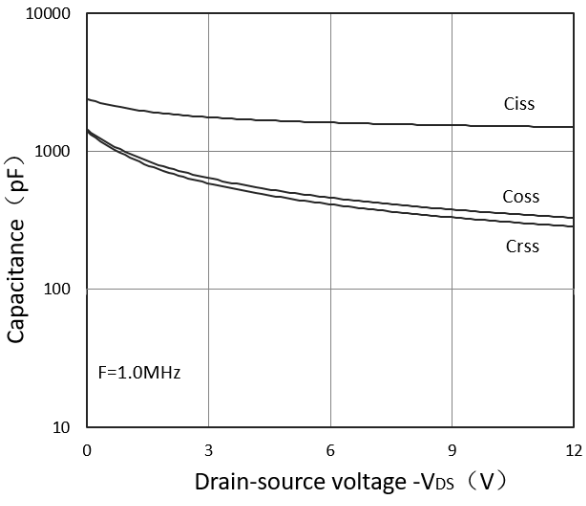
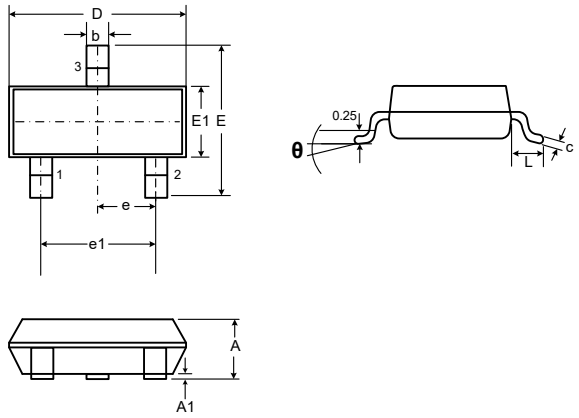


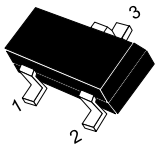
Figure 6. Capacitance Characteristics



Outline Drawing – SOT-23

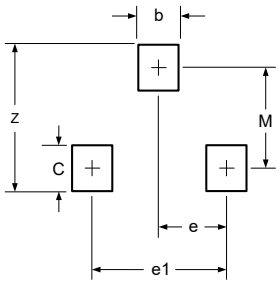
PACKAGE OUTLINE





SOT-23

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	2.25	2.55	0.089	0.100
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.45	0.65	0.018	0.026
θ	0	8°	0	8°



DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.080	2.02
C	0.032	0.80
Z	0.111	2.82
e	0.037 BSC	0.95 BSC
e1	0.075 BSC	1.90 BSC
b	0.032	0.80

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes

Part Number	WM01P60M
Marking Code	S33

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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WAYON website: **http://www.way-on.com**

For additional information, please contact your local Sales Representative.