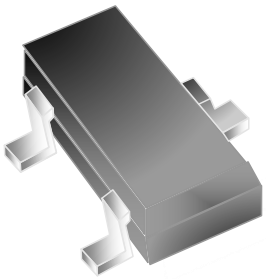
WM02P60M2

P-Channel MOSFET

Features

- V_{DS}= -20 V, I_D = -6A
  $R_{DS(on)}$ < 23mΩ @ V_{GS} = -4.5V
  $R_{DS(on)}$ < 30mΩ @ V_{GS} = -2.5V
- Super High Density Cell Design for Extremely Low $R_{DS(ON)}$
- Exceptional On-Resistance and Maximum DC Current Capability

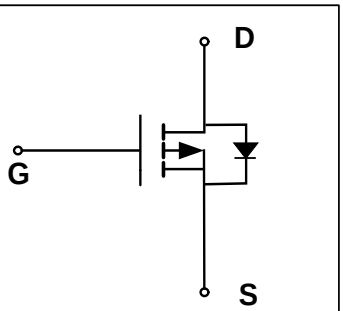


SOT-23-3L

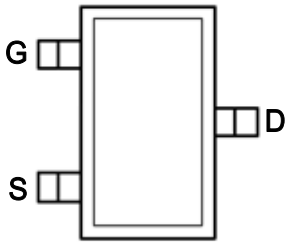
Mechanical Characteristics

- SOT-23-3L Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Device symbol



SOT-23-3L(Top View)

Absolute Maximum Rating

Rating		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	±10	
Continuous Drain Current	T_A=25°C	I_D	-6	A
	T_A=70°C		-3.1	
Power Dissipation	T_A=25°C	P_D	0.35	W
Pulsed Drain Current[2] (t=300μS)		I_{DM}	-18	A
Thermal Resistance from Junction to Ambient[1]		$R_{\theta JA}$	357	°C/W
Operating Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	–55 to 150	°C

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}= 0V, I_D= -250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}= -20V, V_{GS}= 0V	-	-	-1	μA
Gate-Source Leakage	I_{GSS}	V_{DS}= 0V, V_{GS}= ±10V	-	-	±100	nA
Gate-Source Threshold Voltage[3]	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D= -250μA	-0.4	-0.6	-1.0	V
Drain-Source on-State Resistance[3]	$R_{DS(on)}$	V_{GS}= -4.5V, I_D= -5A	-	15	23	mΩ
		V_{GS}= -2.5V, I_D= -4A	-	19	30	
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{GS} =0V, V_{DS} = -10V, f=1.0MHz	-	2895	-	pF
Output Capacitance	C_{oss}		-	303	-	
Reverse Transfer Capacitance	C_{rss}		-	280	-	
Switching Characteristics						
Total Gate Charge[4]	Q_g	V_{GS}= -10V, V_{DS}= -15V, I_D= -9.1A	-	30	-	nC
Gate−Source Charge[4]	Q_{gs}		-	5.3	-	
Gate−Drain Charge[4]	Q_{gd}		-	7.6	-	
Turn-on Delay Time[4]	$t_{d(on)}$	V_{DS}= -15V, V_{GS}= -10V, I_D= -6A, R_{GEN}=2.5Ω	-	14	-	nS
Rise Time[4]	t_r		-	20	-	
Turn-off Delay Time[4]	$t_{d(off)}$		-	95	-	
Fall Time[4]	t_f		-	65	-	
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. The data tested by surface mounted on a 1 inch2 FR-4 board with 2OZ copper..
3. Pulse test: Pulse width ≤300μs, Duty cycle ≤2%
4. Guaranteed by design, not subject to production

Typical Characteristics

Figure 1. Output Characteristics

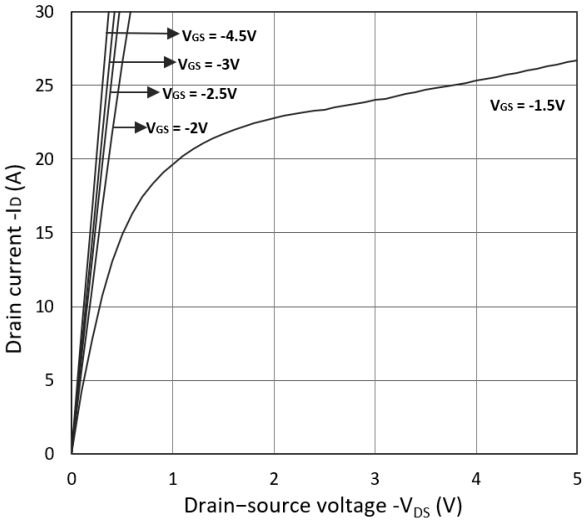


Figure 2. Transfer Characteristics

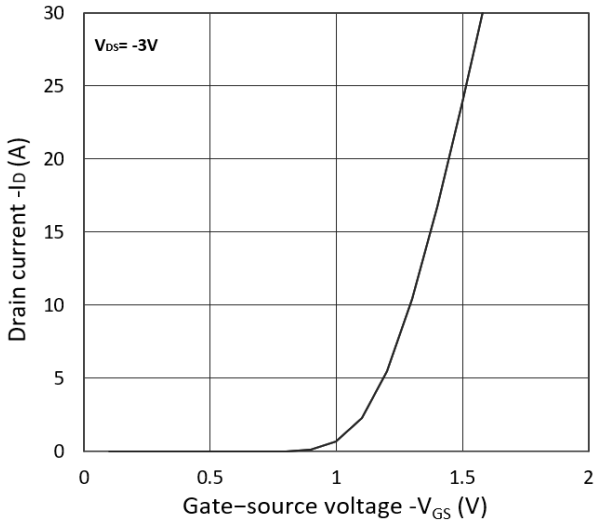


Figure 3. $R_{DS(ON)}$ vs. I_D

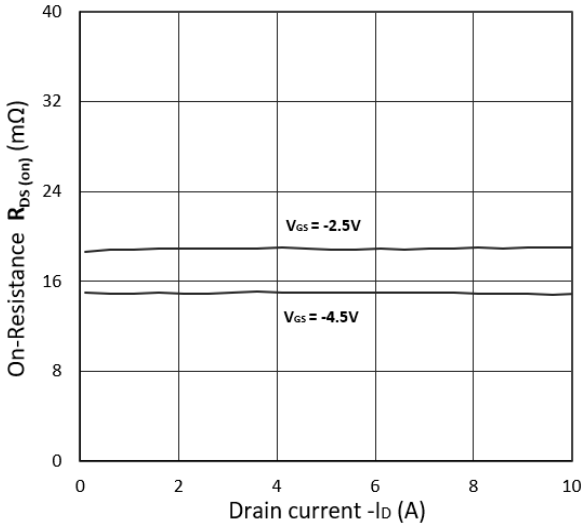


Figure 4. $R_{DS(ON)}$ vs. V_{GS}

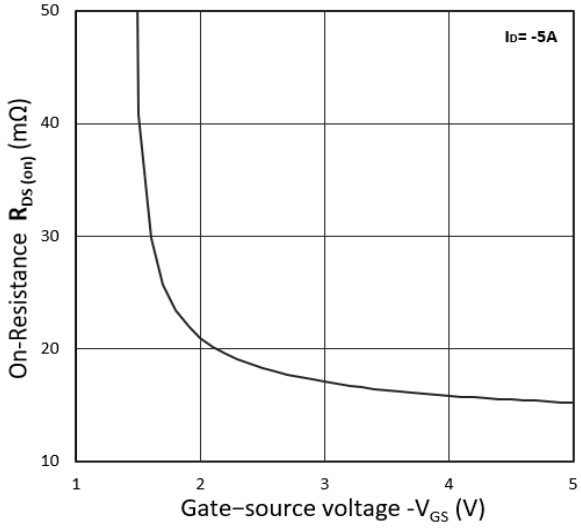


Figure 5. Forward Characteristics of Reverse

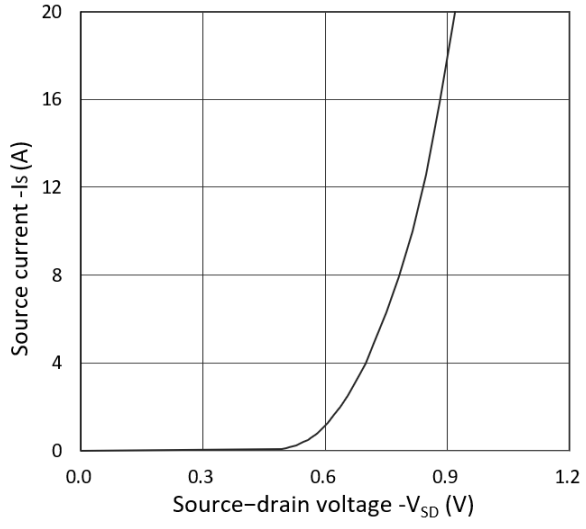
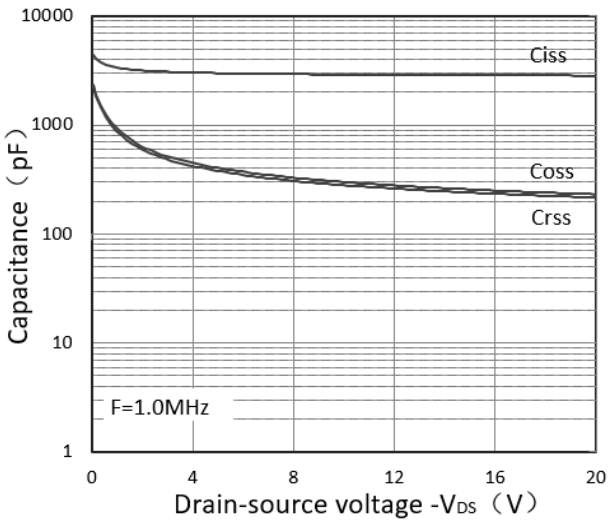
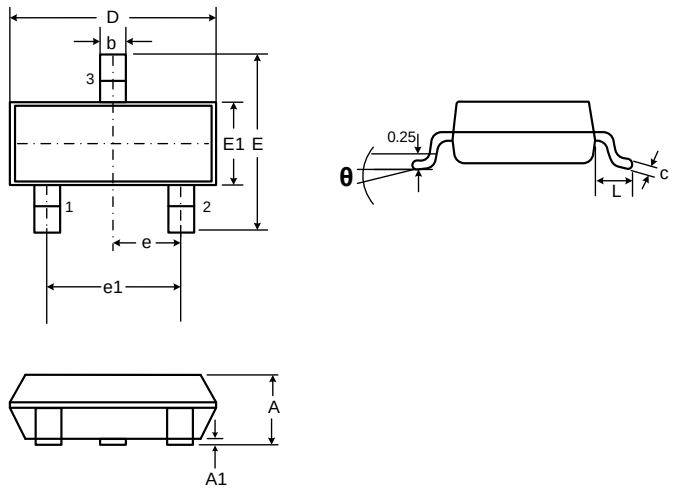


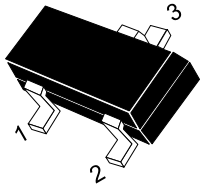
Figure 6. Capacitance Characteristics



Outline Drawing – SOT-23-3L

PACKAGE OUTLINE

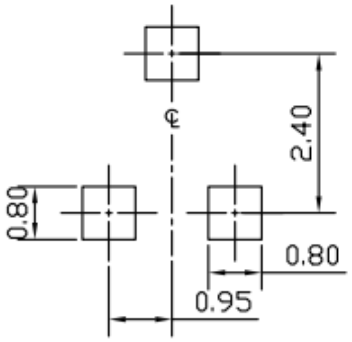




SOT-23-3L

DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.05	1.15	0.041	0.045
A1	0.00	0.10	0.000	0.004
b	0.30	0.50	0.012	0.020
c	0.10	0.20	0.004	0.008
D	2.82	3.02	0.111	0.119
E	2.65	2.95	0.104	0.116
E1	1.50	1.70	0.059	0.067
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.55	0.75	0.021	0.029
θ	0	8°	0	8°

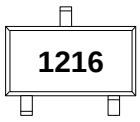


Unit:mm

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	WM02P60M2
Marking Code	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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