

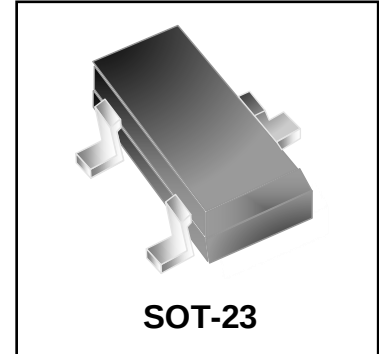


WM06P17M

P-Channel MOSFET

Features

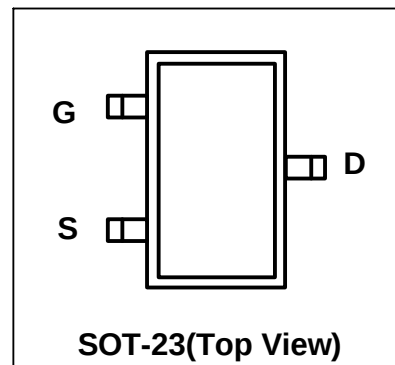
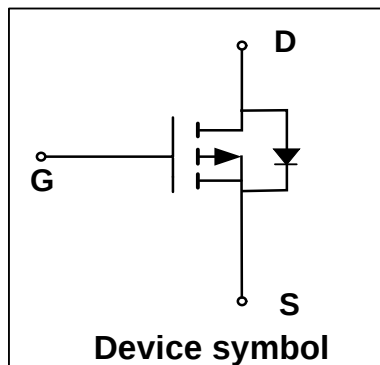
- $V_{DS} = -60\text{ V}$, $I_D = -1.7\text{ A}$
 $R_{DS(on)} < 180\text{ m}\Omega$ @ $V_{GS} = -10\text{ V}$
 $R_{DS(on)} < 260\text{ m}\Omega$ @ $V_{GS} = -4.5\text{ V}$
- Trench MOSFET Technology
- Low Gate Charge
- Very Fast Switching
- Pb Free Device



Mechanical Characteristics

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

Schematic & PIN Configuration



Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DS}	-60	V
Gate-Source voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	-1.7	A
Pulsed Drain Current ¹	I_{DM}	-5.2	A
Power Dissipation	P_D	1	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ 150	$^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient ²	$R_{\theta JA}$	125	$^{\circ}\text{C/W}$

Electrical Characteristics (Tamb=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Off characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-60	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60V, V_{GS} = 0V$	-	-	-1	μA
Gate-body Leakage Current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$	-	-	± 100	nA
Gate-Threshold Voltage ³	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1.0	-	-2.5	V
Drain-Source On-Resistance ³	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -1.5A$	-	155	180	m Ω
		$V_{GS} = -4.5V, I_D = -1A$	-	200	260	
Dynamic characteristics						
Input Capacitance	C_{iss}	$V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$	-	405	-	pF
Output Capacitance	C_{oss}		-	35	-	
Reverse Transfer Capacitance	C_{rss}		-	15	-	
Switching characteristics						
Total Gate Charge ⁴	Q_g	$V_{GS} = -4.5V, V_{DS} = -30V, I_D = -1.5A$	-	6.6	-	nC
Gate-Source Charge ⁴	Q_{gs}		-	2.8	-	
Gate-Drain Charge ⁴	Q_{gd}		-	2	-	
Turn-on Delay Time ⁴	$t_{d(on)}$	$V_{GS} = -10V, V_{DS} = -15V, I_D = -1A, R_G = 3.3\Omega$	-	19	-	nS
Rise Time ⁴	t_r		-	36.8	-	
Turn-off Delay Time ⁴	$t_{d(off)}$		-	5.4	-	
Fall Time ⁴	t_f		-	3.5	-	
Drain-source diode characteristics						
Diode Forward Voltage	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 $\leq 300\mu s$, duty cycle $\leq 2\%$.
4. Guaranteed by design, not subject to product

Typical Characteristics

Figure 1. Output Characteristics

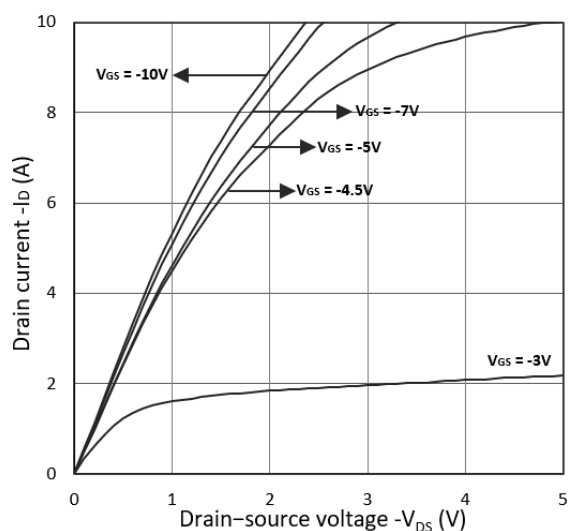


Figure 2. Transfer Characteristics

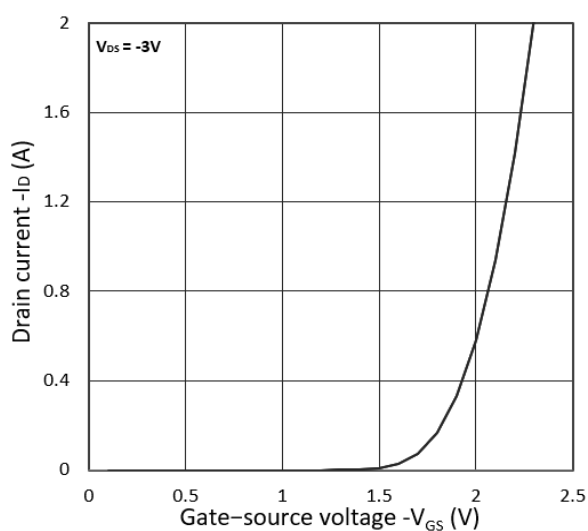
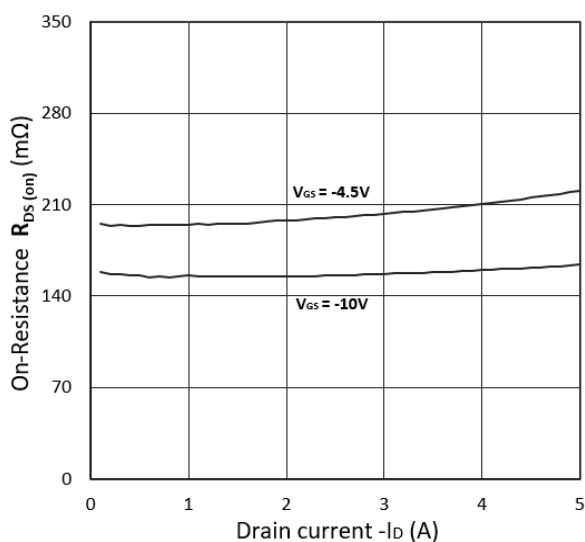
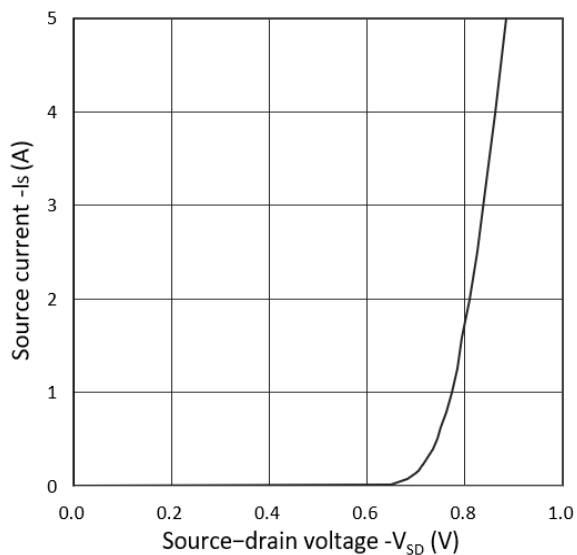
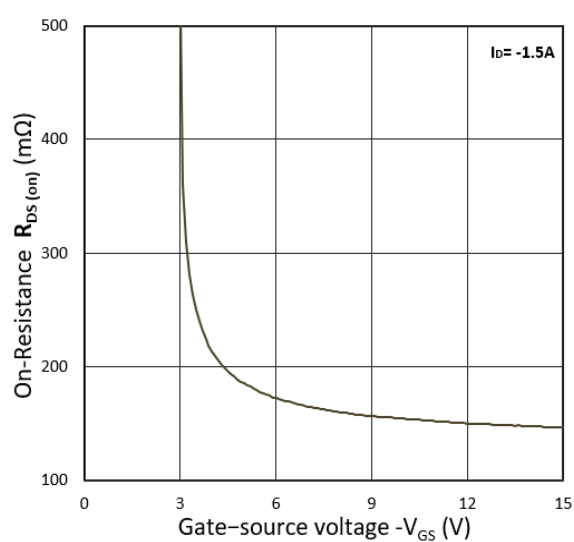
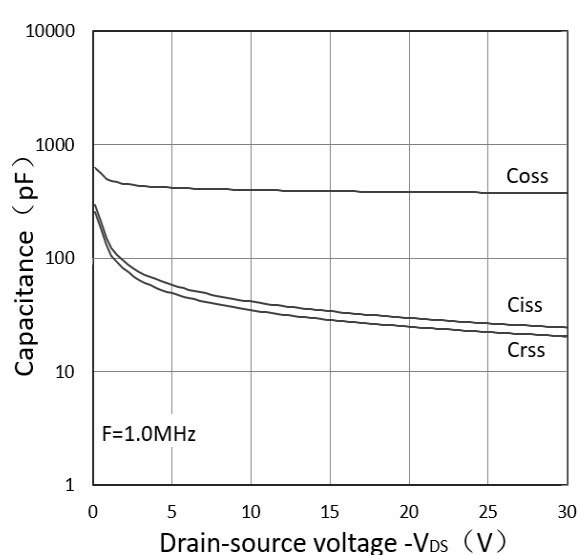
Figure 3. $R_{DS(on)}$ vs. I_D Figure 5. I_S vs. V_{SD} Figure 4. $R_{DS(on)}$ vs. V_{GS} 

Figure 6. Capacitance Characteristics



Outline Drawing – SOT-23

PACKAGE OUTLINE

Top view of the package showing dimensions: D (total width), b (pin width), 3 (pin pitch), E1 (pin height), E (total height), e (pin offset), e1 (total offset), 1 (pin 1), 2 (pin 2).

Side view of the package showing dimensions: A (total height), A1 (pin height).

Bottom view of the package showing dimensions: 0.25 (lead width), theta (lead angle), L (lead length), c (lead thickness).

3D perspective view of the package showing pins 1, 2, 3.

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°

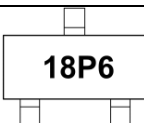
Bottom view of the package showing dimensions: b (pin width), z (pin height), C (pin pitch), M (pin offset), e (pin offset), e1 (total offset).

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	WM06P17M
Marking Code	

Package Information

Qty: 3k/Reel

CONTACT INFORMATION.

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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.

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