

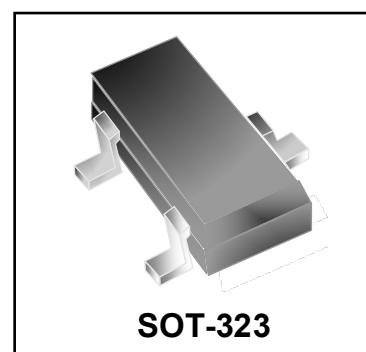
N-Channel Enhancement MOSFET

Features

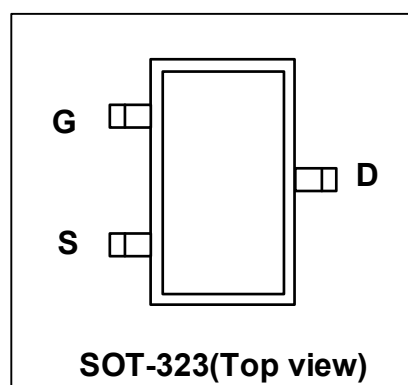
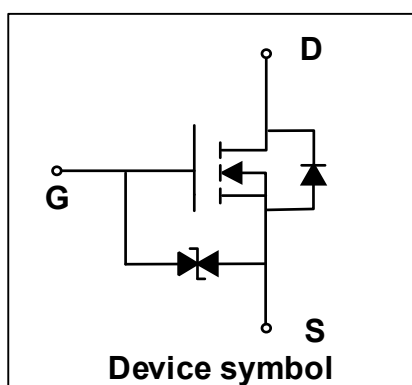
- $V_{DS} = 60V$, $I_D = 0.34A$
 $R_{DS(on)} < 2.1\Omega$ @ $V_{GS} = 10V$
 $R_{DS(on)} < 2.8\Omega$ @ $V_{GS} = 4.5V$
- Trench LV MOSFET Technology
- ESD Protected

Mechanical Characteristics

- SOT-323 Package
- Marking : Making Code
- RoHS Compliant



Schematic & PIN Configuration



Absolute Maximum Rating ($T_A = 25^\circ C$ unless otherwise noted)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_A = 25^\circ C$	I_D	0.34	A
Pulsed Drain Current ¹		I_{DM}	1.36	A
Power Dissipation	$T_A = 25^\circ C$	P_D	200	mW
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	$^\circ C$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ²	$R_{\theta JA}$	625	$^\circ C/W$

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	V_{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	60	-	-	V
Gate leakage Current	I_{GSS}	V _{GS} = ±20V, V _{DS} = 0V	-	-	±10	μA
Drain Cut-off Current	I_{DSS}	V _{DS} = 60V, V _{GS} = 0V	-	-	1	μA
Gate Threshold Voltage	V_{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.5	2	V
Drain-Source On-state Resistance ³	R_{DS(on)}	V _{GS} = 10V, I _D = 0.3A	-	1.3	2.1	Ω
		V _{GS} = 4.5V, I _D = 0.2A	-	1.4	2.8	Ω
Dynamic characteristics ⁴						
Input Capacitance	C_{iss}	V _{DS} = 30V, V _{GS} = 0V, f = 1MHz	-	25	-	pF
Output Capacitance	C_{oss}		-	5.6	-	
Reverse Transfer Capacitance	C_{rss}		-	2.2	-	
Switching Characteristics ⁴						
Total Gate Charge	Q_g	V _{GS} = 4.5V, V _{DS} = 30V, I _D = 0.3A	-	0.62	-	nC
Gate-Source Charge	Q_{gs}		-	0.25	-	
Gate-Drain Charge	Q_{gd}		-	0.22	-	
Turn-on Delay Time	t_{d(on)}	V _{GS} = 10V,V _{DD} = 30V, I _D = 0.3A, R _G = 3Ω	-	3.5	-	ns
Turn-on Rise Time	t_r		-	3.4	-	
Turn-off Delay Time	t_{d(off)}		-	14.2	-	
Turn- off Fall Time	t_f		-	10.8	-	
Source-Drain Diode characteristics						
Diode Forward Voltage ³	V_{SD}	I _S = 0.3A ,V _{GS} =0V,	-	-	1.5	V
Continuous Source Current	I_S		-	-	0.34	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}=150^{\circ}\text{C}$.
2. The data tested by surface mounted on a 1 inch² FR-4 board with 20Z copper, The value in any given application depends on the user's specific board design.
3. Pulse Test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
4. This value is guaranteed by design hence it is not included in the production test.

Typical Characteristics

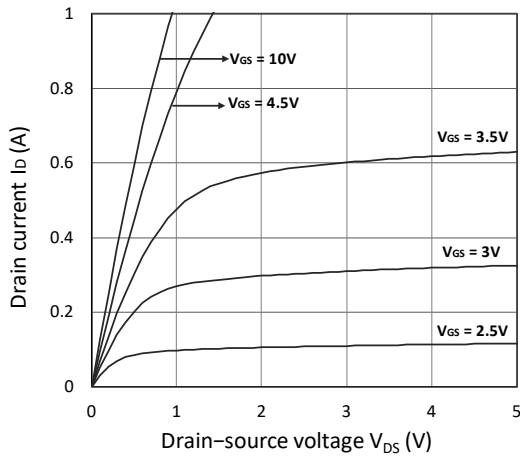


Figure 1. Output Characteristics

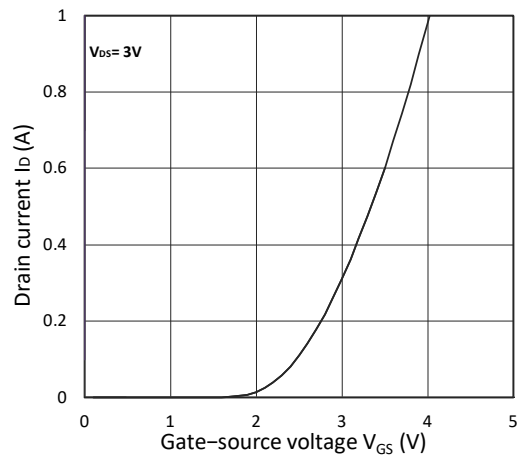


Figure 2. Transfer Characteristics

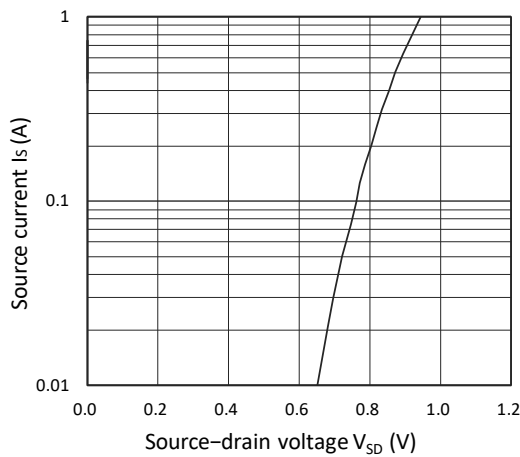
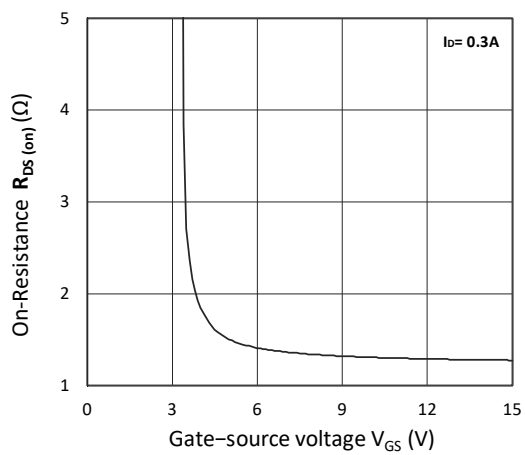
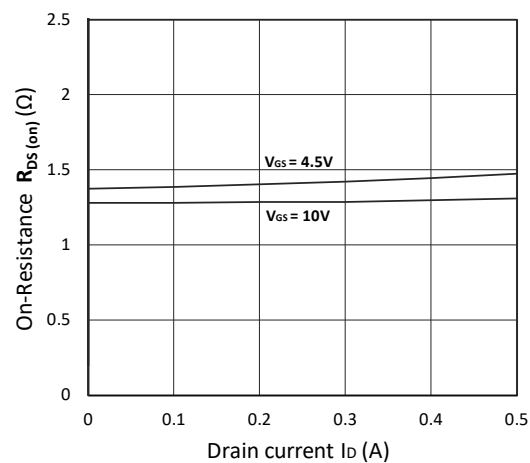
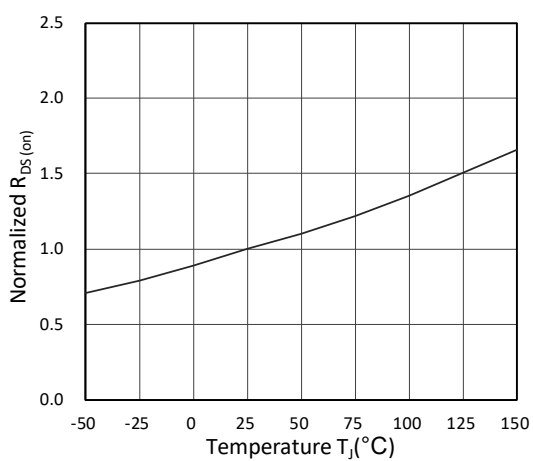


Figure 3. Forward Characteristics of Reverse

Figure 4. $R_{DS(on)}$ vs. V_{GS} Figure 5. $R_{DS(on)}$ vs. I_D Figure 6. Normalized $R_{DS(on)}$ vs. Temperature

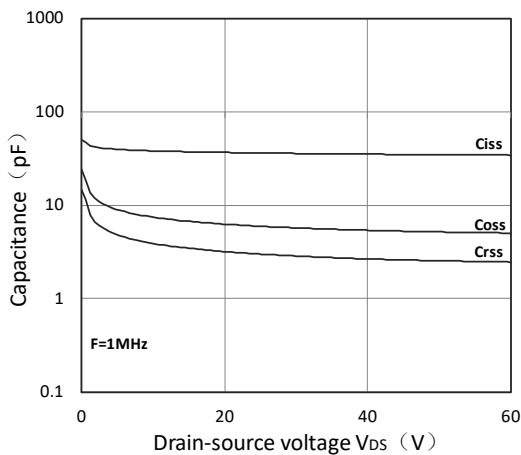


Figure 7. Capacitance Characteristics

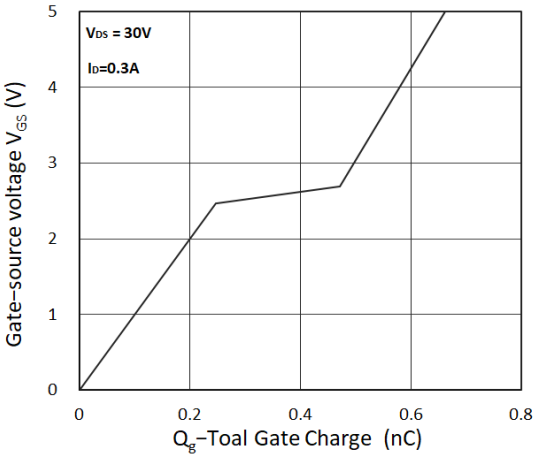
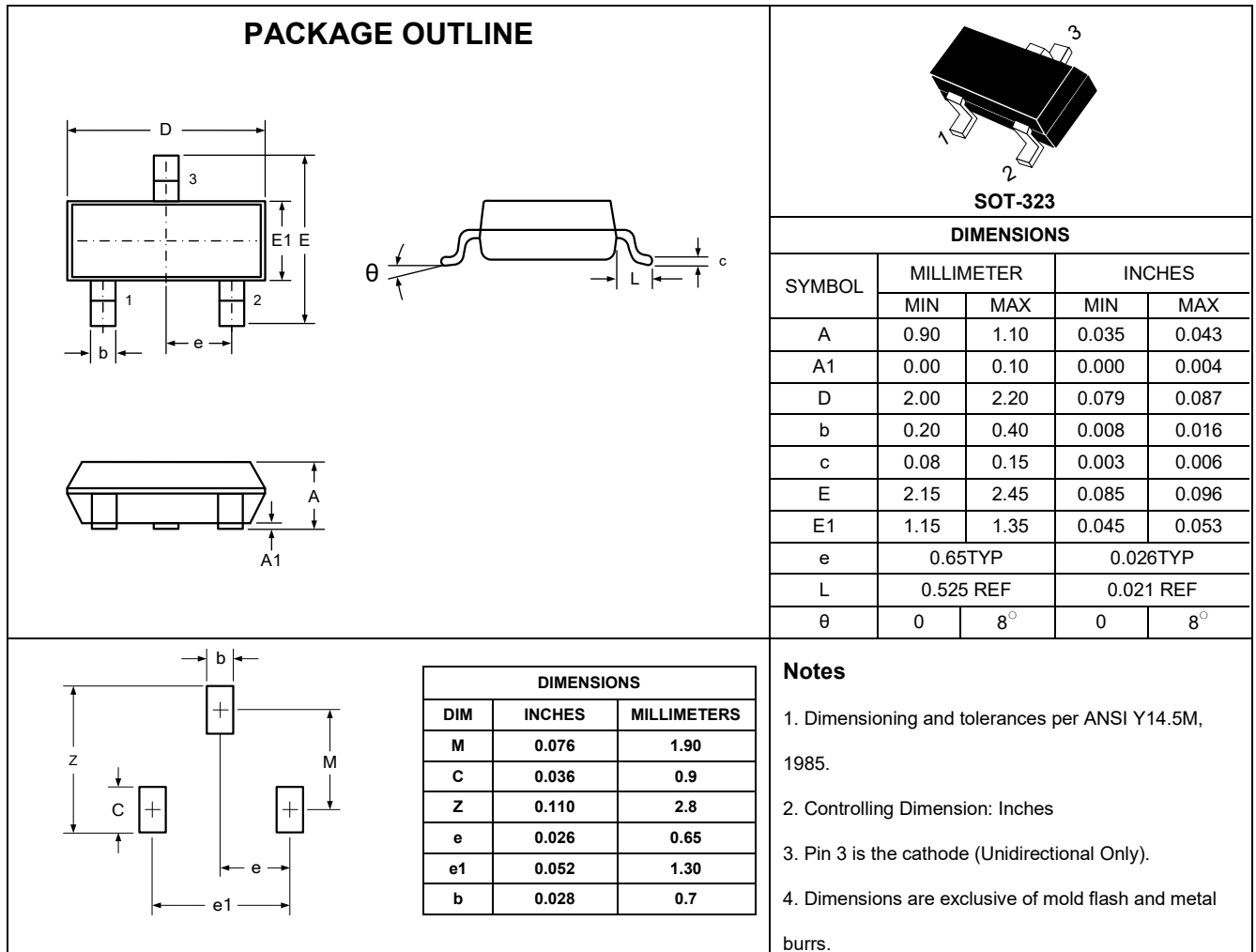


Figure 8. Gate Charge Characteristics

Outline Drawing – SOT-323



Marking Codes

Part Number	WM06N03G
Marking Code	72K

Package Information

Qty: 3k/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.