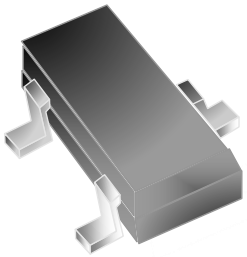
WM06N03G

N-Channel MOSFET

Features

- V_{DS}= 60V, I_D = 0.34A
  $R_{DS(on)}$ < 2.1Ω @ V_{GS} = 10V
  $R_{DS(on)}$ < 2.8Ω @ V_{GS} = 4.5V
- Portable Equipment
- Battery Powered System
- ESD Protected

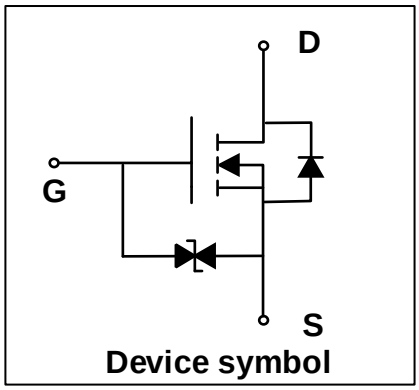


SOT-323

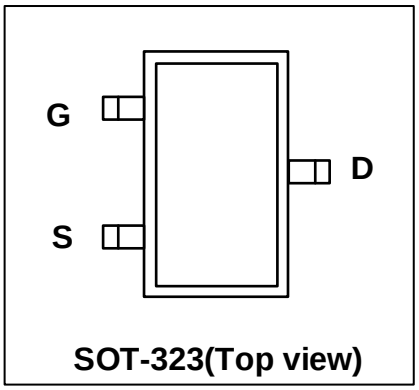
Mechanical Characteristics

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

Schematic & PIN Configuration



Device symbol



SOT-323(Top view)

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current[1]	I_D	0.34	A
Plused Drain Current	I_{DM}	0.8	A
Power Dissipation	P_D	200	mW
Thermal Resistance from Junction to Ambient[1]	$R_{\theta JA}$	625	°C/W
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	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0V, I_D = 250μA	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} = ±20V	-	-	±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	
Gate Threshold Voltage[2]	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250μA	1	1.3	2.0	V
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 10V, 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, V_{DS} = 10V, I_D = 0.25A	-	0.3	-	nC
Gate-Source Charge	Q_{gs}		-	0.2	-	
Gate-Drain Charge	Q_{gd}		-	0.08	-	
Turn-on Delay Time[4]	$t_{d(on)}$	V_{DD} = 30V, V_{GEN} = 10V, I_D = 0.20A, R_G = 25Ω	-	3.9	-	ns
Turn-on Rise Time[4]	t_r			3.4	-	
Turn-off Delay Time[4]	$t_{d(off)}$		-	15.7	-	
Turn- off Fall Time[4]	t_f		-	9.9	-	
Source-Drain Diode Characteristics						
Body Diode Voltage[3]	V_{SD}	I_S = 0.3A, V_{GS} = 0V	-	-	1.5	V

Notes:

1. Surface mounted on FR4 board using the minimum recommended pad size.

2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.

3. Switching characteristics are independent of operating junction temperatures.

4. Guaranteed by design, not subject to producting.

Typical Characteristics

Figure 1. Output Characteristics

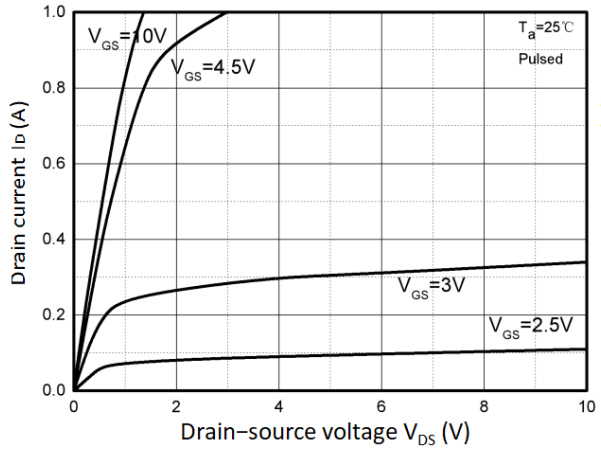


Figure 2. Transfer Characteristics

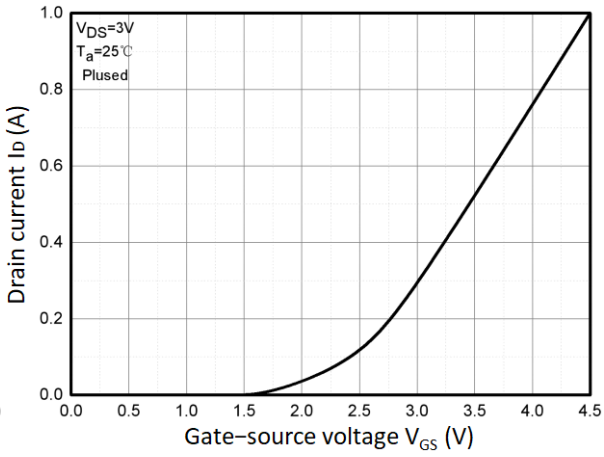


Figure 3. $R_{DS(ON)}$ vs. I_D

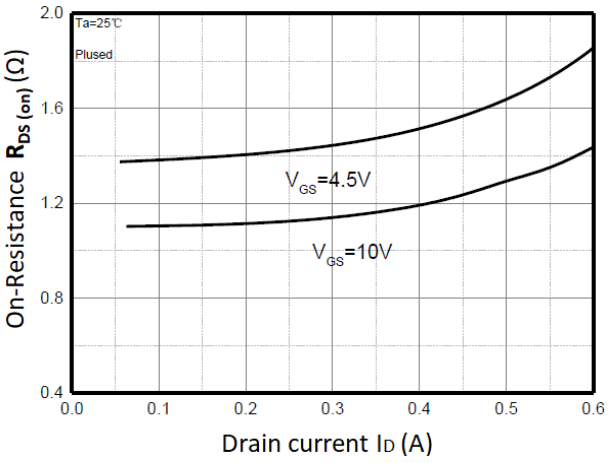


Figure 4. $R_{DS(ON)}$ vs. V_{GS}

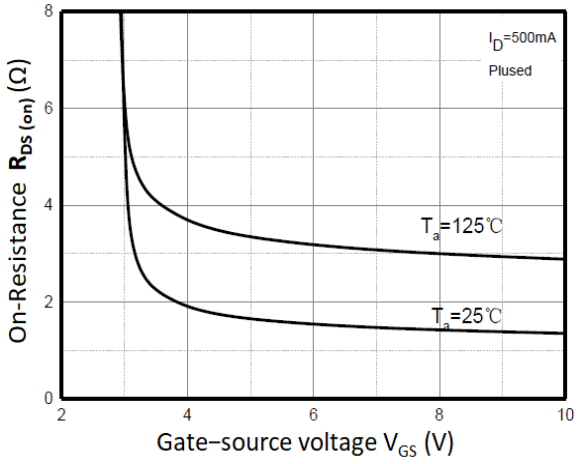


Figure 5. I_S vs. V_{SD}

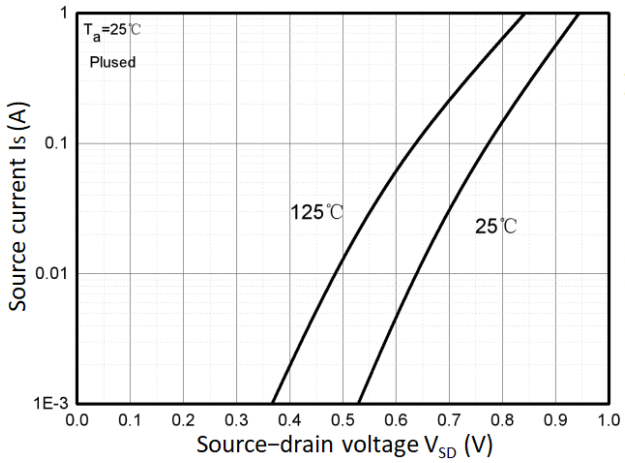
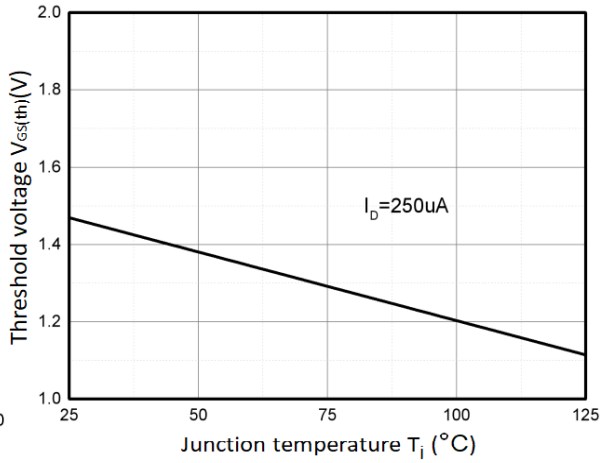
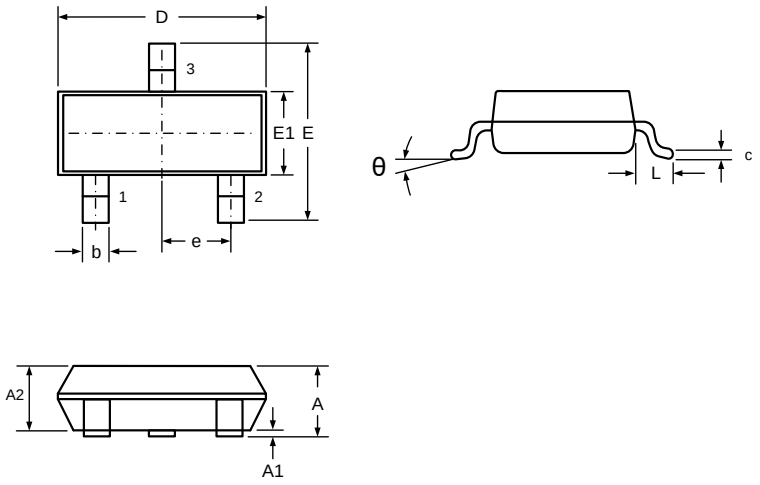


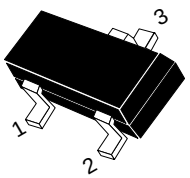
Figure 6. $V_{GS(th)}$ vs.T_J



Outline Drawing – SOT-323

PACKAGE OUTLINE

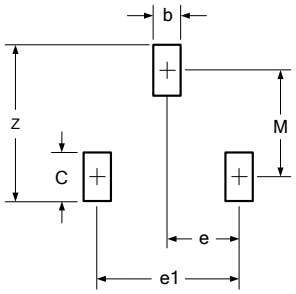




SOT-323

DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
D	2.000	2.200	0.079	0.087
b	0.300	0.500	0.012	0.020
c	0.100	0.150	0.004	0.006
E	2.150	2.450	0.085	0.096
E1	1.150	1.350	0.045	0.053
e	0.650TYP		0.026TYP	
L	0.525 REF		0.021 REF	
θ	0	8°	0	8°

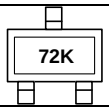


DIMENSIONS		
DIM	**INCHES**	**MILLIMETERS**
M	**0.076**	**1.90**
C	**0.036**	**0.9**
Z	**0.108**	**2.7**
e	**0.026**	**0.65**
e1	**0.052**	**1.30**
b	**0.028**	**0.7**

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	WM06N03G
Marking Code	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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