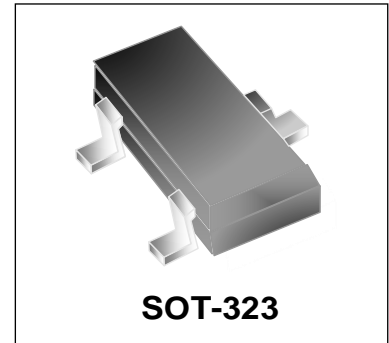


## N-Channel Enhancement MOSFET

### Features

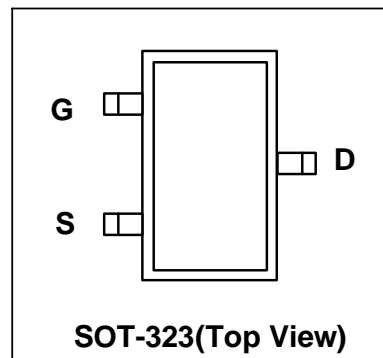
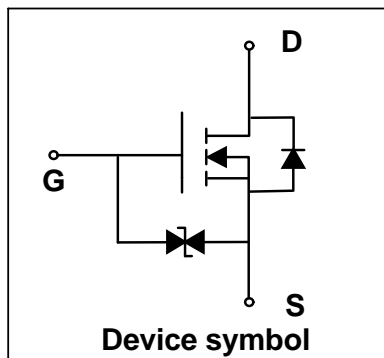
- Way-on Small Signal MOSFETs
- $V_{DS} = 60V$ ,  $I_D = 0.34A$   
 $R_{DS(on)} < 2\Omega @ V_{GS} = 10V$   
 $R_{DS(on)} < 2.5\Omega @ V_{GS} = 4.5V$
- Trench LV MOSFET Technology
- ESD Protected



### Mechanical Characteristics

- SOT-323 Package
- Marking : Making Code
- RoHS Compliant & Halogen-Free

### 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	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	0.34	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	1.36	A
Power Dissipation	$P_D$	300	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 <sup>2</sup>	$R_{\theta JA}$	416.6	$^\circ C/W$

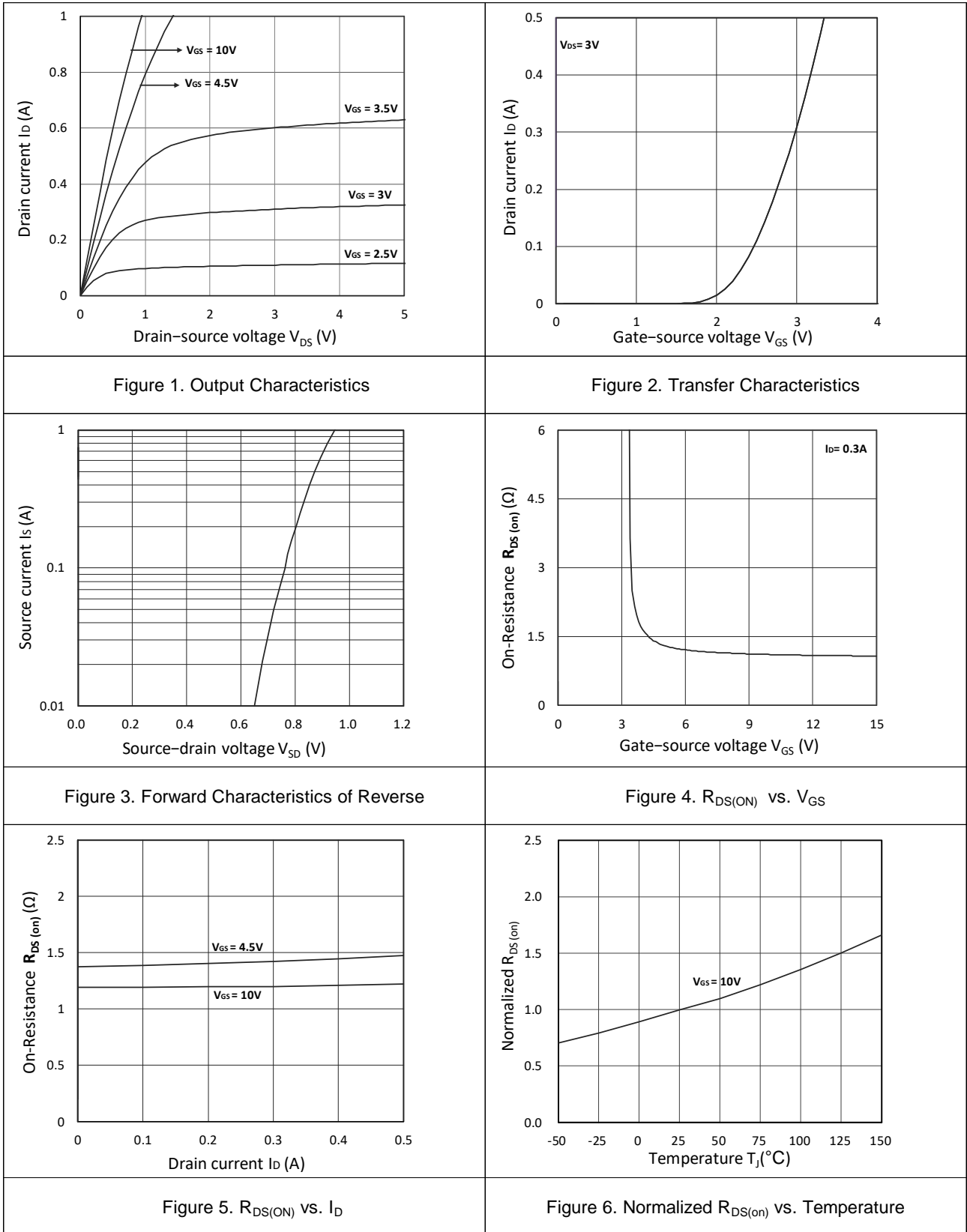
**Electrical Characteristics (T<sub>J</sub>=25°C unless otherwise noted)**

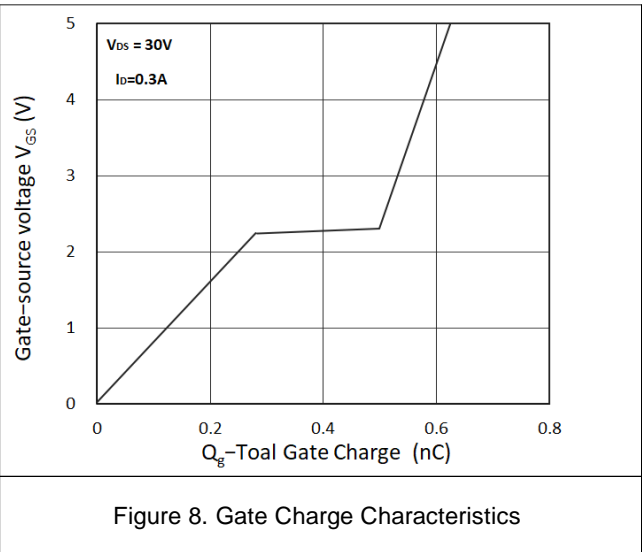
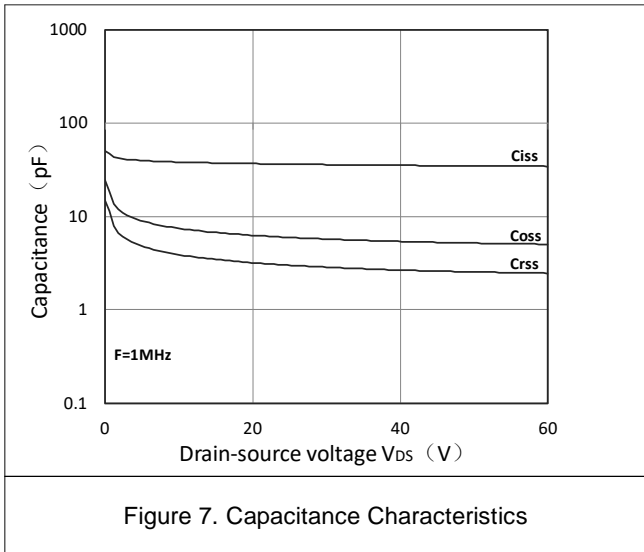
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	60	-	-	V
Gate leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V	-	-	±10	μA
Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = 60V, V <sub>GS</sub> = 0V	-	-	1	μA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA	1	1.4	2	V
Drain-Source On-state Resistance <sup>3</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> = 10V, I <sub>D</sub> = 0.3A	-	1.2	2	Ω
		V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 0.2A	-	1.4	2.5	Ω
<b>Dynamic characteristics<sup>4</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0V, f = 1MHz	-	25	-	pF
Output Capacitance	C <sub>oss</sub>		-	5.6	-	
Reverse Transfer Capacitance	C <sub>rss</sub>		-	2.2	-	
<b>Switching Characteristics<sup>4</sup></b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> = 4.5V, V <sub>DS</sub> = 30V, I <sub>D</sub> = 0.3A	-	0.61	-	nC
Gate-Source Charge	Q <sub>gs</sub>		-	0.27	-	
Gate-Drain Charge	Q <sub>gd</sub>		-	0.23	-	
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>GS</sub> = 10V, V <sub>DD</sub> = 30V, I <sub>D</sub> = 0.3A, R <sub>G</sub> = 3Ω	-	4.3	-	ns
Turn-on Rise Time	t <sub>r</sub>		-	2.4	-	
Turn-off Delay Time	t <sub>d(off)</sub>		-	21	-	
Turn- off Fall Time	t <sub>f</sub>		-	14.5	-	
<b>Source-Drain Diode characteristics</b>						
Diode Forward Voltage <sup>3</sup>	V <sub>SD</sub>	I <sub>S</sub> = 0.3A , V <sub>GS</sub> =0V,	-	-	1.5	V
Continuous Source Current	I <sub>S</sub>	-	-	-	0.34	A

**Notes:**

1. Repetitive rating, pulse width limited by junction temperature T<sub>J(MAX)</sub>=150°C.
2. The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper, The value in any given application depends on the user's specific board design.
3. Pulse Test: Pulse width≤300μs, duty cycle≤2%.
4. This value is guaranteed by design hence it is not included in the production test.

### Typical Characteristics





### Outline Drawing – SOT-323

#### PACKAGE OUTLINE

**SOT-323**

#### DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.10	0.035	0.043
A1	0.00	0.10	0.000	0.004
D	2.00	2.20	0.079	0.087
b	0.20	0.40	0.008	0.016
c	0.08	0.15	0.003	0.006
E	2.15	2.45	0.085	0.096
E1	1.15	1.35	0.045	0.053
e	0.65TYP		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	0.110	2.8
e	0.026	0.65
e1	0.052	1.30
b	0.028	0.7

### Marking Codes

Part Number	WM06N03GE
Marking Code	

### Package Information

Qty: 3k/Reel

### CONTACT INFORMATION

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