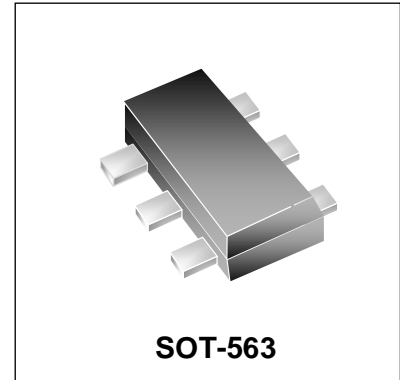


### Features

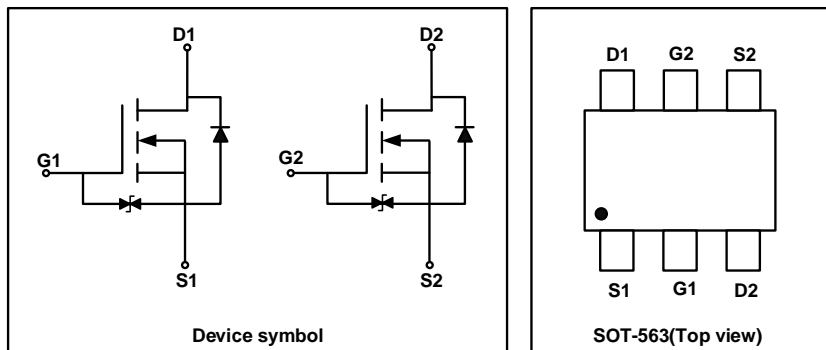
- Way-on Small Signal MOSFETs
- $V_{DS} = 20V$ ,  $I_D = 0.8A$   
 $R_{DS(on)} < 0.25\Omega @ V_{GS} = 4.5V$   
 $R_{DS(on)} < 0.4\Omega @ V_{GS} = 2.5V$
- Trench LV MOSFET Technology
- ESD Protected

### Mechanical Characteristics

- SOT-563 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	$V_{DS}$	20	V
Gate-Source Voltage	$V_{GS}$	$\pm 10$	V
Continuous Drain Current	$I_D$	0.8	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	3	A
Power Dissipation	$P_D$	270	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>	$R_{\theta JA}$	462.9	$^\circ C/W$

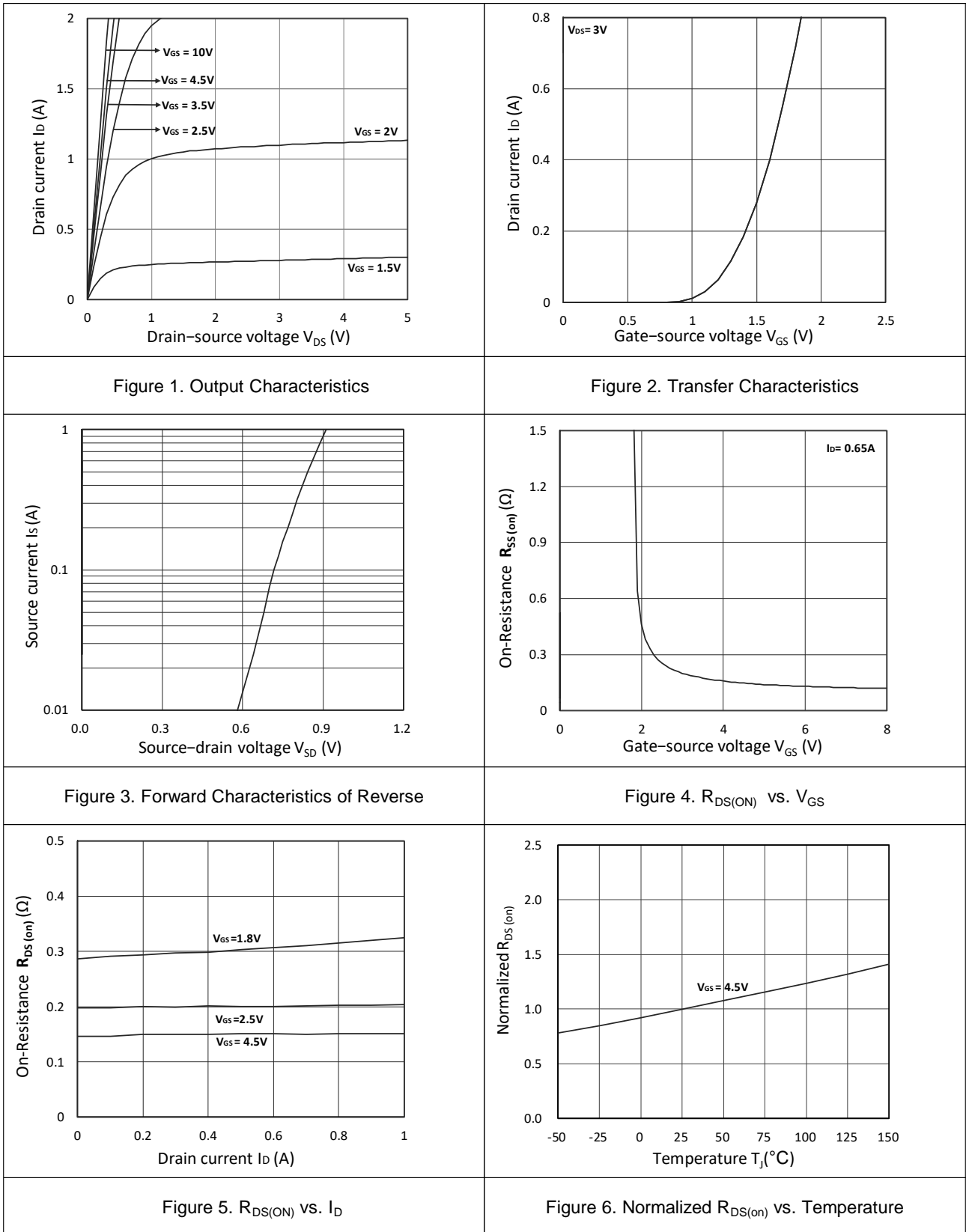
**Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	20	-	-	V
Gate-body Leakage Current	I <sub>gss</sub>	V <sub>DS</sub> = 0V, V <sub>GS</sub> = ±10V	-	-	±20	μA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 20V, 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	0.35	0.75	1.1	V
Drain-Source On-state Resistance <sup>3</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 0.65A	-	0.15	0.25	Ω
		V <sub>GS</sub> = 2.5V, I <sub>D</sub> = 0.5A	-	0.2	0.4	
		V <sub>GS</sub> = 1.8V, I <sub>D</sub> = 0.4A	-	0.3	-	
<b>Dynamic Characteristics<sup>4</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> = 0V, V <sub>DS</sub> = 10V, f = 1MHz	-	58	-	pF
Output Capacitance	C <sub>oss</sub>		-	14.5	-	
Reverse Transfer Capacitance	C <sub>rss</sub>		-	9	-	
<b>Switching Characteristics<sup>4</sup></b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> = 4.5V, V <sub>DS</sub> = 10V, I <sub>D</sub> = 0.65A	-	1.1	-	nC
Gate-Source Charge	Q <sub>gs</sub>		-	0.27	-	
Gate-Drain Charge	Q <sub>gd</sub>		-	0.25	-	
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>GS</sub> = 4.5V, V <sub>DD</sub> = 10V, I <sub>D</sub> = 0.65A, R <sub>G</sub> = 3Ω	-	3.3	-	ns
Turn-on Rise Time	t <sub>r</sub>		-	1.1	-	
Turn-off Delay Time	t <sub>d(off)</sub>		-	16.2	-	
Turn-off Fall Time	t <sub>f</sub>		-	8.4	-	
<b>Source-Drain Diode characteristics</b>						
Body Diode Voltage <sup>3</sup>	V <sub>SD</sub>	I <sub>S</sub> = 0.15A, V <sub>GS</sub> = 0V	-	-	1.2	V
Continuous Source Current	I <sub>S</sub>	-	-	-	0.8	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



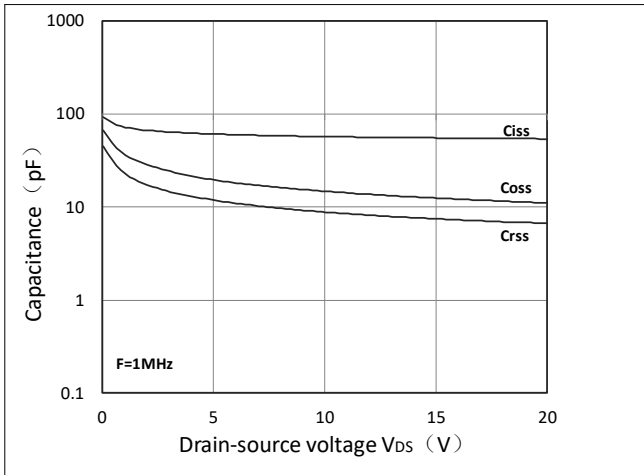


Figure 7. Capacitance Characteristics

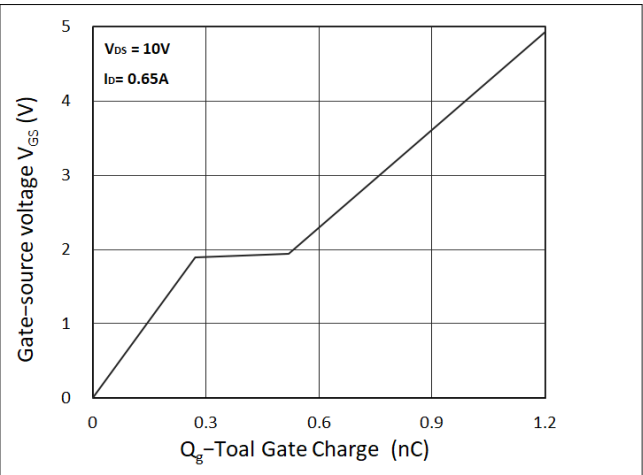
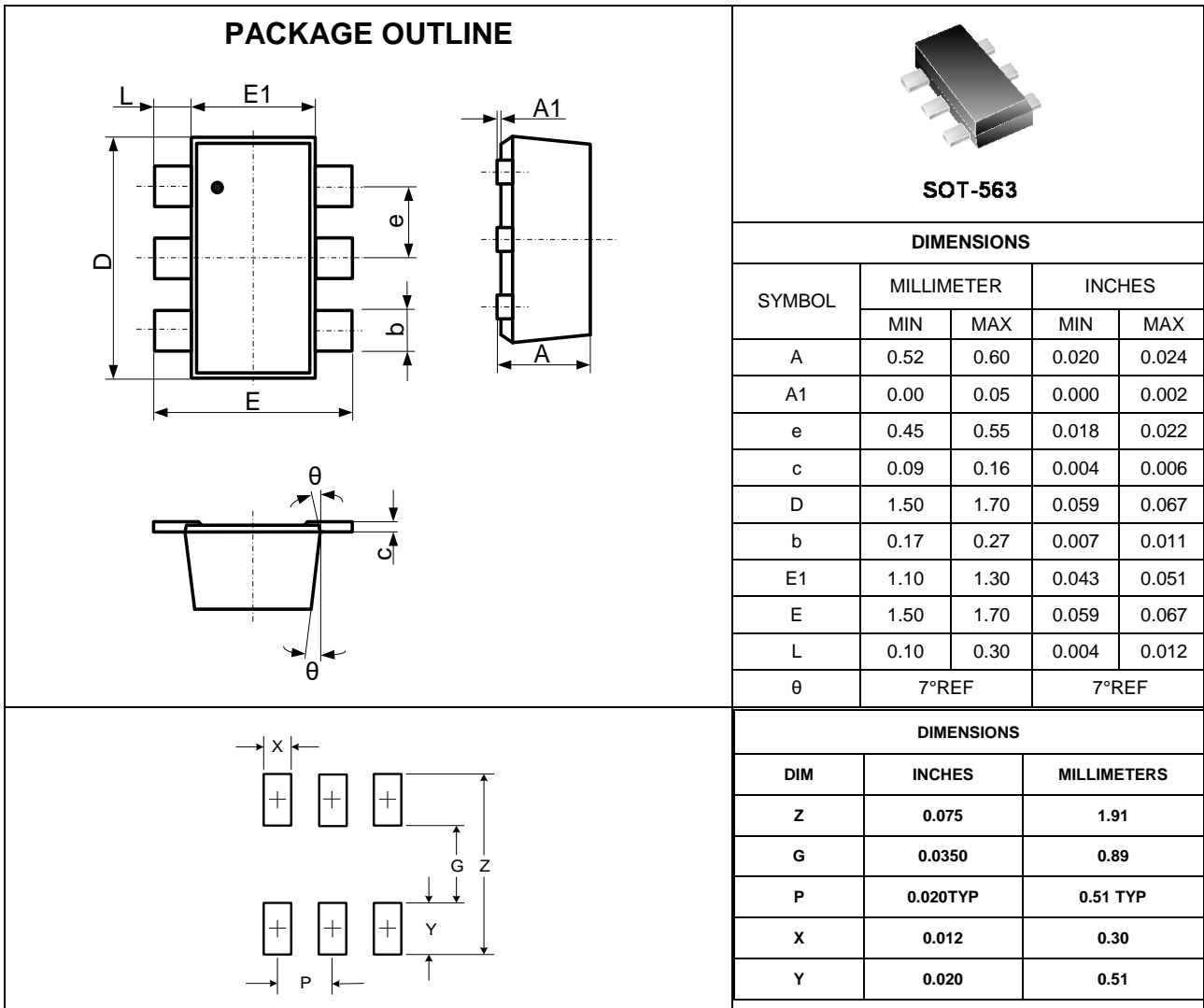


Figure 8. Gate Charge Characteristics

### Outline Drawing – SOT-563



### Marking Codes

Part Number	WM02DN08TE
Marking Code	

### Package Information

Qty: 3k/Reel

### CONTACT INFORMATION

No.1001, Shiwan (7) Road, Pudong District, Shanghai, P.R.China.201207

Tel: 86-21-50310888 Fax: 86-21-50757680 Email: [market@way-on.com](mailto:market@way-on.com)

WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

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## Product Specification Statement

1. The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.
2. The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.
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4. Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.
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