

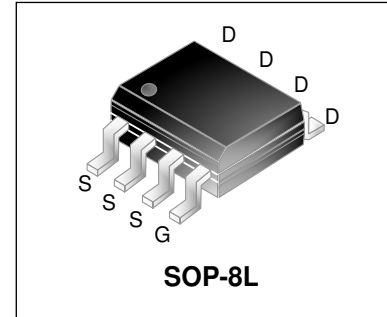


WM03N115A

N-Channel MOSFET

Features

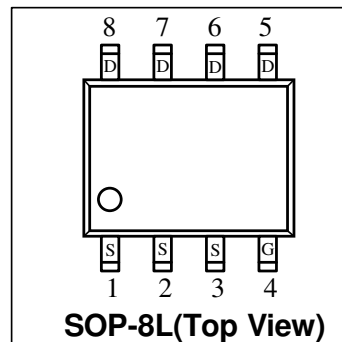
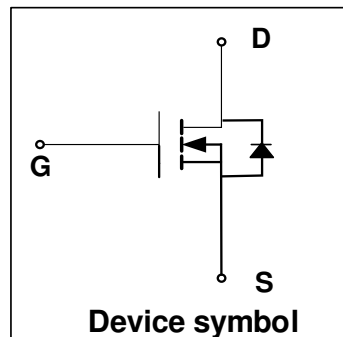
- $V_{DS} = 30\text{ V}$, $I_D = 11.5\text{ A}$
 $R_{DS(on)} < 12\text{ m}\Omega$ @ $V_{GS} = 10\text{ V}$
 $R_{DS(on)} < 16\text{ m}\Omega$ @ $V_{GS} = 4.5\text{ V}$
- Trench Power MOSFET
- Fast Switching Speed
- Low On-Resistance
- Green Device Available



Mechanical Characteristics

- SOP-8 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source breakdown voltage	V_{DS}	30	V
Gate-Source voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	11.5	A
Pulsed Drain Current ¹	I_{DM}	80	
Power Dissipation	P_D	3	W
Thermal Resistance from Junction to Ambient ²	$R_{\theta JA}$	41.7	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	30	-	-	V
Gate-body Leakage current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V	-	-	±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 30V, V _{GS} = 0V	-	-	1	μA
Gate-Threshold Voltage ³	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.0	-	2.5	V
Drain-Source On-Resistance ³	R _{DS(on)}	V _{GS} = 10V, I _D = 12A	-	8.5	12	mΩ
		V _{GS} = 4.5V, I _D = 10A	-	10.5	16	
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =15V, V _{GS} =0V, f =1MHz	-	1140	-	pF
Output Capacitance	C _{oss}		-	165	-	
Reverse Transfer Capacitance	C _{rss}		-	110	-	
Switching Characteristics						
Total Gate Charge ⁴	Q _g	V _{GS} = 5V, I _D = 10A, V _{DS} = 15V	-	13	-	nC
Gate-Source Charge ⁴	Q _{gs}		-	5.5	-	
Gate-Drain Charge ⁴	Q _{gd}		-	3.5	-	
Turn-On Delay Time ⁴	t _{d(on)}	V _{GS} =10V, V _{DS} = 25V, R _{GEN} = 6Ω,R _L = 6.7Ω	-	30	-	nS
Rise Time ⁴	t _r		-	20	-	
Turn-Off Delay Time ⁴	t _{d(off)}		-	100	-	
Fall Time ⁴	t _f		-	80	-	
Source-Drain Diode characteristics						
Body Diode Voltage	V _{SD}	I _S =10A, V _{GS} = 0V	-	-	1.2	V

Notes

1. Repetitive rating: Pulse width limited by junction temperature.
2. Surface mounted on FR4 board, $t \leq 10s$.
3. Pulse Test: Pulse Width $\leq 80\mu s$, Duty Cycle $\leq 0.5\%$.
4. Guaranteed by design, not subject to production

Typical Characteristics

Figure 1. Output Characteristics

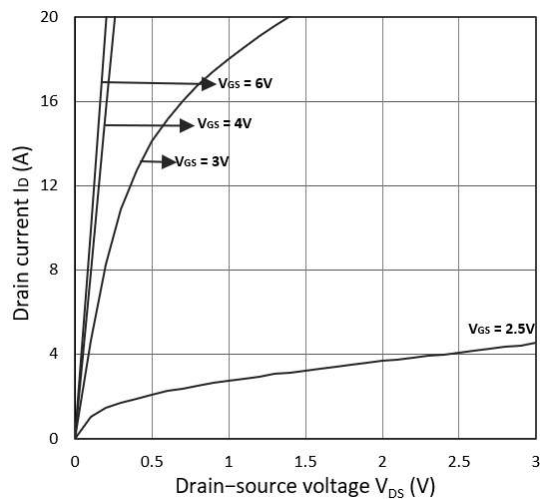


Figure 2. Transfer Characteristics

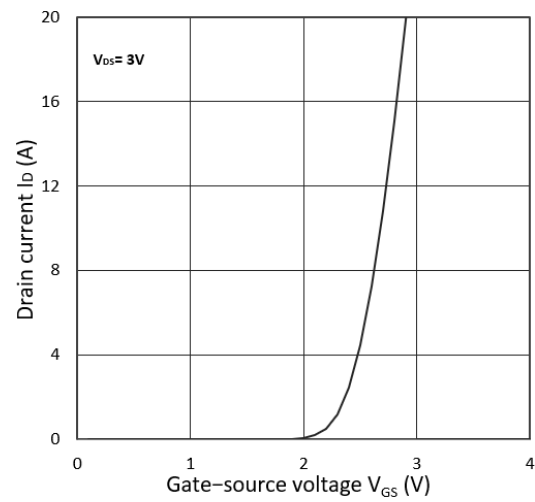
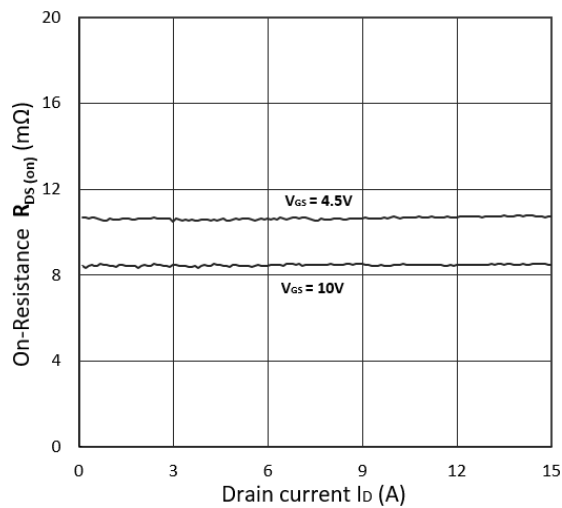
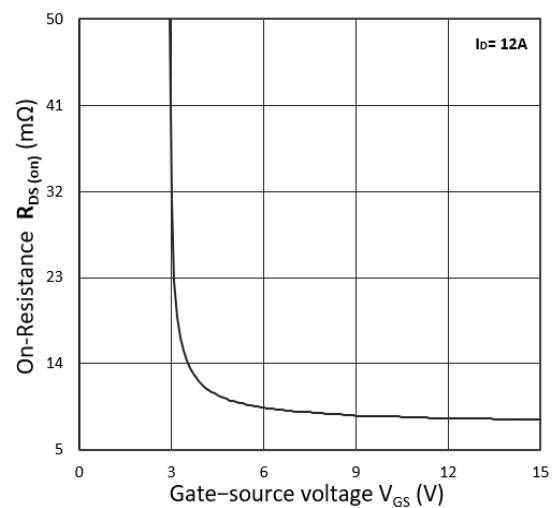
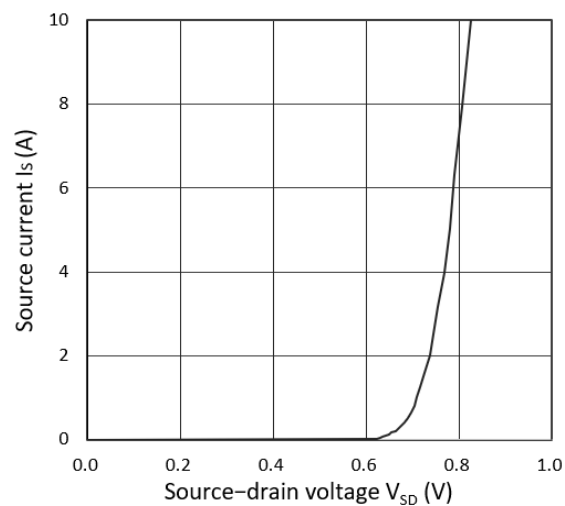
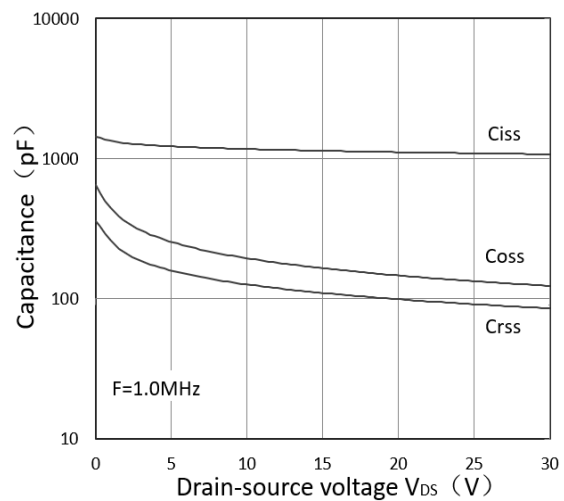
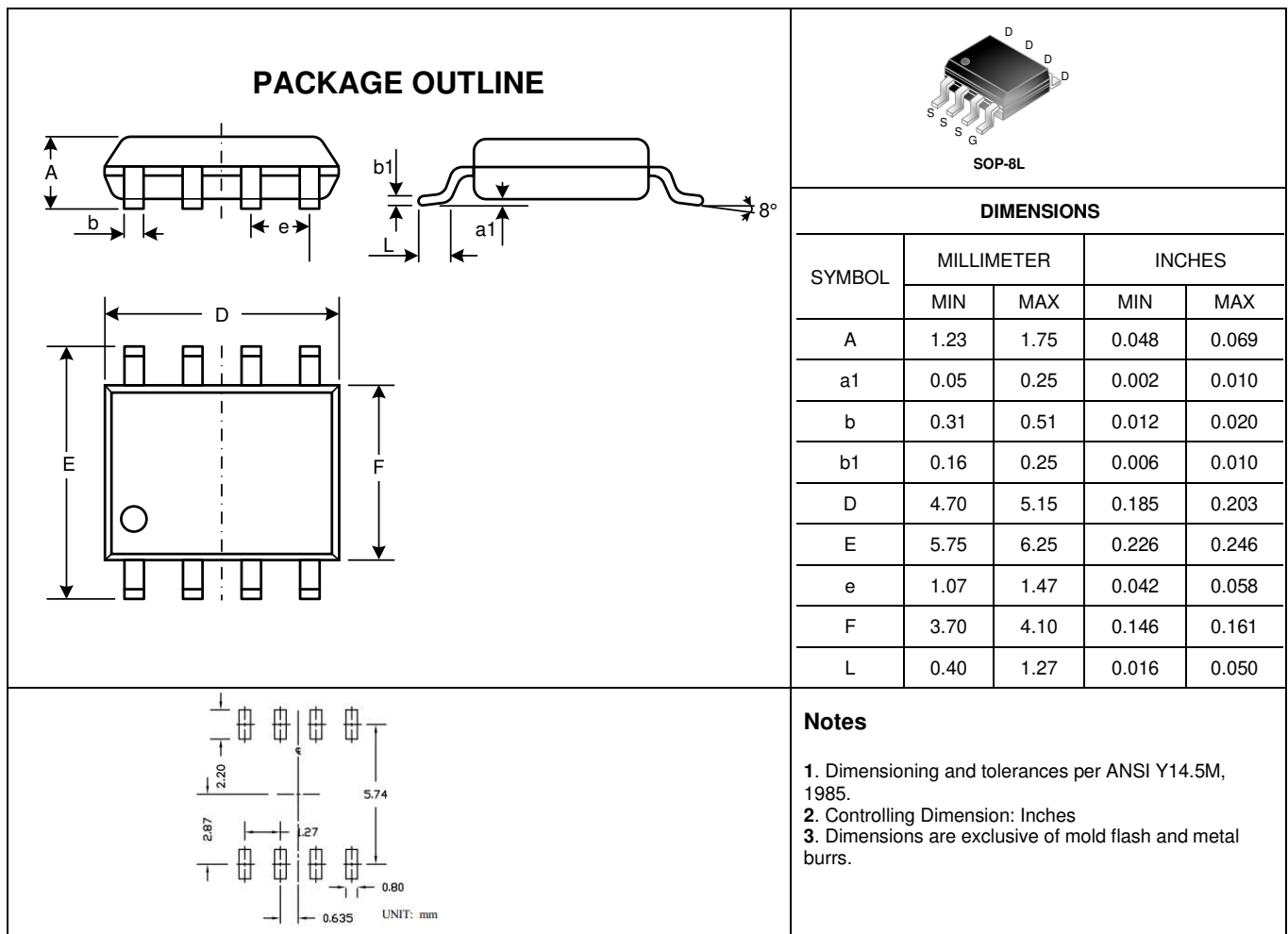
Figure 3. $R_{DS(ON)}$ vs. I_D Figure 4. $R_{DS(ON)}$ vs. V_{GS} Figure 5. I_S vs. V_{SD} 

Figure 6. Capacitance Characteristics



Outline Drawing – SOP-8L



Marking Codes

Part Number	WM03N115A
Marking Code	

Package Information

Qty: 4k/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.