

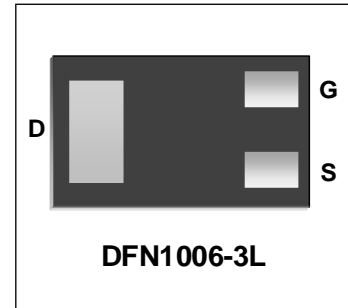


WM06N03F

N-Channel Trench MOSFET

Features

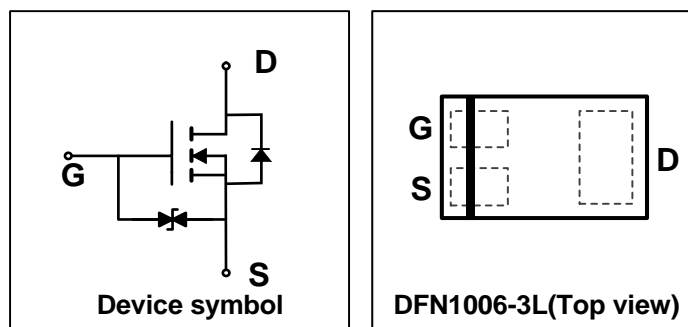
- $V_{DS} = 60V$, $I_D = 0.34A$
 $R_{DS(on)} < 2.1\Omega$ @ $V_{GS} = 10V$
 $R_{DS(on)} < 2.8\Omega$ @ $V_{GS} = 4.5V$
- Very Fast Switching
- Trench MOSFET Technology
- Low Threshold Voltage
- Pb Free Device
- ESD Protected



Mechanical Characteristics

- DFN1006-3L Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.34	A
Power Dissipation	P_D	360	mW
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Characteristics (Tamb=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
Gate Threshold Voltage	V_{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.3	2.0	V
Drain Cut-off Current	I_{DSS}	V _{DS} = 60V, V _{GS} = 0V	-	-	1	μA
Gate Leakage Current	I_{GSS}	V _{GS} = ±20V, V _{DS} = 0V	-	-	±10	μA
Drain-Source on-State Resistance ¹	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	
Dynamic Characteristics						
Input Capacitance	C_{iss}	V _{DS} = 10V, V _{GS} = 0V, f = 1 MHz	-	29	-	pF
Output Capacitance	C_{oss}		-	7.5	-	
Reverse Transfer Capacitance	C_{rss}		-	2	-	
Switching Characteristics						
Total Gate Charge	Q_g	V _{DS} = 10V, V _{GS} = 4.5V, 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 ²	t_{d(on)}	V _{DD} = 30V, V _{GEN} = 10V, I _D = 0.2A, R _G = 25Ω	-	3.9	-	ns
Rise Time ²	t_r		-	3.4	-	
Turn-off Delay Time ²	t_{d(off)}		-	15.7	-	
Fall Time ²	t_f		-	9.9	-	
Source-Drain Diode Characteristics						
Body Diode Voltage	V_{SD}	I _S = 0.3A, V _{GS} = 0V	-	-	1.5	V

Notes:

1. Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
2. Guaranteed by design, not subject to producing.

Typical Characteristics

Figure 1. Output Characteristics

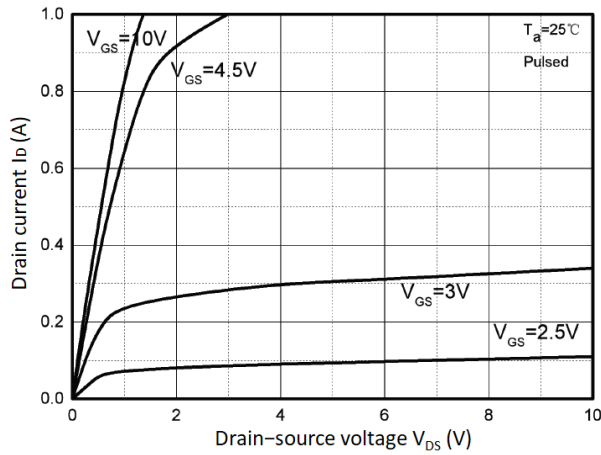


Figure 2. Transfer Characteristics

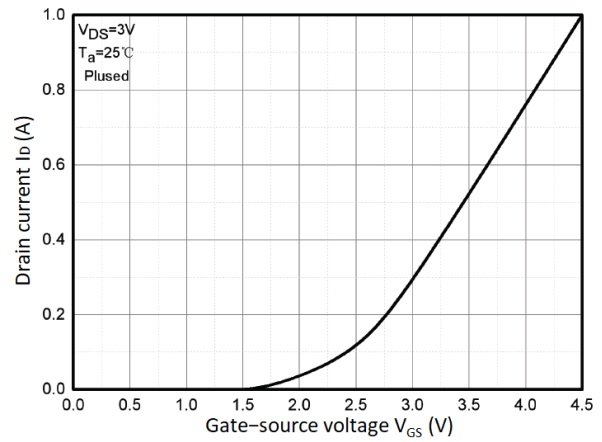


Figure 3. $R_{DS(on)}$ vs. I_D

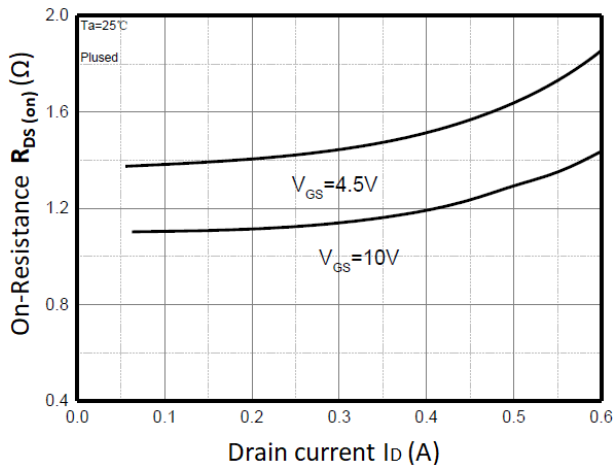


Figure 4. $R_{DS(on)}$ vs. V_{GS}

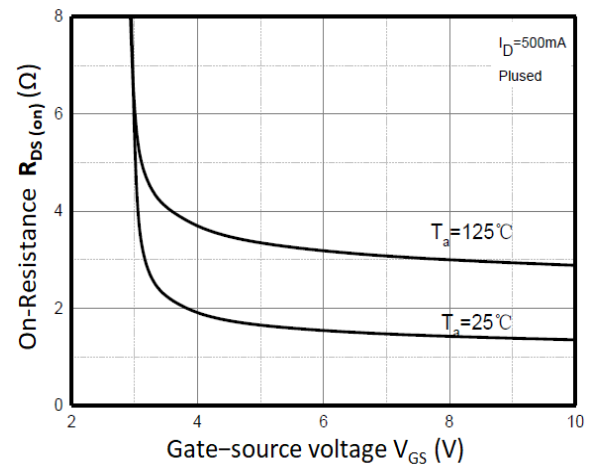


Figure 5. I_S vs. V_{SD}

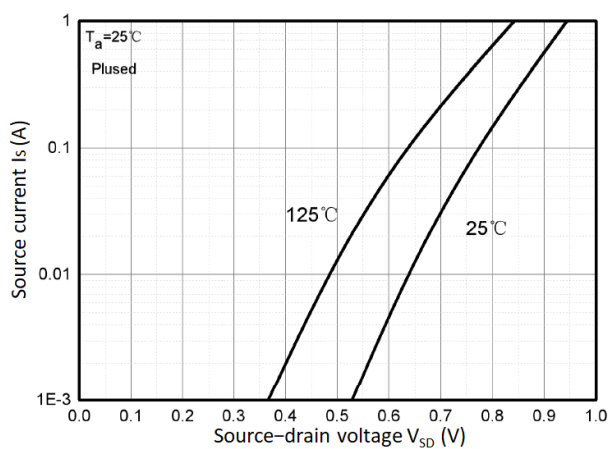
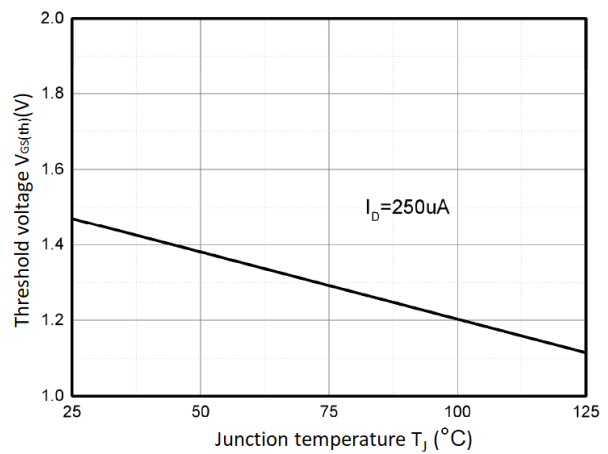


Figure 6. $V_{GS(th)}$ vs. T_J



Outline Drawing – DFN1006-3L

PACKAGE OUTLINE

TOP VIEW

BOTTOM VIEW

DFN1006-3L

SYMBOL	MILLIMETER		
	MIN.	TYP.	MAX.
A	0.43	0.48	0.53
A1	0	-	0.05
b	0.40	0.50	0.60
b1	0.1	0.15	0.2
D	0.95	1	1.05
e	0.65BSC		
E	0.55	0.6	0.65
E1	0.19BSC		
L	0.20	0.25	0.3

Land Pattern

Marking Codes

Part Number	WM06N03F
Marking Code	72K

Package Information

Qty: 10k/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.