

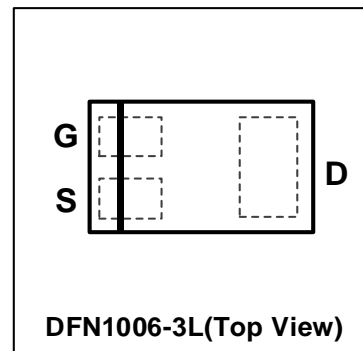
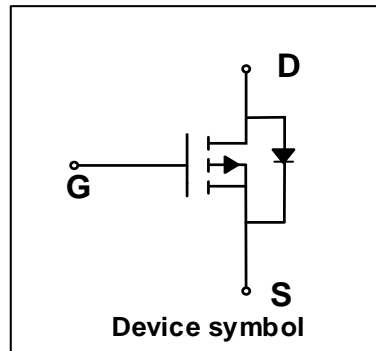
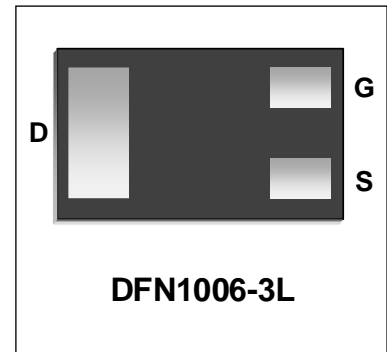
Features

- Way-on Small Signal MOSFETs
- $V_{DS} = -20V$, $I_D = -1.8A$
 Typ. $R_{DS(on)} = 112m\Omega$ @ $V_{GS} = -4.5V$
 Typ. $R_{DS(on)} = 149m\Omega$ @ $V_{GS} = -2.5V$
- Trench LV MOSFET Technology

Mechanical Characteristics

- DFN1006-3L Package
- Marking: Making Code
- RoHS Compliant & Halogen-Free

Schematic & PIN Configuration



Absolute Maximum Rating ($T_A=25^\circ C$ unless otherwise noted)

Rating	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-1.8	A
Pulsed Drain Current ¹	I_{DM}	-7.2	A
Power Dissipation	P_D	0.7	W
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 ²	$R_{\theta JA}$	179	$^\circ C/W$

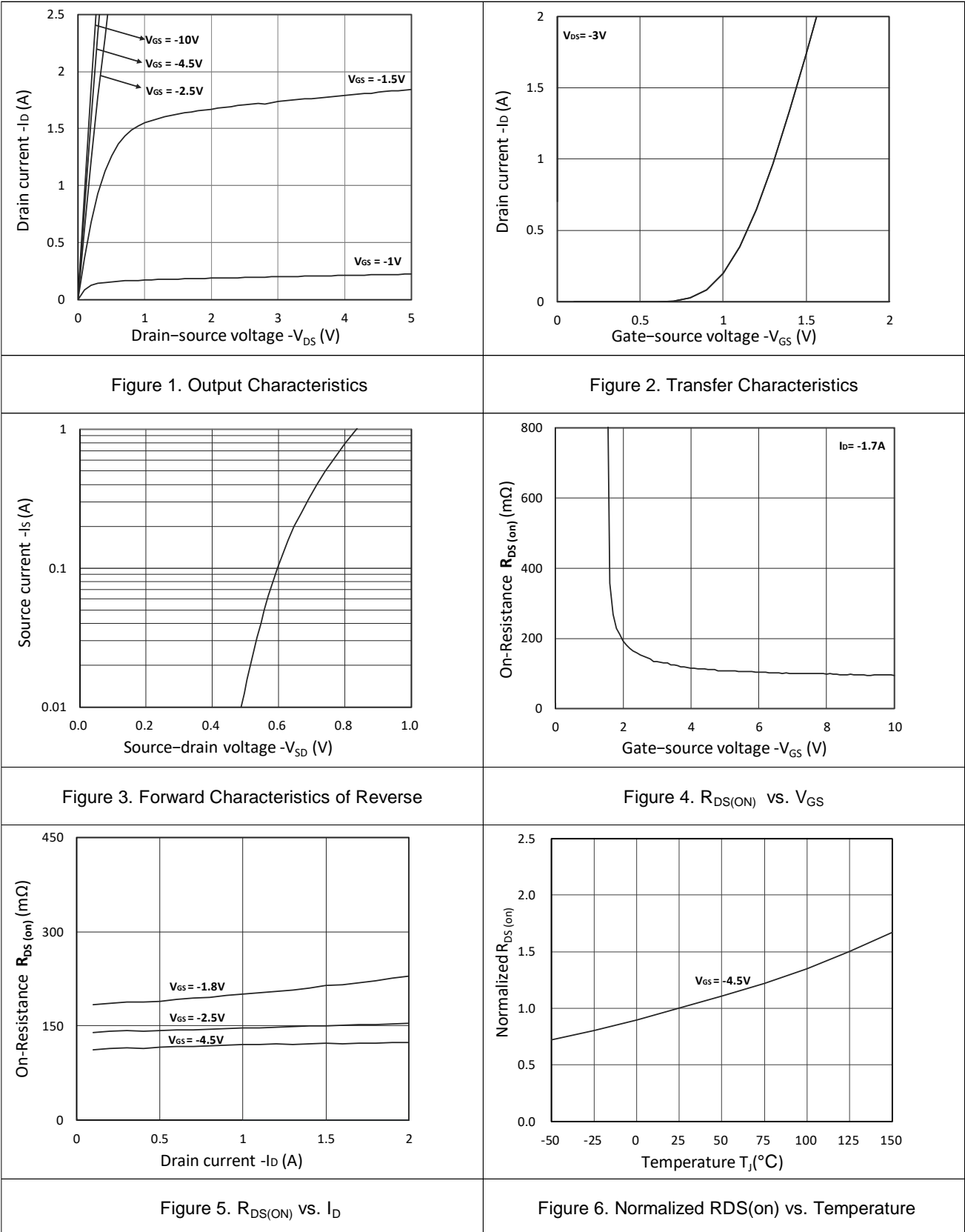
Electrical Characteristics (T_J=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -20V, V _{GS} = 0V	-	-	-1	μA
Gate-Source Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±10V	-	-	±100	nA
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.4	-	-1.0	V
Drain-Source on-State Resistance ³	R _{DS(on)}	V _{GS} = -4.5V, I _D = -1.7A	-	112	150	mΩ
		V _{GS} = -2.5V, I _D = -1.2A	-	149	210	
		V _{GS} = -1.8V, I _D = -1.0A	-	207	290	
Dynamic Characteristics⁴						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = -10V, f=1MHz	-	168	-	pF
Output Capacitance	C _{oss}		-	30	-	
Reverse Transfer Capacitance	C _{rss}		-	24	-	
Switching Characteristics⁴						
Total Gate Charge	Q _g	V _{GS} = -4.5V, V _{DS} = -10V, I _D = -1.7A	-	2.72	-	nC
Gate-Source Charge	Q _{gs}		-	0.49	-	
Gate-Drain Charge	Q _{gd}		-	0.57	-	
Turn-On Delay Time	t _{d(on)}	V _{GS} = -4.5V, V _{DD} = -10V, R _G = 3Ω, I _D = -1.7A	-	6.5	-	ns
Rise Time	t _r		-	4.8	-	
Turn-Off Delay Time	t _{d(off)}		-	18	-	
Fall Time	t _f		-	5	-	
Drain-Source Body Diode Characteristics						
Diode Forward Voltage ³	V _{SD}	I _S = -1A, V _{GS} = 0V	-	-	-1.2	V
Continuous Source Current	I _S	-	-	-	-1.8	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature T_{J(MAX)}=150°C.
2. The data tested by surface mounted on a 1 inch² 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



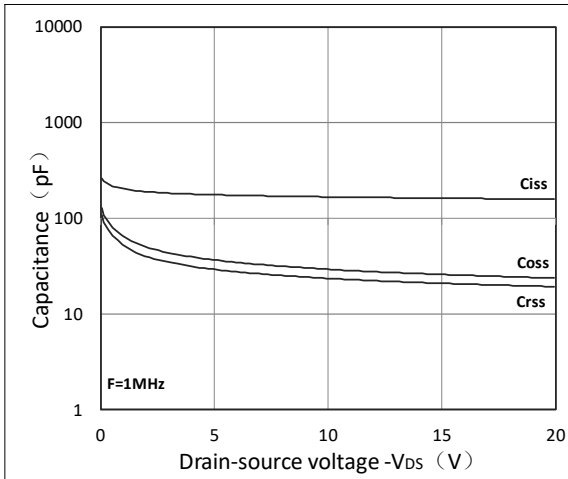


Figure 7. Capacitance Characteristics

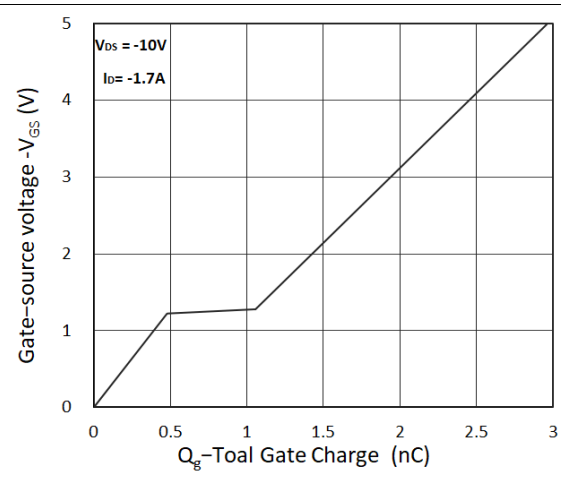


Figure 8. Gate Charge Characteristics

Outline Drawing – DFN1006-3L

PACKAGE OUTLINE

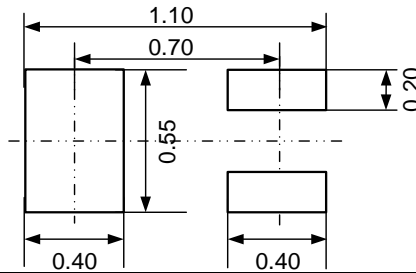
TOP VIEW

BOTTOM VIEW

DFN1006-3L

SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
b	0.40	0.60	0.016	0.024
b1	0.10	0.20	0.004	0.008
D	0.95	1.05	0.037	0.041
e	0.65BSC		0.026BSC	
E	0.55	0.65	0.022	0.026
E1	0.19BSC		0.007BSC	
L	0.20	0.30	0.008	0.012

Land Pattern



Marking Codes

Part Number	WM02P18F
Marking Code	

Package Information

Qty: 10k/Reel

CONTACT INFORMATION

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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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