

**Product Summary**

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
-20V	67mΩ@-4.5V	-2A
	98mΩ@-2.5V	

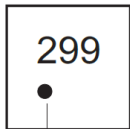
**Feature**

- High power and current handing capability

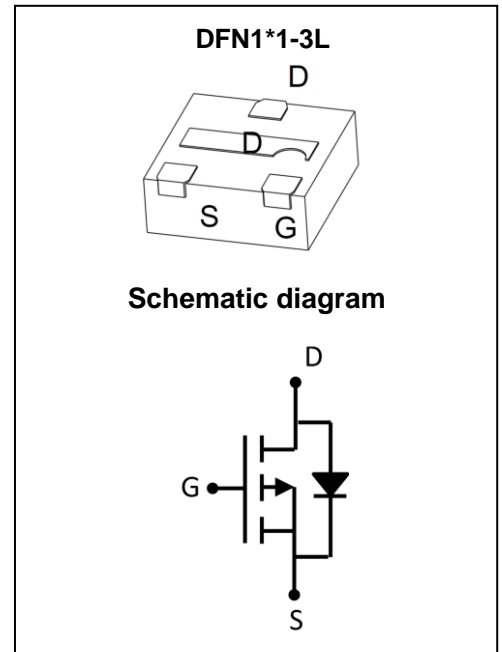
**Application**

- Load Switch for Portable Devices
- PWM applications

**MARKING:**



PIN 1



**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}C$  unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GS}$	±12	V
Continuous Drain Current	$I_D$	-2	A
Pulsed Drain Current	$I_{DM}$	-10	A
Power Dissipation	$P_D$	0.2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}C/W$
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}C$

**MOSFET ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$  unless otherwise noted)**

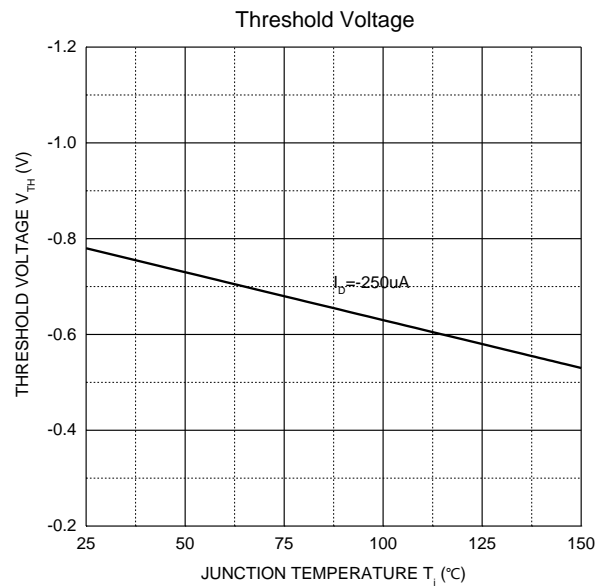
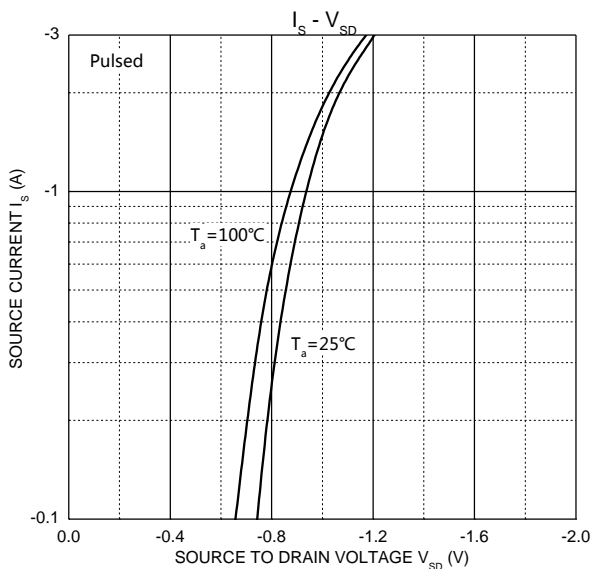
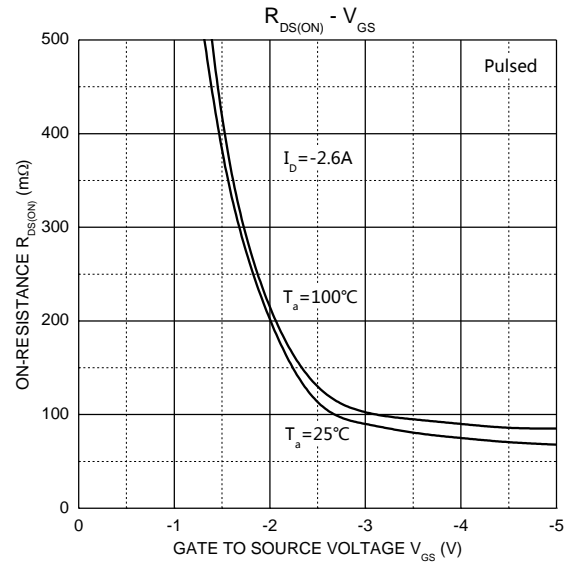
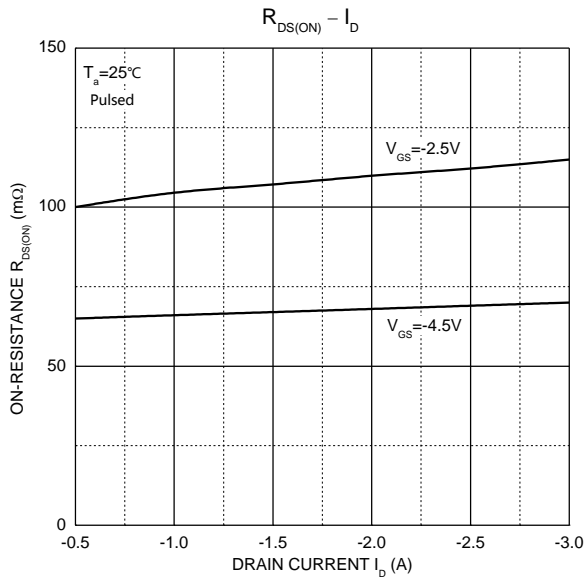
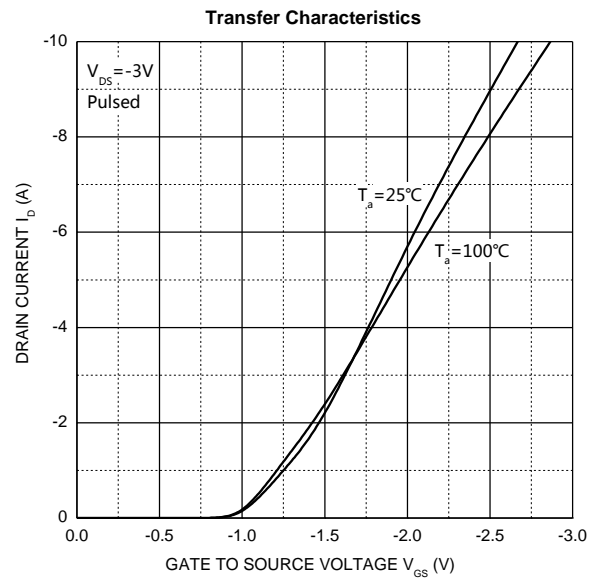
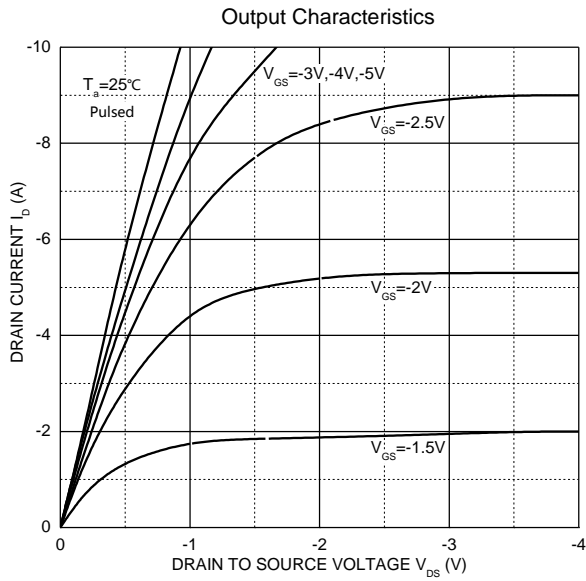
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -20V, V_{GS} = 0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 12V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.7	-1	V
Drain-source on-resistance <sup>a</sup>	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -2A$		67	87	m $\Omega$
		$V_{GS} = -2.5V, I_D = -1.8A$		98	147	
Forward transconductance <sup>a</sup>	$g_{FS}$	$V_{DS} = -5V, I_D = -2A$	5			S
<b>Dynamic characteristics<sup>b</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$		290		pF
Output Capacitance	$C_{oss}$			60		
Reverse Transfer Capacitance	$C_{rss}$			34		
Total Gate Charge	$Q_g$	$V_{DS} = -10V, V_{GS} = -4.5V, I_D = -2A$		3.0		nC
Gate-Source Charge	$Q_{gs}$			0.5		
Gate-Drain Charge	$Q_{gd}$			0.8		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -10V, R_L = 5\Omega,$ $V_{GEN} = -4.5V, R_g = 3\Omega$		10		ns
Turn-on rise time	$t_r$			5.0		
Turn-off delay time	$t_{d(off)}$			21		
Turn-off fall time	$t_f$			7		
<b>Source-Drain Diode characteristics</b>						
Diode forward current	$I_S$	$T_C = 25^{\circ}\text{C}$			-2.0	A
Diode Forward voltage	$V_{DS}$	$V_{GS} = 0V, I_S = -2.0A$			-1.2	V

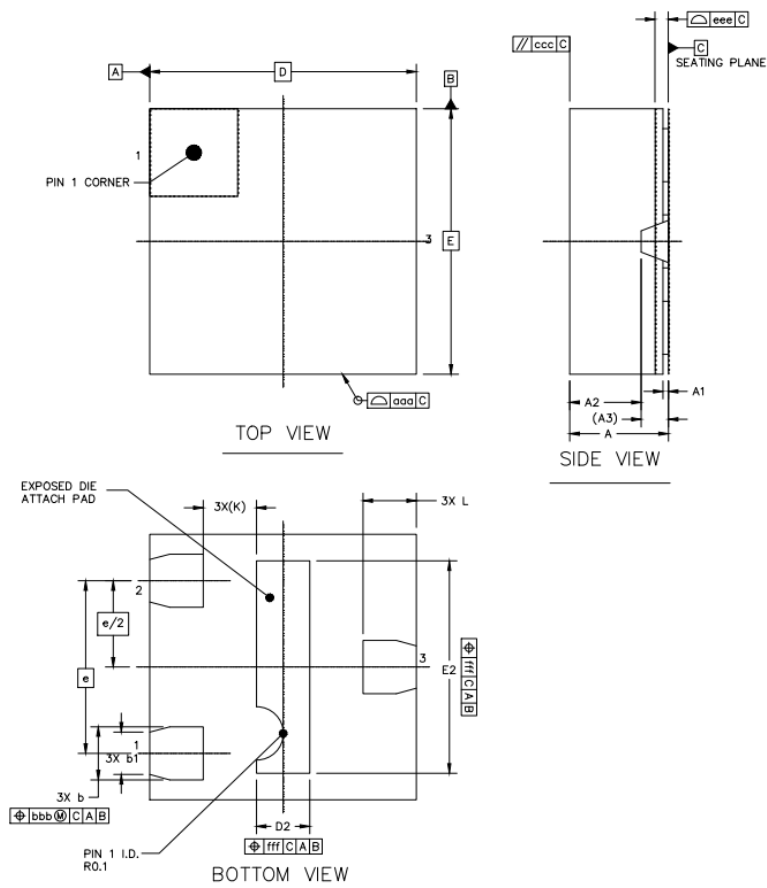
Notes :

a. Pulse Test : Pulse Width < 300 $\mu$ s, Duty Cycle  $\leq$ 2%.

b. Guaranteed by design, not subject to production testing.

**Typical Electrical and Thermal Characteristics**



**DFNWB1 × 1-3L Package Information**


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.340	0.400	0.013	0.016
A1	0.000	0.050	0.000	0.002
A2	0.270TYP		0.011TYP	
A3	0.102REF		0.004REF	
b	0.150	0.250	0.006	0.010
b1	0.160REF		0.006REF	
D	1.000BSC		0.039BSC	
E	1.000BSC		0.039BSC	
e	0.650BSC		0.026BSC	
D2	0.100	0.300	0.004	0.012
E2	0.700	0.900	0.028	0.035
L	0.150	0.250	0.006	0.010
K	0.200REF		0.008REF	
aaa	0.100TYP		0.004TYP	
ccc	0.100TYP		0.004TYP	
eee	0.050TYP		0.002TYP	
bbb	0.100TYP		0.004TYP	
fff	0.100TYP		0.004TYP	