



### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
-12V	5.7m $\Omega$ @-4.5V	-34A
	6.0m $\Omega$ @-3.7V	
	7.0m $\Omega$ @-2.5V	
	10.0m $\Omega$ @-1.8V	

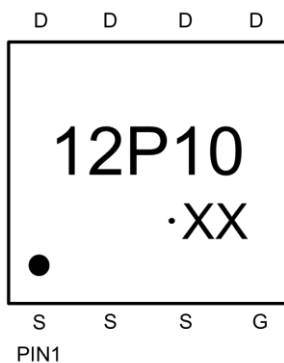
### Feature

- High cell density trench P-ch MOSFETs
- Super low gate charge
- Advanced high cell density Trench technology

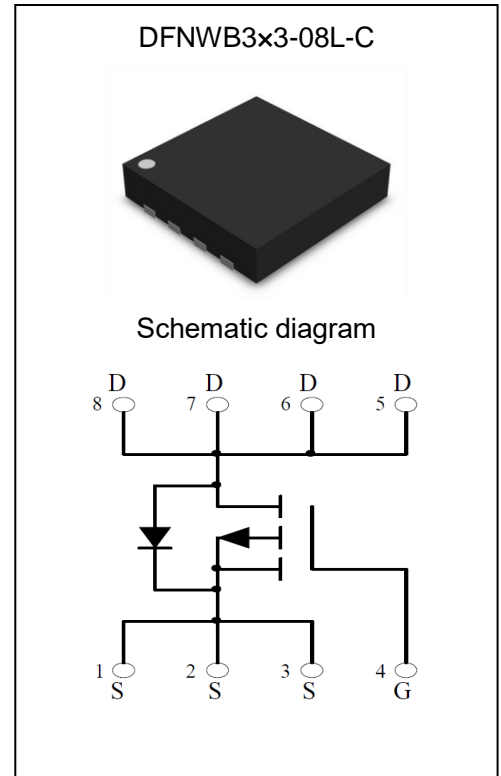
### Application

- Battery protection applications
- Load switch

### MARKING:



12P10 = Device code  
 Solid dot1 = Pin1 indicator  
 Solid dot2 = Green device, if none, normal device  
 XX = Date Code



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	-12	V
Gate-Source Voltage	$V_{GS}$	$\pm 8$	V
Continuous Drain Current <sup>1</sup>	$I_D$	-34	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	-102	A
Power Dissipation <sup>2</sup>	$P_D$	3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	42	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}\text{C}$

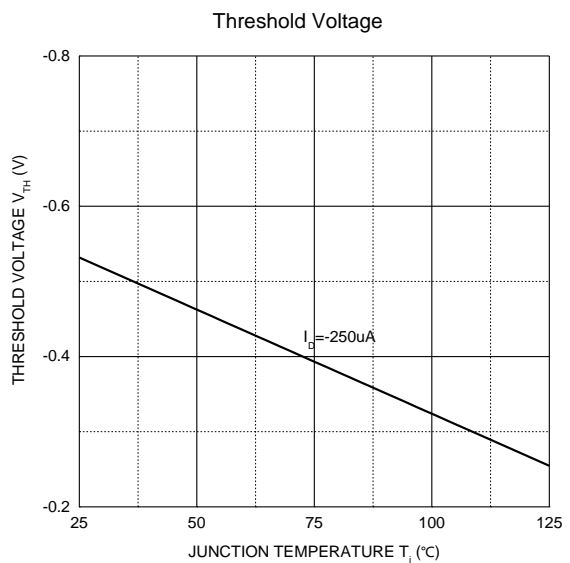
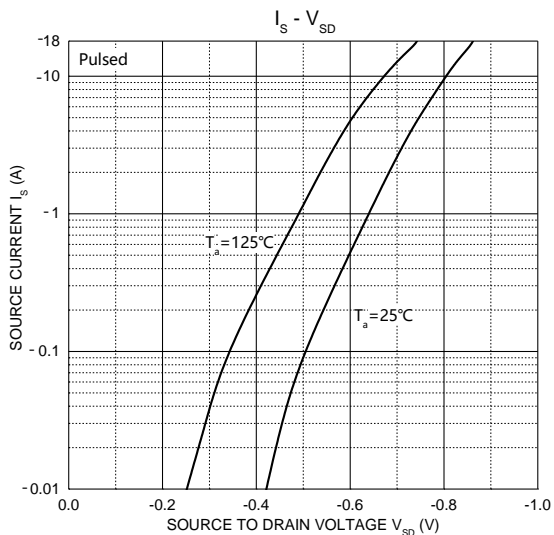
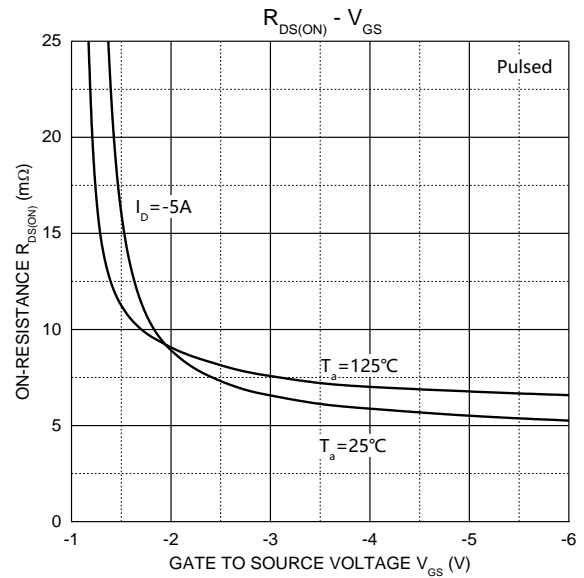
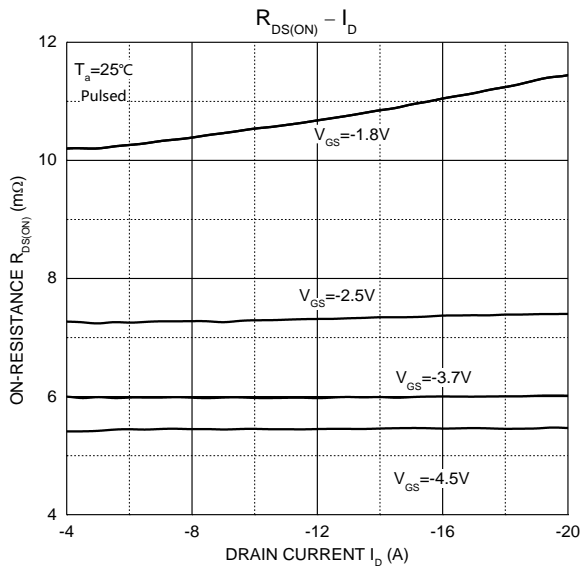
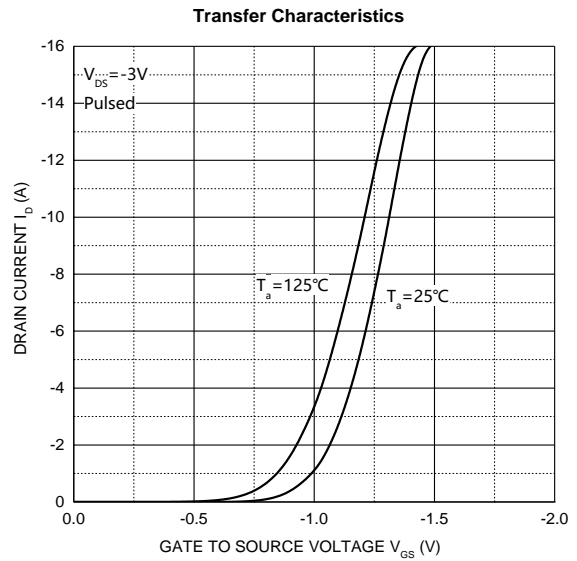
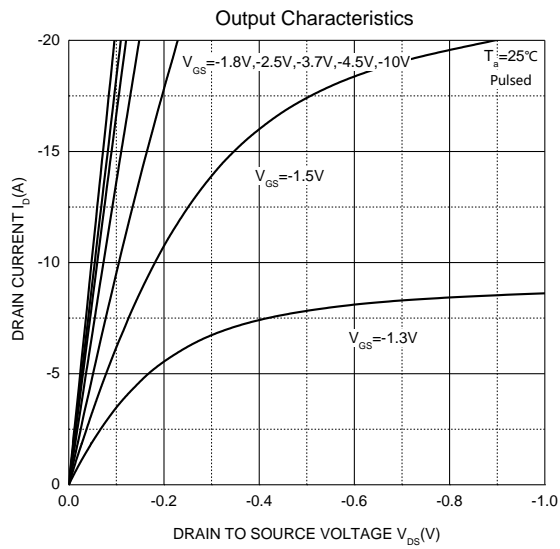
## MOSFET ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-12			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -12V, V_{GS} = 0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 8V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage <sup>3</sup>	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.35	-0.5	-1	V
Drain-source on-resistance <sup>3</sup>	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -10A$		5.7	7.5	m $\Omega$
		$V_{GS} = -3.7V, I_D = -10A$		6.0	7.8	
		$V_{GS} = -2.5V, I_D = -8A$		7.0	9.1	
		$V_{GS} = -1.8V, I_D = -6A$		10	15	
Forward tranconductance <sup>3</sup>	$g_{FS}$	$V_{DS} = -6V, I_D = -10A$	5			S
<b>Dynamic characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS} = -6V, V_{GS} = 0V, f = 1MHz$		4850		pF
Output Capacitance	$C_{oss}$			1520		
Reverse Transfer Capacitance	$C_{rss}$			1610		
Gate resistance	$R_g$	$f = 1MHz$			30	$\Omega$
Total Gate Charge	$Q_g$	$V_{DS} = -6V, V_{GS} = -4.5V, I_D = -5A$		65		nC
Gate-Source Charge	$Q_{gs}$			20		
Gate-Drain Charge	$Q_{gd}$			325		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -6V, V_{GEN} = -4.5V, I_D = -4A$ $R_L = 6\Omega, R_{GEN} = 1\Omega$		22		ns
Turn-on rise time	$t_r$			50		
Turn-off delay time	$t_{d(off)}$			100		
Turn-off fall time	$t_f$			30		
<b>Source-Drain Diode characteristics</b>						
Diode forward current <sup>4</sup>	$I_S$	$T_C = 25^\circ\text{C}$			-34	A
Diode pulsed forward curren <sup>4</sup>	$I_{SM}$				-102	A
Diode Forward voltage <sup>3</sup>	$V_{DS}$	$V_{GS} = 0V, I_S = -10A$			-1.2	V

Notes:

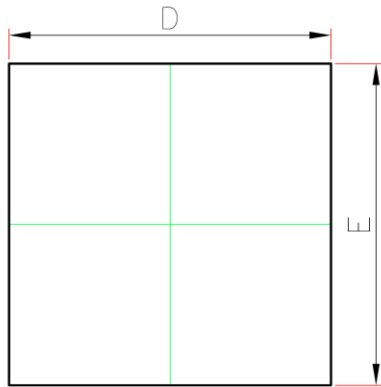
1. Device mounted on FR-4 substrate board, with minimum recommended pad layout, single side.
2. The power dissipation is limited by  $150^\circ\text{C}$  junction temperature
3. Pulse Test : Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .
4. The data is theoretically the same as  $I_D$ , in real applications , should be limited by total power dissipation.

**Typical Electrical and Thermal Characteristics**

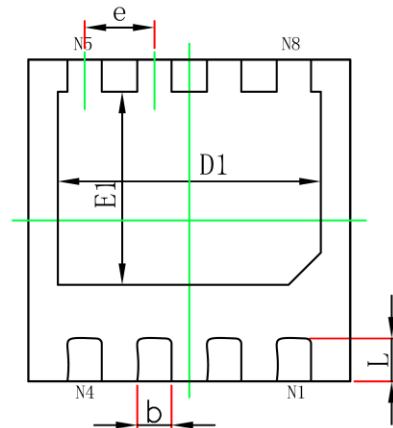


## DFNWB3x3-08L-C Package Information

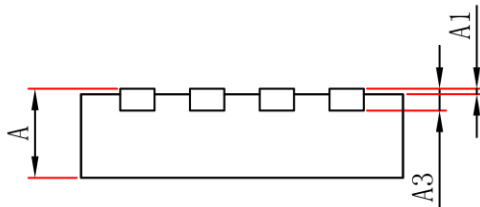
DFNWB3×3-8L-C (P0. 65T0. 75) PACKAGE OUTLINE DIMENSIONS



TOP VIEW



BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF		0.008REF	
D	2.924	3.076	0.115	0.121
E	2.924	3.076	0.115	0.121
D1	2.350	2.550	0.093	0.100
E1	1.700	1.900	0.067	0.075
k	0.200MIN.		0.008MIN.	
b	0.270	0.370	0.011	0.015
e	0.650TYP.		0.026TYP.	
L	0.324	0.476	0.013	0.019

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)