

### Product Summary

V <sub>(BR)DSS</sub>	R <sub>DS(on)TYP</sub>	I <sub>D</sub>
20V	5.5mΩ@4.5V	25A
	6.0mΩ@4.0V	
	6.5mΩ@3.8V	
	7.0mΩ@3.1V	
	7.5mΩ@2.5V	

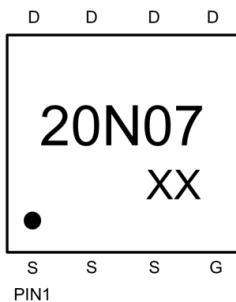
### Feature

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

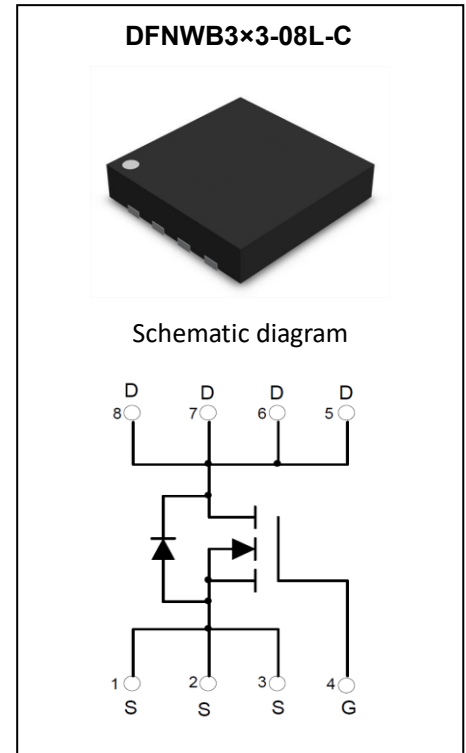
### Application

- Battery protection applications
- Load switch

### MARKING:



20N07 = Device code  
 Solid dot = Pin1 indicator  
 XX = Date Code



### ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DS</sub>	20	V
Gate-Source Voltage	V <sub>GS</sub>	±12	V
Continuous Drain Current	I <sub>D</sub> <sup>(1)</sup>	25	A
Pulsed Drain Current	I <sub>DM</sub> <sup>(1), (2)</sup>	75	A
Power Dissipation	P <sub>D</sub> <sup>(3)</sup>	3	W
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	42	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55~ +150	°C

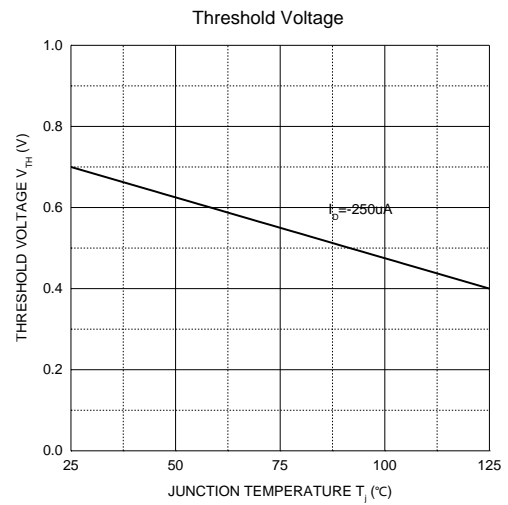
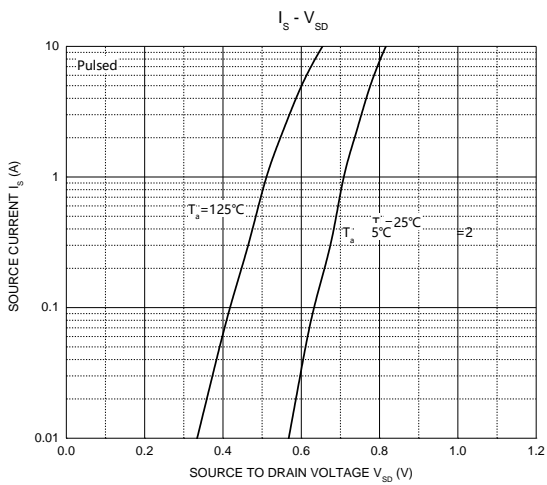
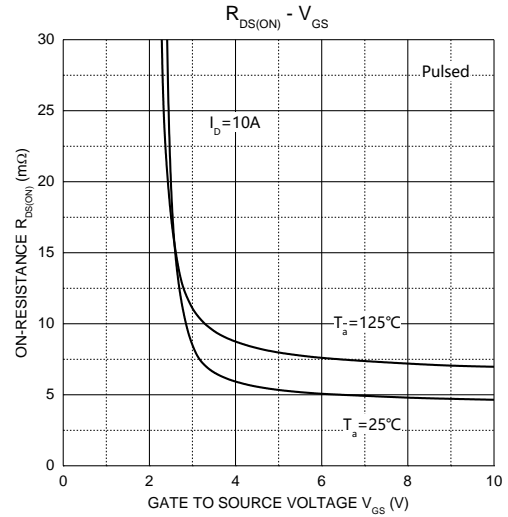
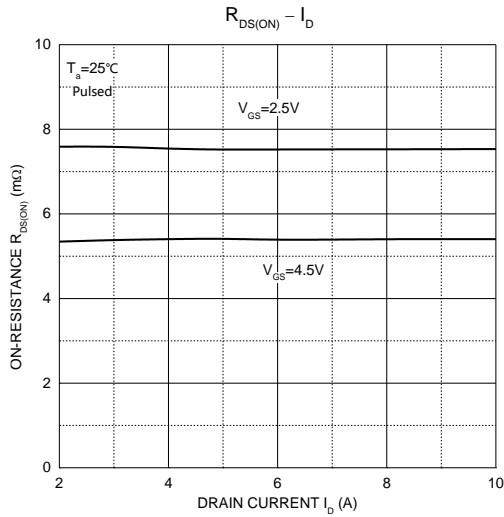
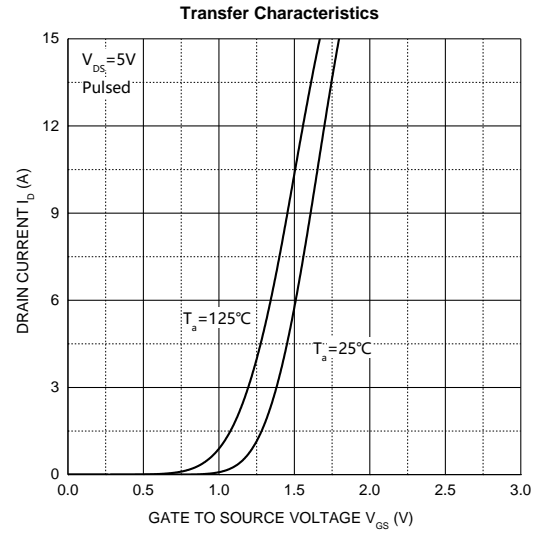
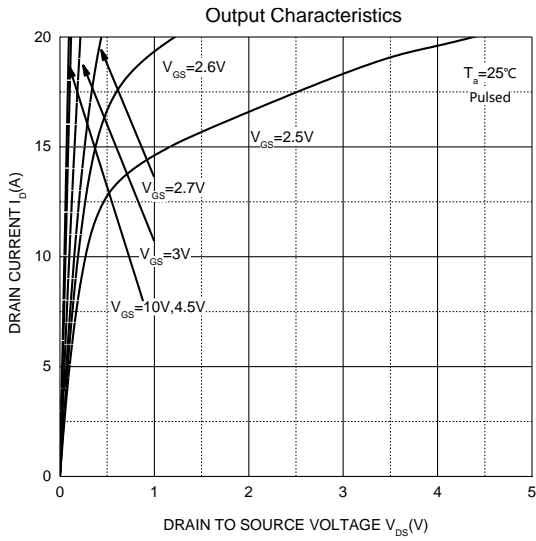
**MOSFET ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> =250μA	20			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> =16V, V <sub>GS</sub> = 0V			-1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±12V, V <sub>DS</sub> = 0V			±100	nA
Gate threshold voltage	V <sub>GS(th)</sub> <sup>(4)</sup>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.4	0.7	1.0	V
Drain-source on-resistance	R <sub>DS(on)</sub> <sup>(4)</sup>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =10A		5.5	7.0	mΩ
		V <sub>GS</sub> =4.0V, I <sub>D</sub> =10A		6.0	7.5	
		V <sub>GS</sub> =3.8V, I <sub>D</sub> =10A		6.5	8.0	
		V <sub>GS</sub> =3.1V, I <sub>D</sub> =10A		7.0	9.0	
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =10A		7.5	10.0	
<b>Dynamic characteristics<sup>(5)</sup></b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f =1MHz		1500		pF
Output capacitance	C <sub>oss</sub>			260		
Reverse transfer capacitance	C <sub>rss</sub>			240		
<b>Switching Characteristics<sup>(5)</sup></b>						
Total gate charge	Q <sub>g</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =4.5V, I <sub>D</sub> =8A		20		nC
Gate-source charge	Q <sub>gs</sub>			4		
Gate-drain charge	Q <sub>gd</sub>			9		
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =10V, R <sub>L</sub> =1.2Ω, R <sub>GEN</sub> =3Ω		5		ns
Turn-on rise time	t <sub>r</sub>			15		
Turn-off delay time	t <sub>d(off)</sub>			70		
Turn-off fall time	t <sub>f</sub>			22		
<b>Diode Characteristics</b>						
Continuous Source Current	I <sub>S</sub>	V <sub>G</sub> =V <sub>D</sub> =0V , Force Current			25	A
Pulsed Source Current	I <sub>SM</sub>				75	
Diode Forward Voltage	V <sub>SD</sub> <sup>(4)</sup>	V <sub>GS</sub> =0V , I <sub>S</sub> =10A , T <sub>J</sub> =25°C			1.2	V

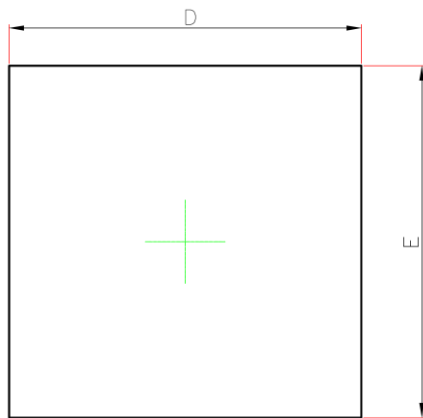
Notes:

- 1.The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper
- 2.Pulse Test:Pulse Width < 10us, Duty Cycle < 0.5%.
- 3.The power dissipation is limited by 150°C junction temperature
- 4.Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
- 5.Guaranteed by design, not subject to production testing.
- 6.The data is theoretically the same as ID, in real applications , should be limited by total power dissipation.

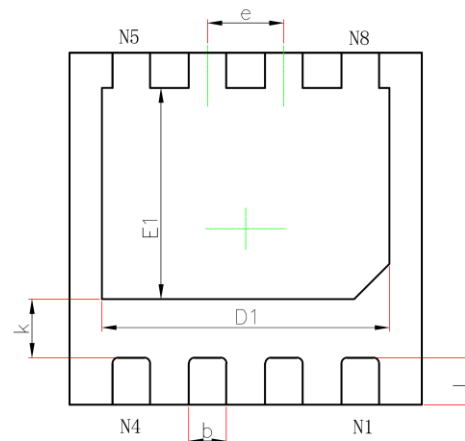
**Typical Electrical and Thermal Characteristics**



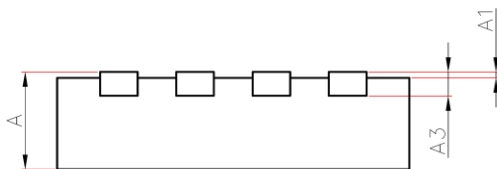
## DFNWB3×3-08L-C Package Information



TOP VIEW



BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700/0.800	0.800/0.900	0.028/0.031	0.031/0.035
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	0.450	0.550	0.018	0.022
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\(格瑞宝\)](#)