

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	8mΩ@-10V	-50A
	9.5mΩ@-6V	
	11mΩ@-4.5V	

Feature

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

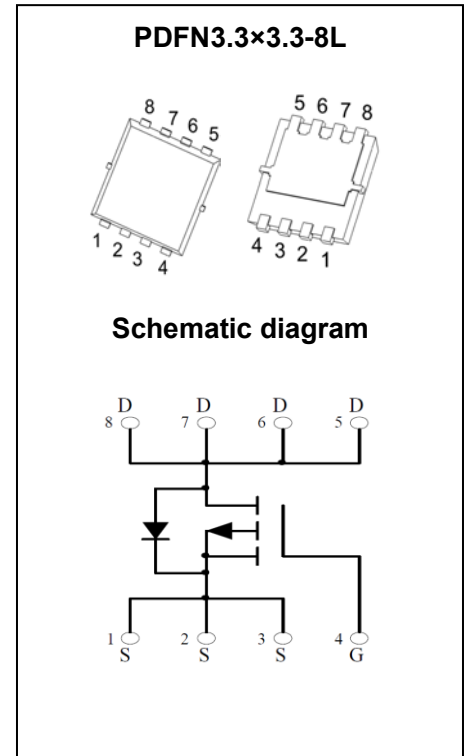
Application

- Battery protection applications
- Load switch

MARKING:



4407 = Device code
 Solid dot = Pin1 indicator
 Solid Dot = Green Molding Compound 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}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current ¹	I_D	-50	A
Pulsed Drain Current ²	I_{DM}	-150	A
Power Dissipation ³	P_D	30	W
Thermal Resistance from Junction to Ambient ⁴	$R_{\theta JA}$	55	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	4.2	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

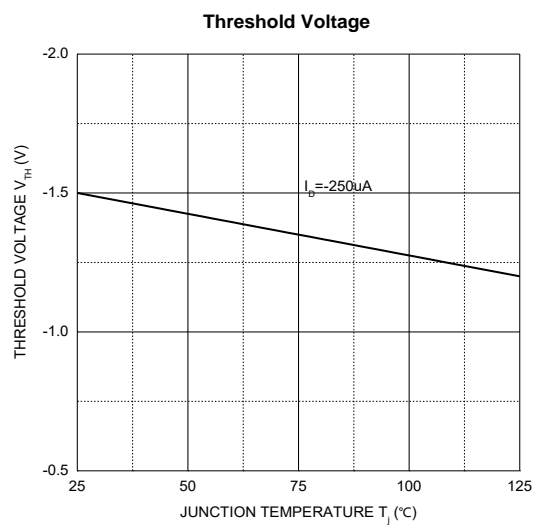
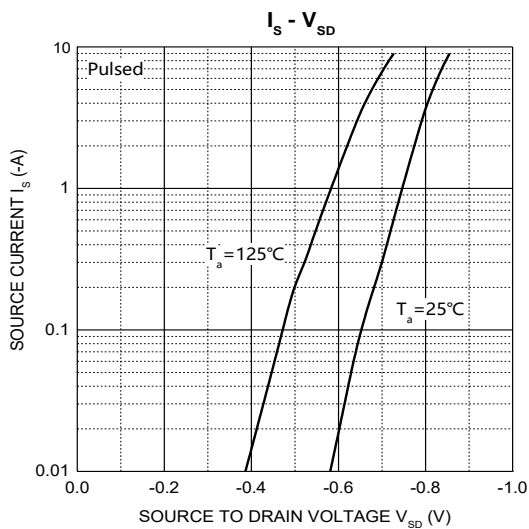
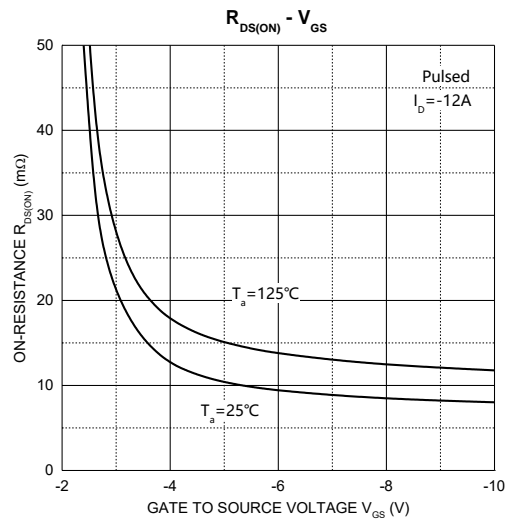
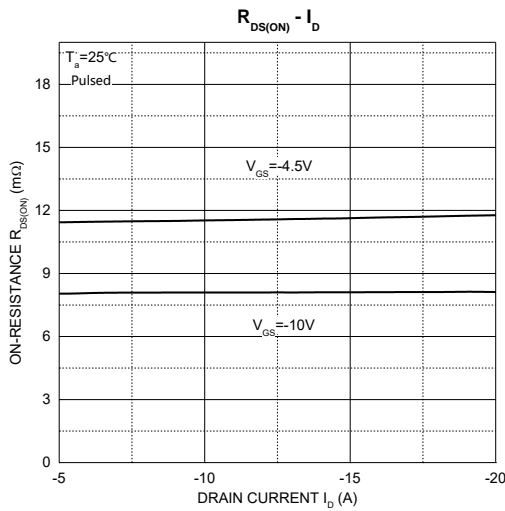
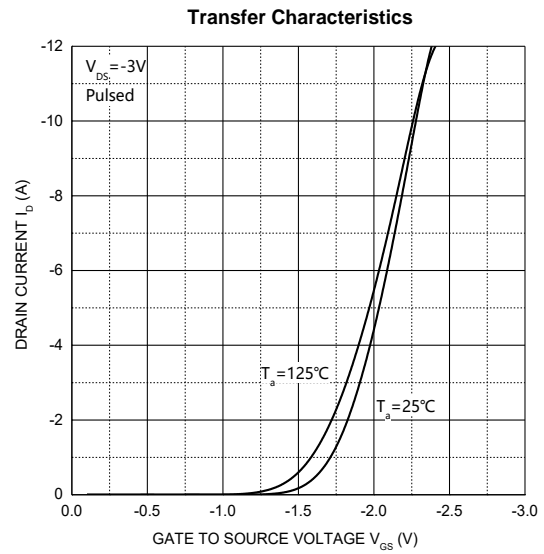
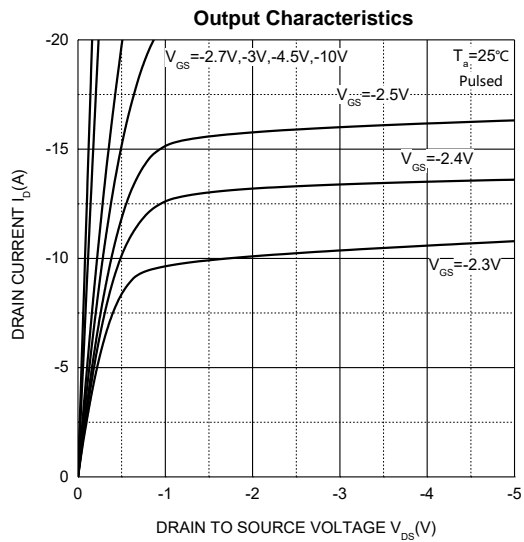
MOSFET ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
On Characteristics						
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.0	-1.5	-2.2	V
Drain-source on-resistance ²	R _{DS(on)}	V _{GS} = -10V, I _D = -12A		8	10	mΩ
		V _{GS} = -6V, I _D = -10A		9.5	12	
		V _{GS} = -4.5V, I _D = -8A		11	15	
Forward tranconductance	g _{FS}	V _{DS} = -5V, I _D = -15A		30		S
Dynamic Characteristics						
Input capacitance	C _{iss}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		3900		pF
Output capacitance	C _{oss}			390		
Reverse transfer capacitance	C _{rss}			340		
Gate Resistance	R _g	f = 1MHz, V _{DS} = 0V, V _{GS} = 0V			10	Ω
Switching Characteristics						
Total gate charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -10A		62		nC
Gate-source charge	Q _{gs}			16		
Gate-drain charge	Q _{gd}			18		
Turn-on delay time	t _{d(on)}	V _{DD} = -15V, V _{GS} = -10V, R _G = 3Ω, R _L = 1.25Ω		20		ns
Turn-on rise time	t _r			14		
Turn-off delay time	t _{d(off)}			57		
Turn-off fall time	t _f			27		
Source-Drain Diode Characteristics						
Continuous Source Current ⁵	I _S	V _G = V _D = 0V, Force Current			-35	A
Pulsed Source Current ⁵	I _{SM}				-105	
Diode Forward Voltage ²	V _{SD}	V _{GS} = 0V, I _S = -2A			-1.2	V

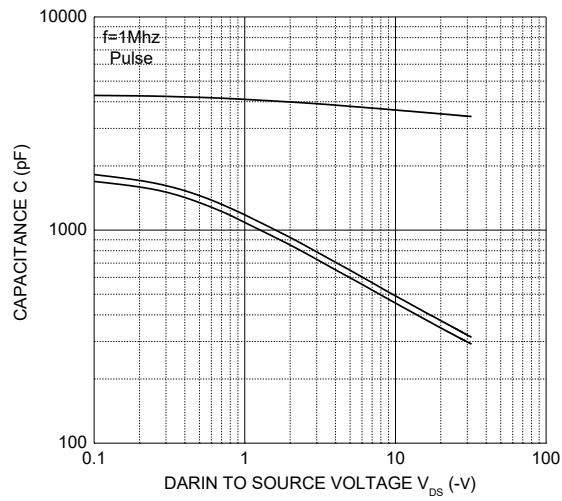
Notes :

- 1.The maximum current rating is limited by package.
- 2.Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.
- 3.The power dissipation P_D is limited by T_{J(MAX)} = 150°C.
- 4.Device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with TA =25°C.
- 5.The Data is theoretically the same as I_D and I_{DM}.In real applications,it will be limited by total power

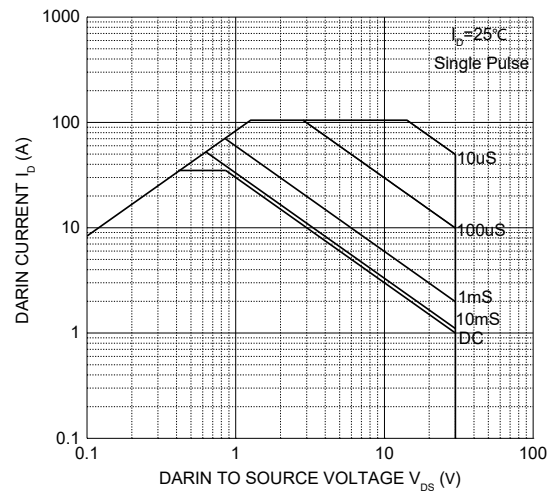
Typical Characteristics



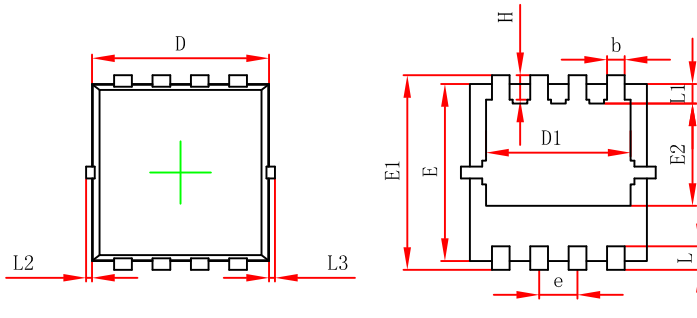
Capacitances



Maximum Forward Biased Safe Operating Area

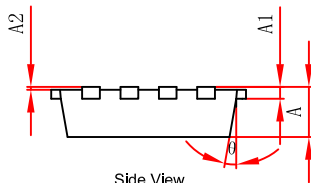


PDFN3.3×3.3-8L Package Information



Top View
[顶视图]

Bottom View
[背视图]

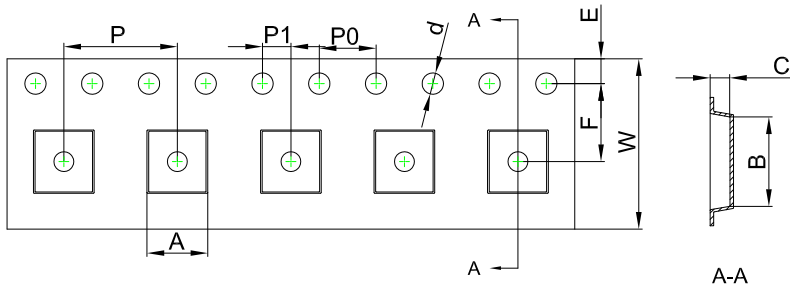


Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.300	2.600	0.091	0.102
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°

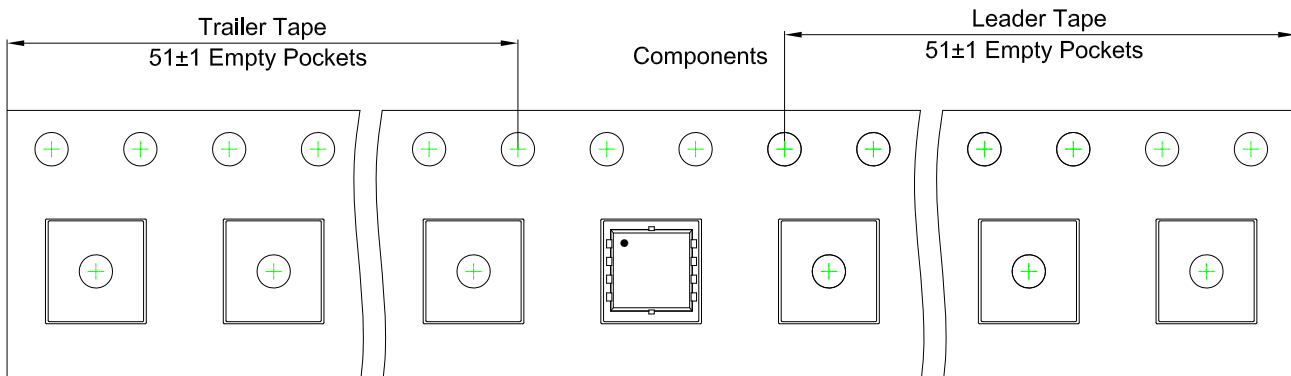
PDFN3.3×3.3-8L Tape and Reel

PDFNWB3.3×3.3-8L Embossed Carrier Tape

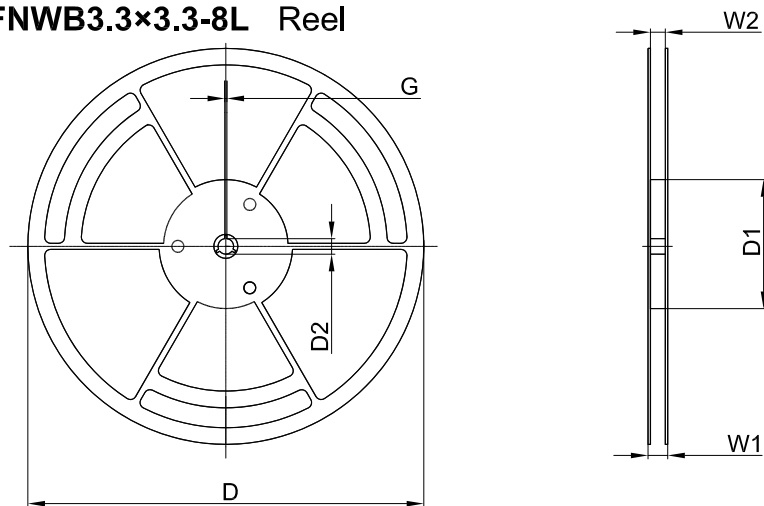


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
PDFNWB3.3×3.3-8L	3.55	3.55	1.10	∅1.50	1.75	5.50	4.00	8.00	2.00	12.00

PDFNWB3.3×3.3-8L Tape Leader and Trailer



PDFNWB3.3×3.3-8L Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	G	W1	W2
13" Dia	∅330.00	100.00	13.00	1.90	17.60	12.40

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
5,000 pcs	13 inch	5,000 pcs	340×336×29	50,000 pcs	353×346×365

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)