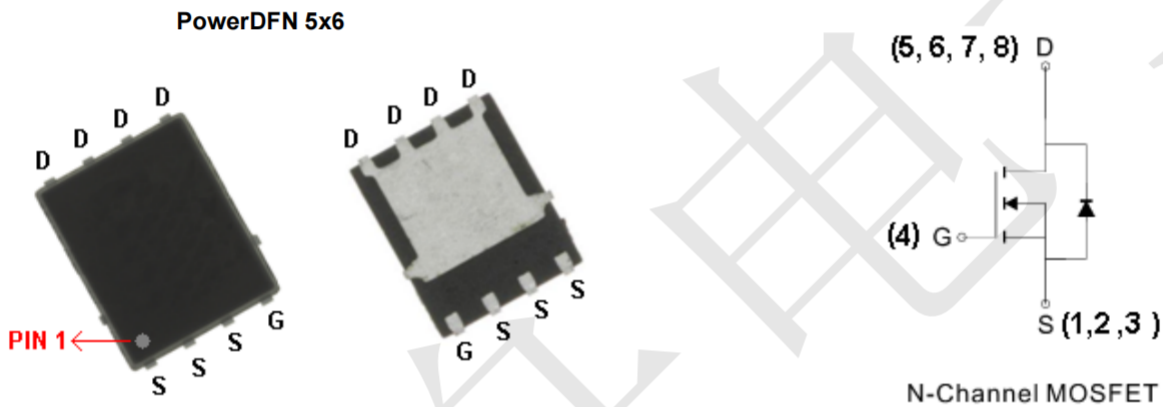


## Product Summary

- ◆  $V_{DS} = 30V$   $I_D = 150A$
- $R_{DS(ON)} \leq 2.5m\Omega @ V_{GS} = 10V$
- $R_{DS(ON)} \leq 3.3m\Omega @ V_{GS} = 4.5V$

## Application

- ◆ Load/Power switch
- ◆ Interfacing, logic switching
- ◆ Battery management for ultra portable electronics



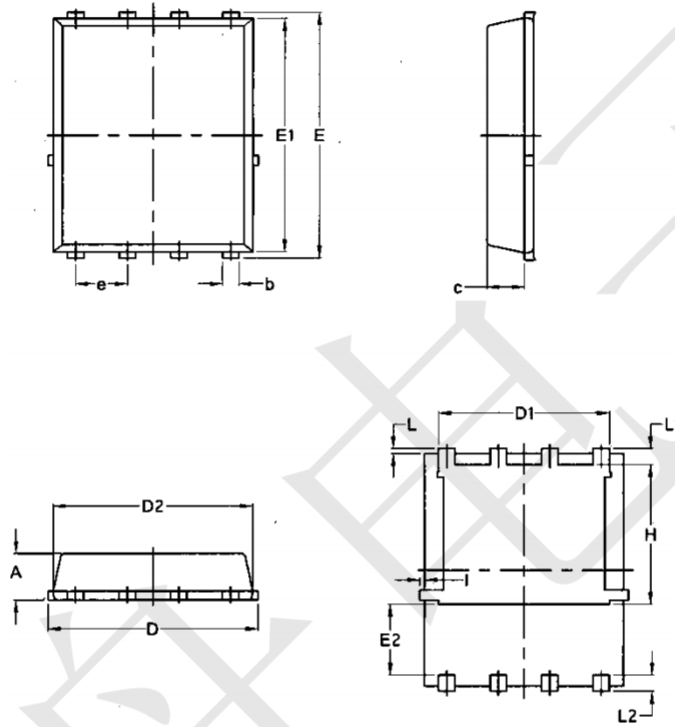
## Absolute Maximum Ratings ( $T_A = 25^\circ C$ unless otherwise specified)

Parameter		Symbol	Maximum Ratings	Unit
Drain-Source Voltage		$V_{DS}$	30	V
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Continuous Drain	$T_C = 25^\circ C$		150	A
	$T_C = 100^\circ C$		100	
Pulsed Drain Current		$I_{DM}$	350	A
Maximum Power Dissipation*	$T_A = 25^\circ C$	$P_D$	75	W
	$T_A = 100^\circ C$		30	
Operating Junction Temperature		$T_J$	-55 to 150	$^\circ C$
Thermal Resistance-Junction to Ambient*		$R_{\theta JA}$	Steady State 45	$^\circ C/W$
Thermal Resistance-Junction to Case*		$R_{\theta JC}$	3.3	$^\circ C/W$

**Electrical Characteristics** (T =25°C unless otherwise specified)

Symbol	Parameter	Limit	Min	Typ	Max	Unit
<b>STATIC</b>						
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>D</sub> =250 μA	30			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250 μA	1.3		3.0	V
I <sub>GSS</sub>	Gate Leakage Current	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =30V, V <sub>GS</sub> =0V			1	μA
R <sub>DS(ON)</sub>	Drain-Source On-State Resistance <sup>a</sup>	V <sub>GS</sub> =10V, I <sub>D</sub> =27A		1.9	2.5	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =20A		2.5	3.3	
V <sub>SD</sub>	Diode Forward Voltage	I <sub>S</sub> =2.8A, V <sub>GS</sub> =0V		0.75	1.1	V
<b>DYNAMIC</b>						
Q <sub>g</sub>	Total Gate Charge	V <sub>DS</sub> =15V, V <sub>GS</sub> =4.5V, I <sub>D</sub> =27A		58		nC
Q <sub>gs</sub>	Gate-Source Charge			23		
Q <sub>gd</sub>	Gate-Drain Charge			30		
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, F=1MHz		5930		pF
C <sub>oss</sub>	Output Capacitance			660		
C <sub>rss</sub>	Reverse Transfer Capacitance			220		
R <sub>g</sub>	Gate-Resistance	V <sub>DS</sub> =0V, V <sub>GS</sub> =0V, F=1MHz		0.85		Ω
t <sub>d(on)</sub>	Turn-On Delay Time	V <sub>DD</sub> =15V, R <sub>L</sub> =15 Ω I <sub>D</sub> =1A, V <sub>GEN</sub> =10V R <sub>G</sub> =6 Ω		36		Ns
t <sub>r</sub>	Turn-On Rise Time			23		
t <sub>d(off)</sub>	Turn-Off Delay Time			170		
t <sub>f</sub>	Turn-Off Fall Time			44		

## Package Outline Dimensions PDFN5\*6-8L



Symbol	Common			
	mm		Inch	
	Min	Max	Min	Max
A	1.03	1.17	0.0406	0.0461
b	0.34	0.48	0.0134	0.0189
c	0.824	0.0970	0.0324	0.082
D	4.80	5.40	0.1890	0.2126
D1	4.11	4.31	0.1618	0.1697
D2	4.80	5.00	0.1890	0.1969
E	5.95	6.15	0.2343	0.2421
E1	5.65	5.85	0.2224	0.2303
E2	1.60	/	0.0630	/
e	1.27 BSC		0.05 BSC	
L	0.05	0.25	0.0020	0.0098
L1	0.38	0.50	0.0150	0.0197
L2	0.38	0.50	0.0150	0.0197
H	3.30	3.50	0.1299	0.1378
I	/	0.18	/	0.0070