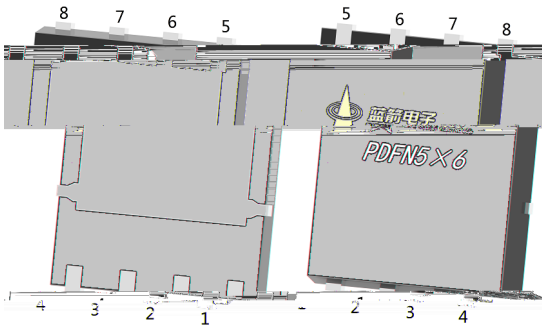
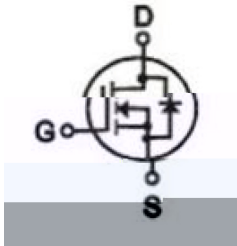


Rev.B May.-2023

PDFN5×6 N
N-Channel MOSFET in a PDFN5×6 Plastic Package.

Low $R_{DS(ON)}$ to minimize conductive loss; low Gate Charge for fast switching; Low Thermal resistance;
HF Product.

Battery Management.



PIN1、2、3: S PIN4: G PIN5、6、7、8: D

See Marking Instructions.

-

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current - Continuous	I_D	215	A
Drain Current – Pulsed	I_{DM}	430	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	$P_D(T_C=25^{\circ}C)$	70	W
Single Pulse Avalanche Energy(L=0.5mH)	E_{AS}	542	mJ
Avalanche Current(L=0.5mH)	I_{AS}	44	A
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - case	$R_{\theta JC}$	1.79	/ W
Thermal resistance, junction - ambient	$R_{\theta JA}$	50	/ W

-

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	40	46		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V, V_{GS}=0V$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=20A$		0.93	1.0	m Ω
		$V_{GS}=4.5V, I_D=10A$		1.28	2.0	
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V, f=1.0MHz$		5800		pF
Output Capacitance	C_{oss}			1860		
Reverse Transfer Capacitance	C_{rss}			135		
Gate resistance	R_g	$V_{GS}=0V, V_{DS}=0V, f=1MHz$		1.0		Ω
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V, V_{DS}=20V, I_D=20A$		70		nC
Total Gate Charge	$Q_g(4.5V)$			30		
Gate Source Charge	Q_{gs}			14.5		
Gate Drain Charge	Q_{gd}			10.5		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V, V_{DS}=20V, R_L=1\Omega, R_{GEN}=3\Omega$		15		ns
Turn-On Rise Time	t_r			5.8		
Turn-Off Delay Time	$t_{d(off)}$			62		
Turn-Off Fall Time	t_f			10		

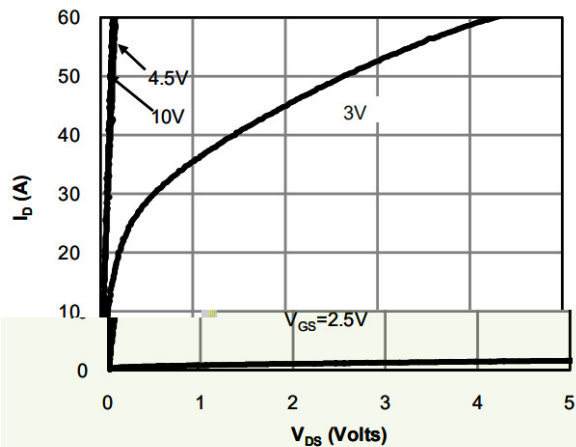


Figure 1: On-Region Characteristics

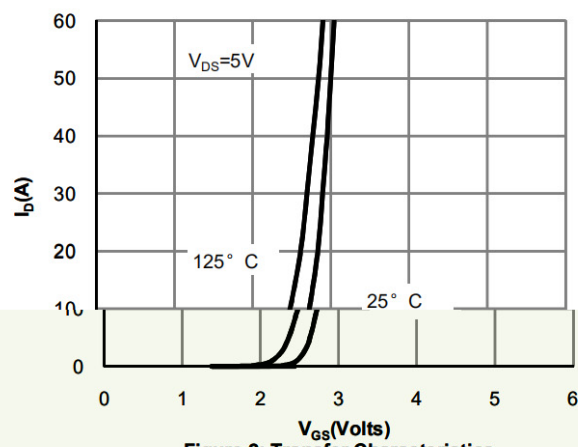


Figure 2: Transfer Characteristics

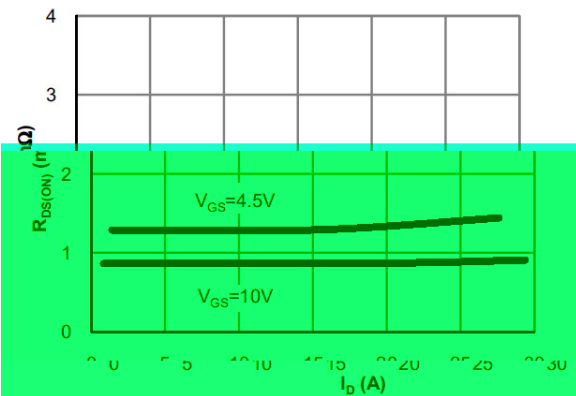


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

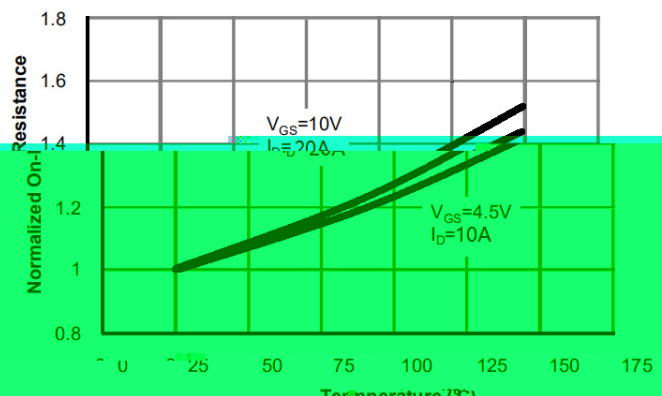


Figure 4: On-Resistance vs. Junction Temperature

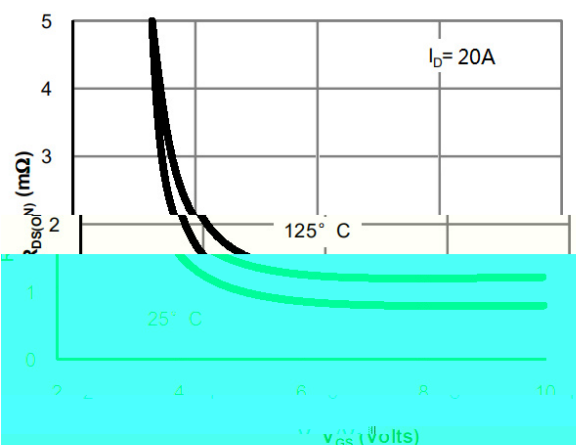


Figure 5: On-Resistance vs. Gate-Source Voltage

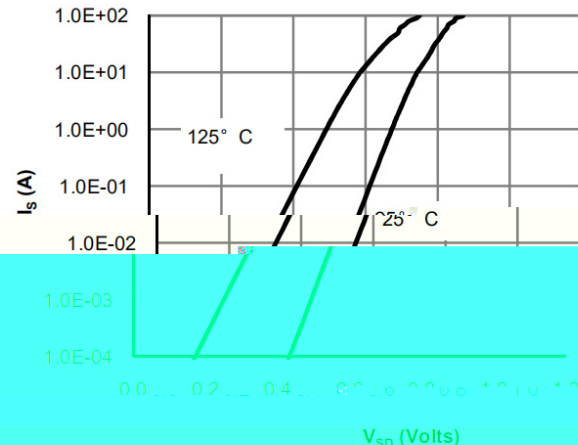
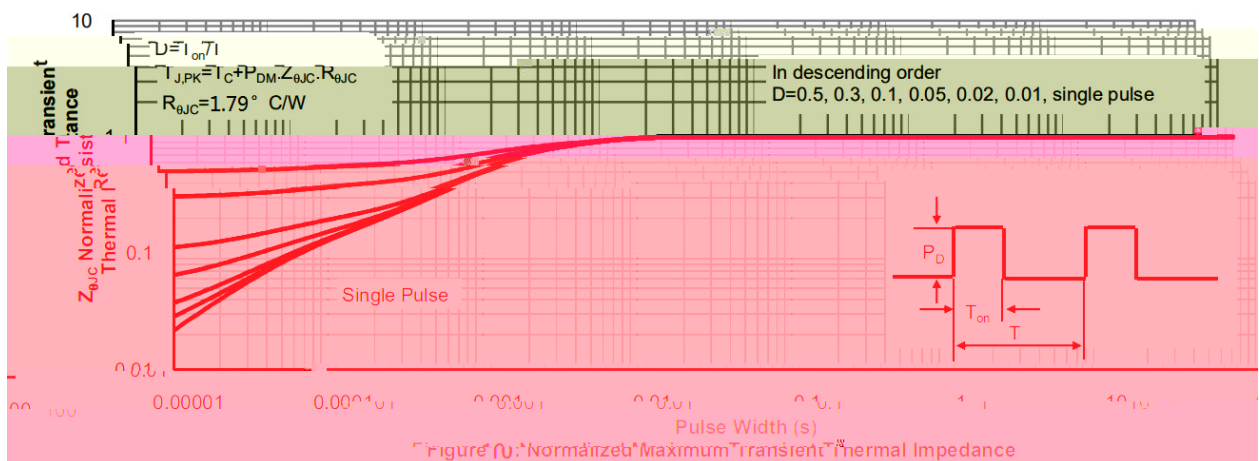
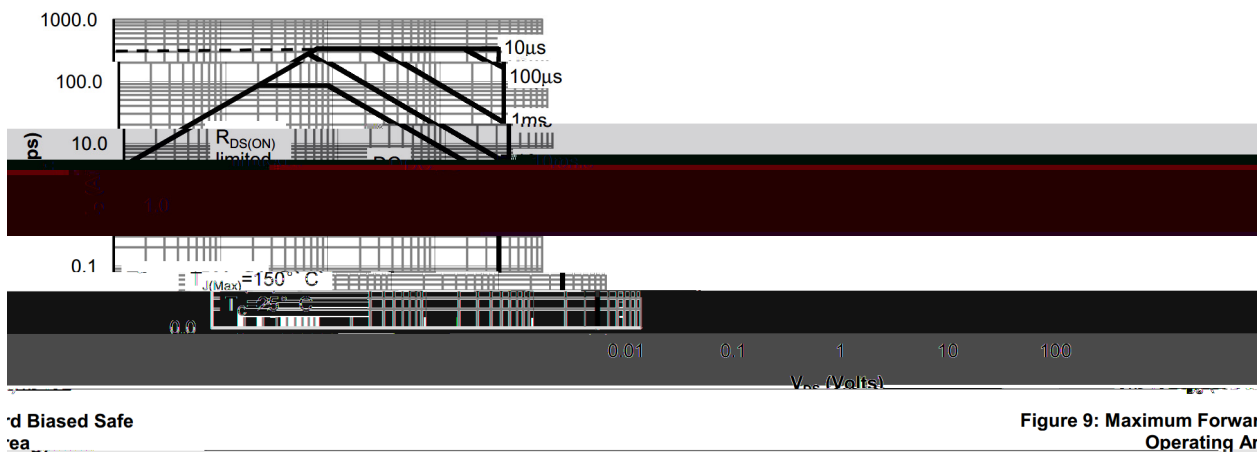
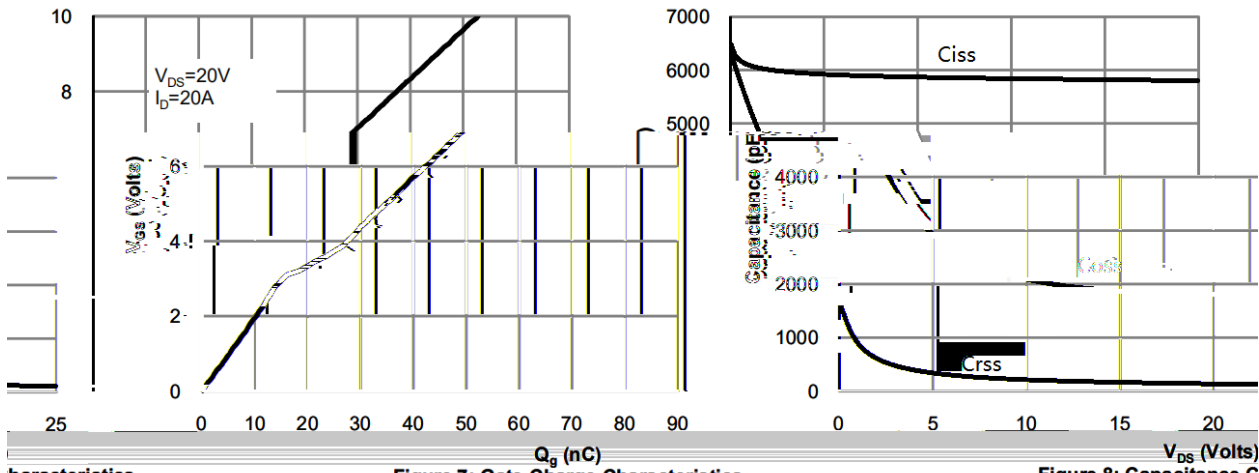
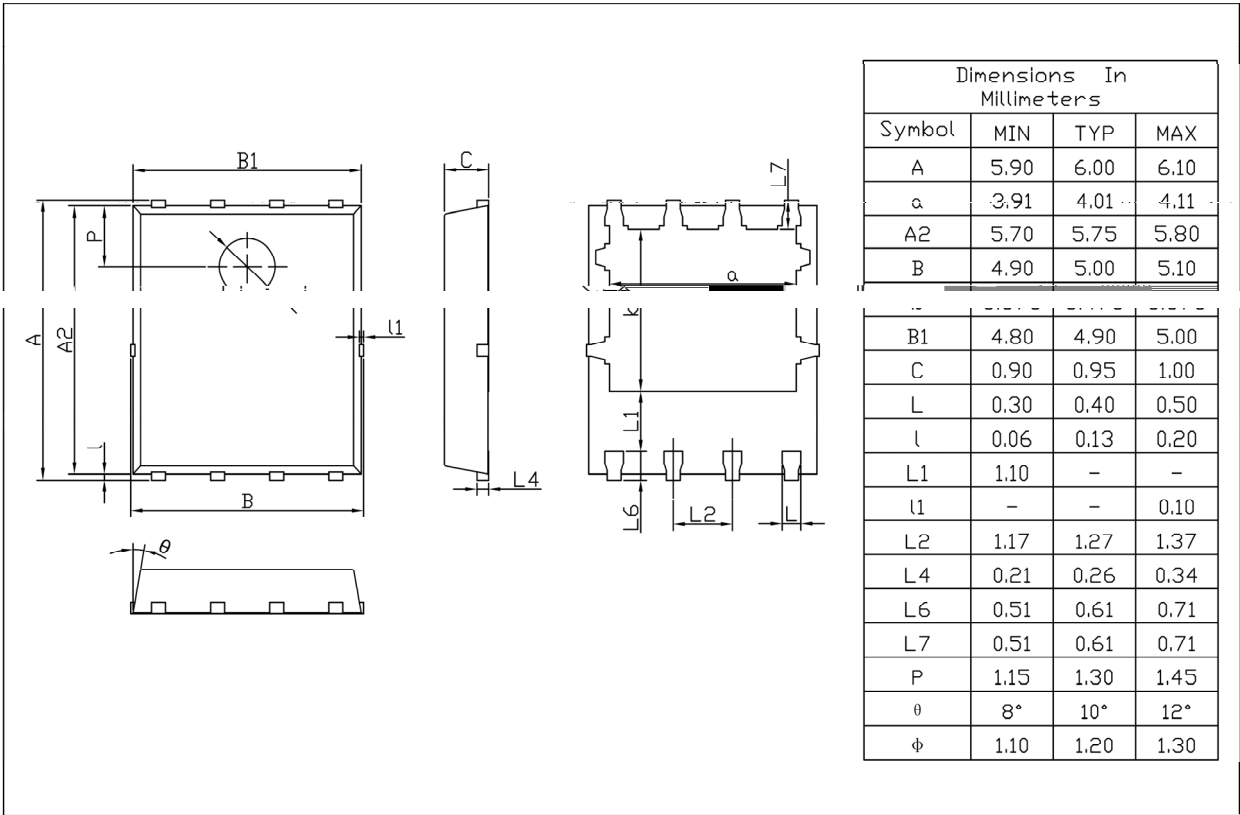


Figure 6: Body Diode Characteristics



PDFN5×6

Unit:mm



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- Note:

11501806090sec;1.Preheating:150~180,Time:60~90sec.

2245±55±0.5sec;2.Peak Temp.:245±5,Duration:5±0.5sec.

3210/sec.3.Cooling Speed: 2~10/sec.

260±510±1 sec.Temp.:260±5Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN5 6	5000	2	10000	6	60000	13" 12	360 360 50	380 335 366