版本	修订日期	有修订的页码	修订涉及的内容	拟制	审核
A	2021.06.09				

/ Descriptions

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

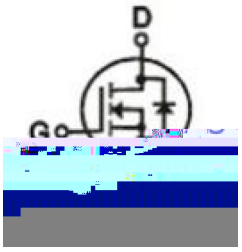
/ Features

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

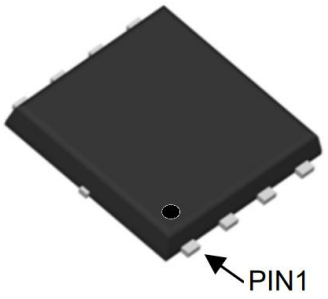
/ Applications

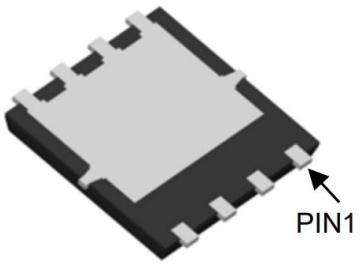
LED
For boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

/ Equivalent Circuit



/ Pinning





PIN1、2、3： S PIN4：G PIN5、6、7、8：D

Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D
7	D
8	D

/ h_{FE} Classifications & Marking

见印章说明。See Marking Instructions.

/ Absolute Maximum Ratings(T_a=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Drain Current - Continuous		I_D	85	A
Drain Current – Pulsed		I_{DM}	200	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_D(T_c=25℃)	83	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	924	mJ
Avalanche Current(L=0.5mH)		I_{AS}	44.5	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	℃
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	17	℃/ W
	Steady-State		55	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	1.5	

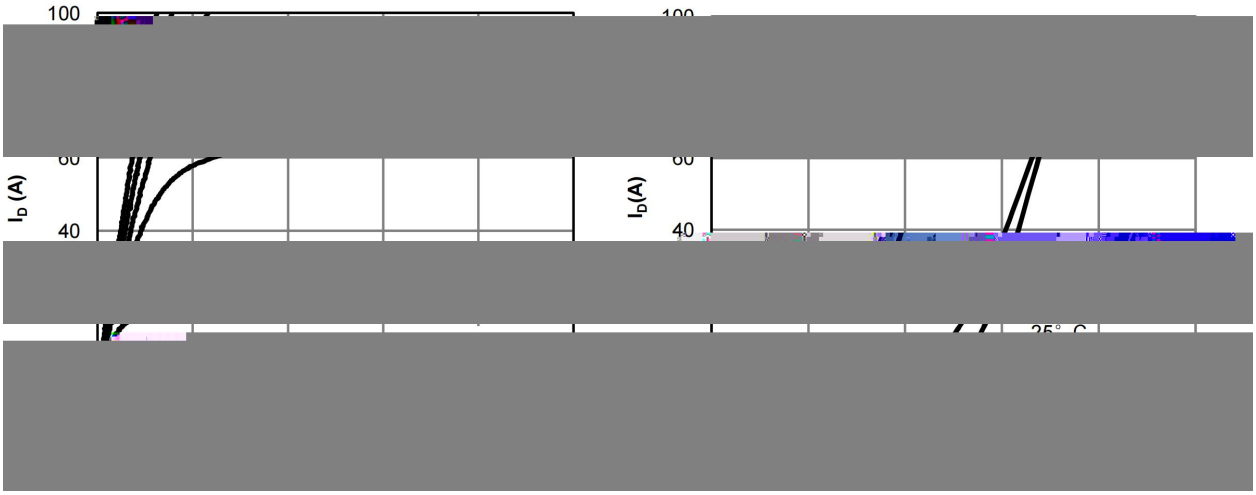
/ Electrical Characteristics(Ta=25)

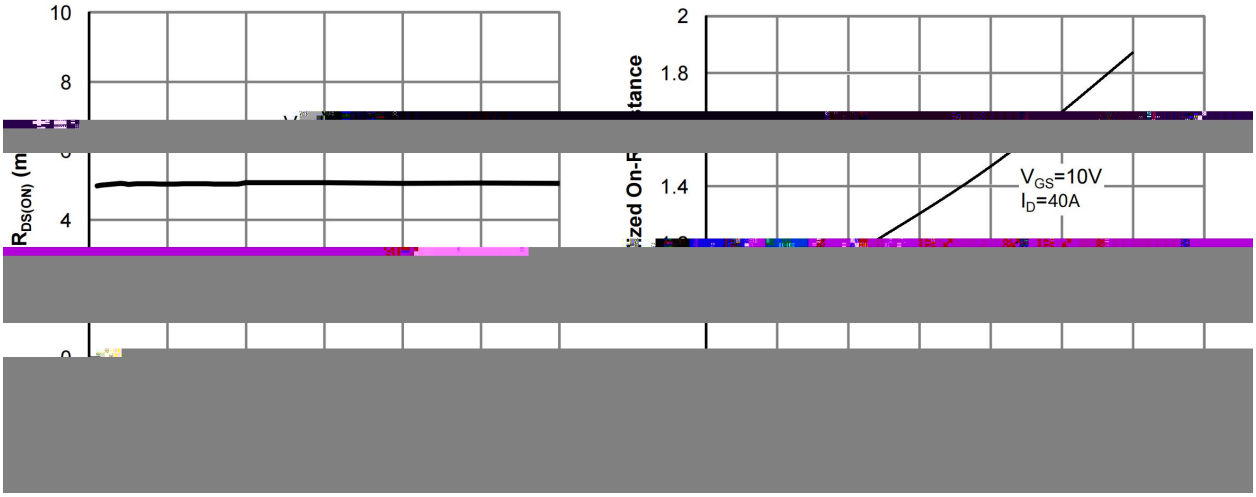
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	80	90		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=80V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	2	3.1	4	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=40A		5.0	6.5	mΩ
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		3600		pF
Output Capacitance	C_{oss}			1380		
Reverse Transfer Capacitance	C_{rss}			110		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		2.5		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, V_{DS}=40V I_D=20A		36.5		nC
Gate Source Charge	Q_{gs}			11		
Gate Drain Charge	Q_{gd}			6		

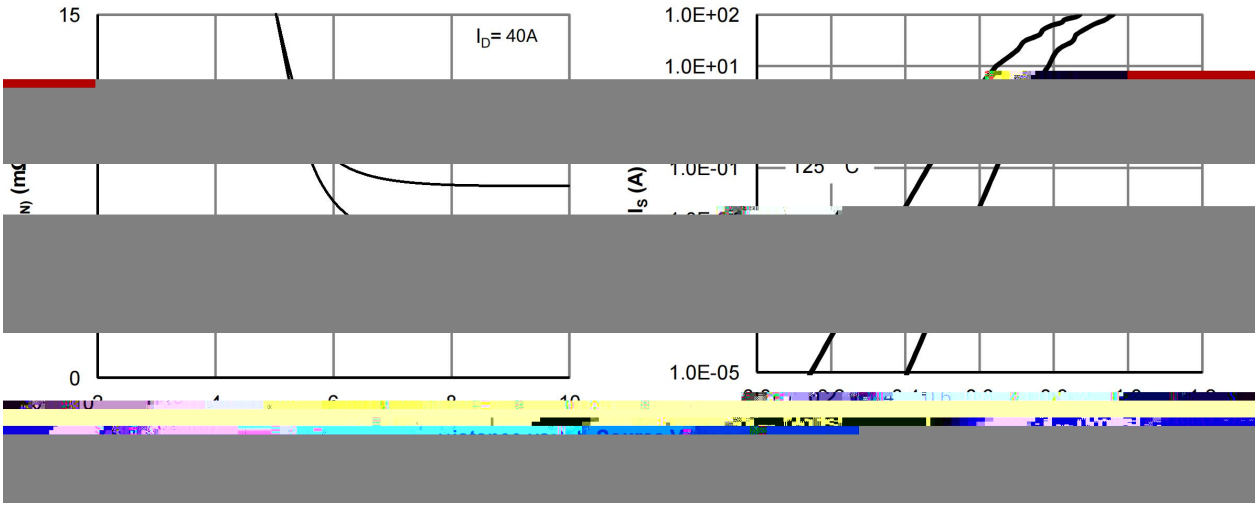
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{D(on)}$	V_{GS}=10V, V_{DS}=40V, R_L=2Ω, R_{GEN}=3Ω		11		ns
Turn-On Rise Time	t_r			5		
Turn-Off Delay Time	$t_{D(off)}$			25		
Turn-Off Fall Time	t_f			6		

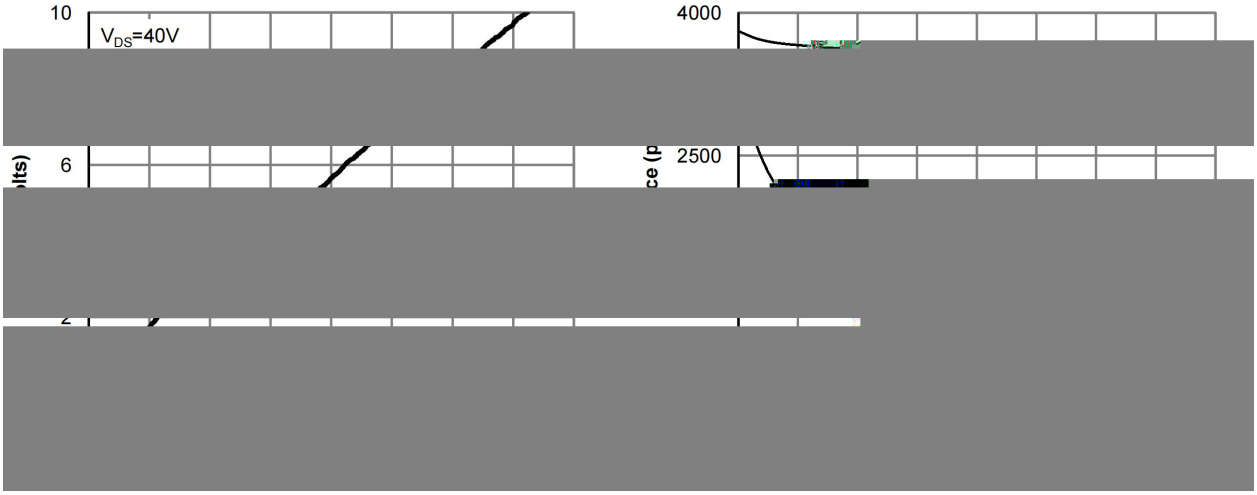
/ Electrical Characteristic Curve

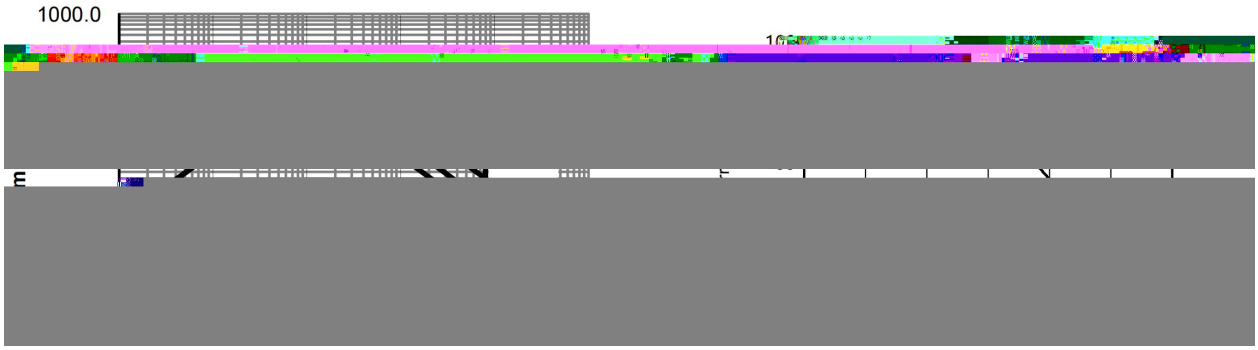


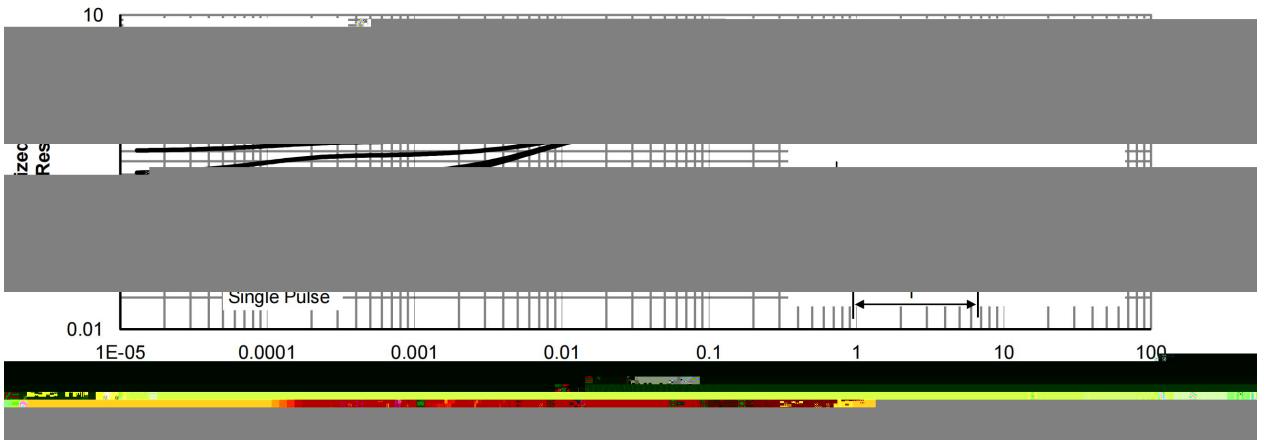




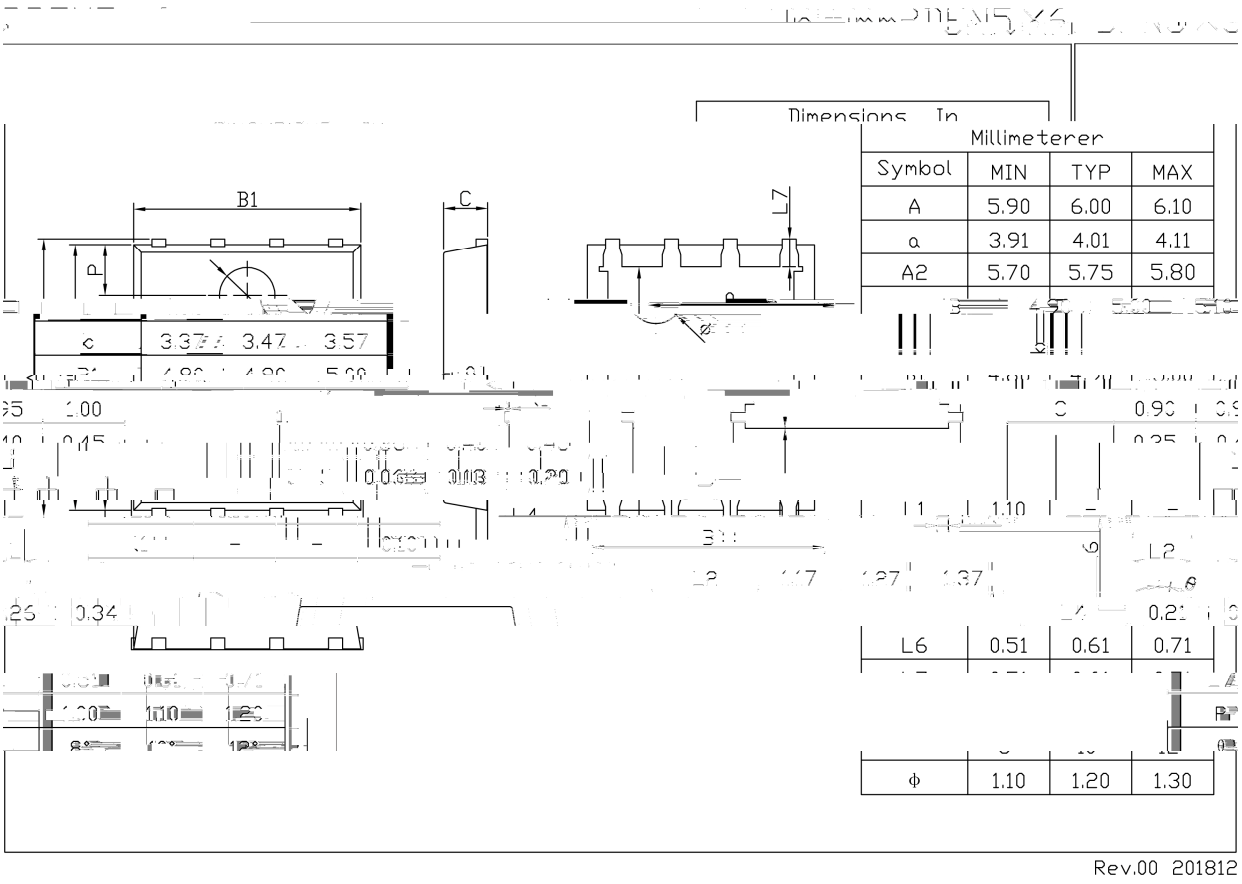
/ Electrical Characteristic Curve







/ Package Dimensions

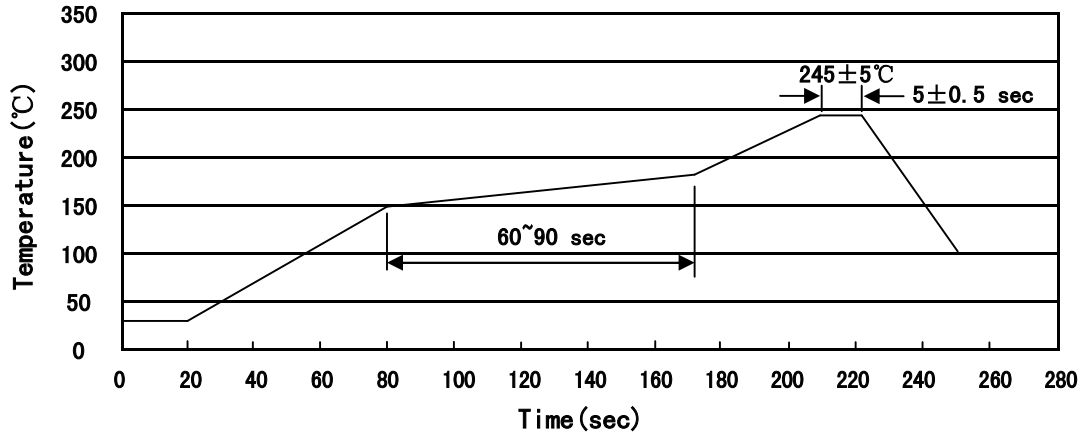


Dimensions In Millimeterer

Symbol	MIN	TYP	MAX
A	5.90	6.00	6.10
a	3.91	4.01	4.11
A2	5.70	5.75	5.80
L6	0.51	0.61	0.71
Φ	1.10	1.20	1.30

/ Marking Instructions

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1	150	180	60	90sec;	1.Preheating:150~180℃, Time:60~90sec.
2	245±5			5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3		2	10℃/sec.		3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
PDFN5 × 6	5000	2	10000	6	60000	13" × 12	360 × 360 × 50	380 × 335 × 366

/ Notices