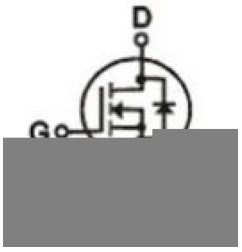
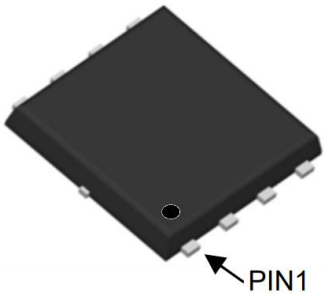
版本	修订日期	有修订的页码	修订涉及的内容	拟制	审核
A	2021.06.22	All	参照 AOS-AONS66923 规格书首次制定	庞隆基	陈逸晞

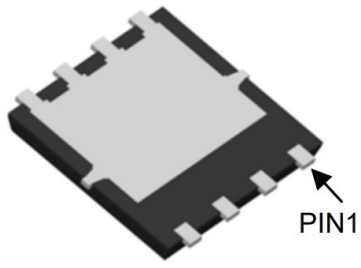
PDFN5*6 N
。
N-Channel MOSFET in a PDFN5*6 Plastic Package .

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

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







PIN1、2、3： S PIN4：G PIN5、6、7、8：D

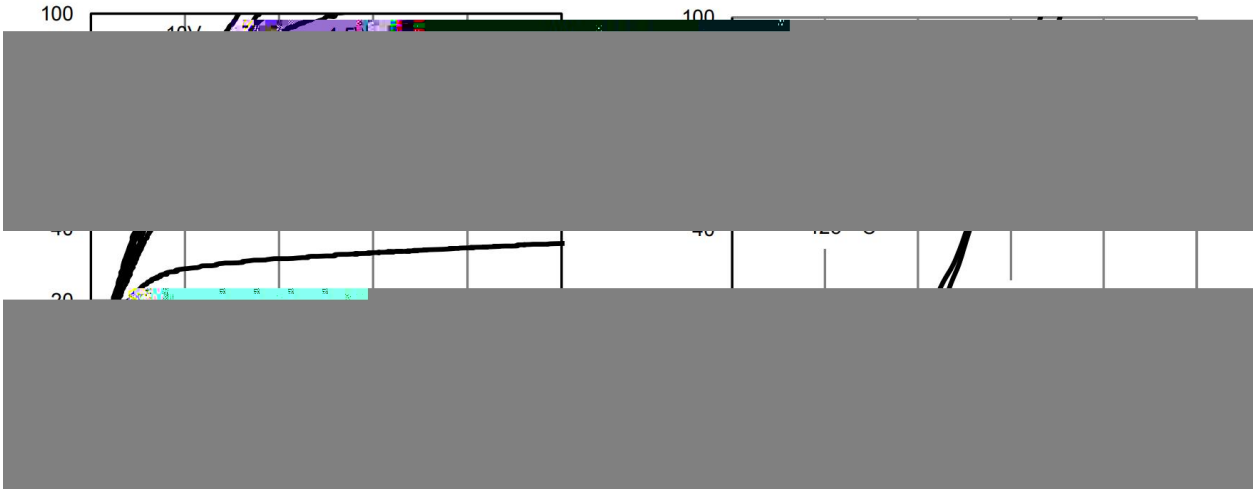
Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D
7	D
8	D

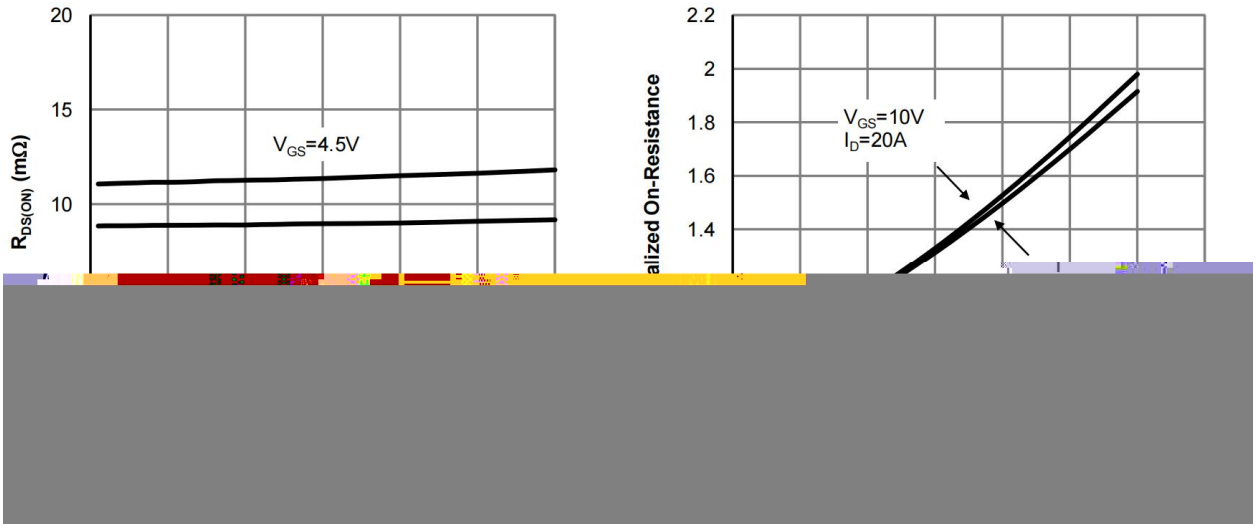
见印章说明。See Marking Instructions.

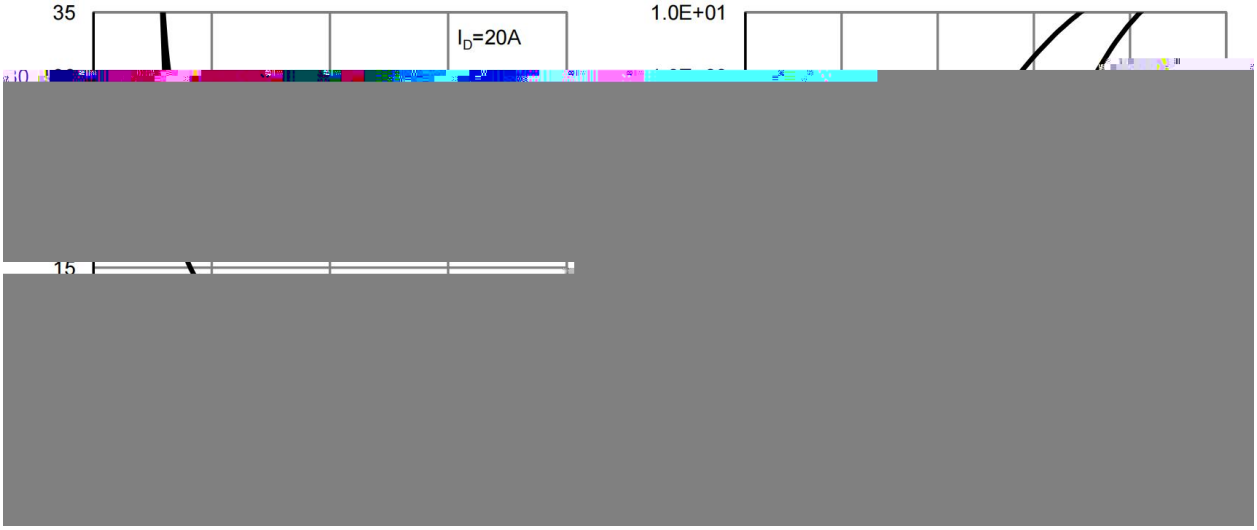
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current - Continuous		I_D	47	A
Drain Current – Pulsed		I_{DM}	105	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		$P_D(T_c=25℃)$	48	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	78.7	mJ
Avalanche Current(L=0.5mH)		I_{AS}	15	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	℃
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	25	℃/ W
	Steady-State		55	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	2.6	

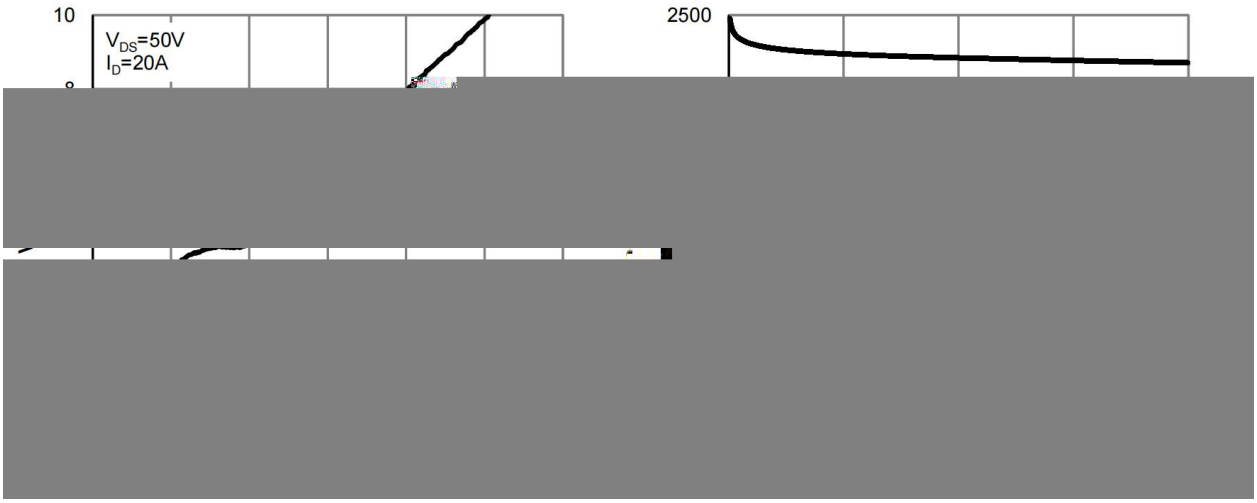
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	1.2	1.9	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=20A		8.3	12	mΩ
	$R_{DS(ON)}$	V_{GS}=4.5V, I_D=10A		11.5	15	mΩ
Drain–Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=1A		0.67	1.2	V

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		2200		pF
Output Capacitance	C_{oss}			950		
Reverse Transfer Capacitance	C_{rss}			110		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		3.3		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, V_{DS}=50V I_D=20A		25		nC
Total Gate Charge	$Q_{g(4.5V)}$			12.5		
Gate Source Charge	Q_{gs}			6		
Gate Drain Charge	Q_{gd}			3.5		
Turn-On Delay Time	$t_{D(on)}$	V_{GS}=10V, V_{DS}=50V, R_L=2.5Ω, R_{GEN}=3Ω		8.5		ns
Turn-On Rise Time	t_r			3		
Turn-Off Delay Time	$t_{D(off)}$			23		
Turn-Off Fall Time	t_f			3.5		


100
100


20
15
10
$R_{DS(ON)}$ (mΩ)
V_{GS}=4.5V
2.2
2
1.8
1.6
1.4
alized On-Resistance
V_{GS}=10V
I_D=20A


35
I_D=20A
1.0E+01
15



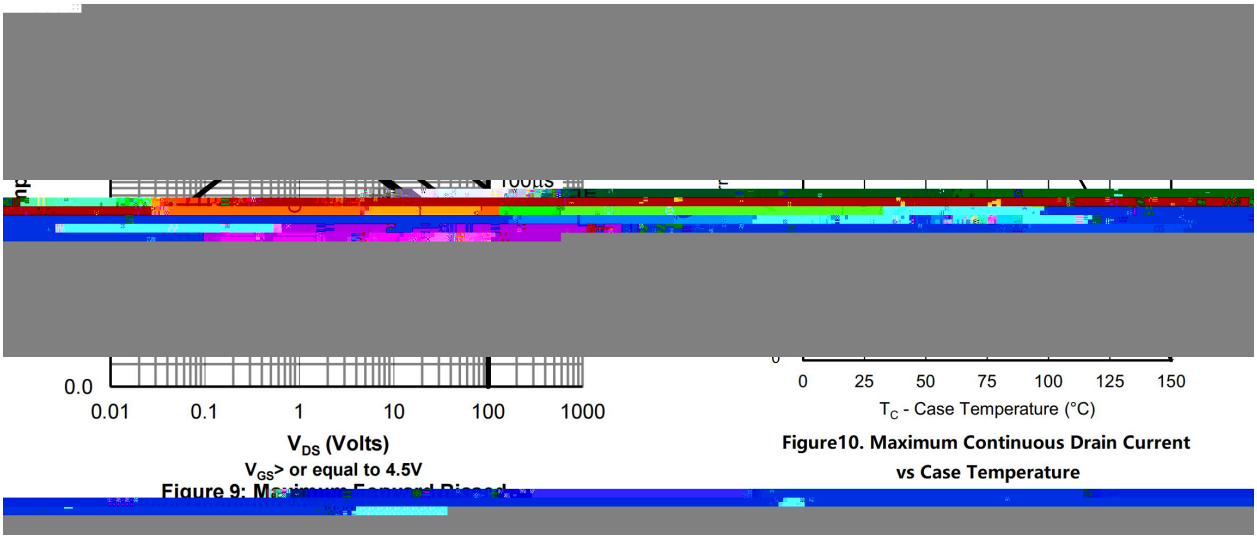
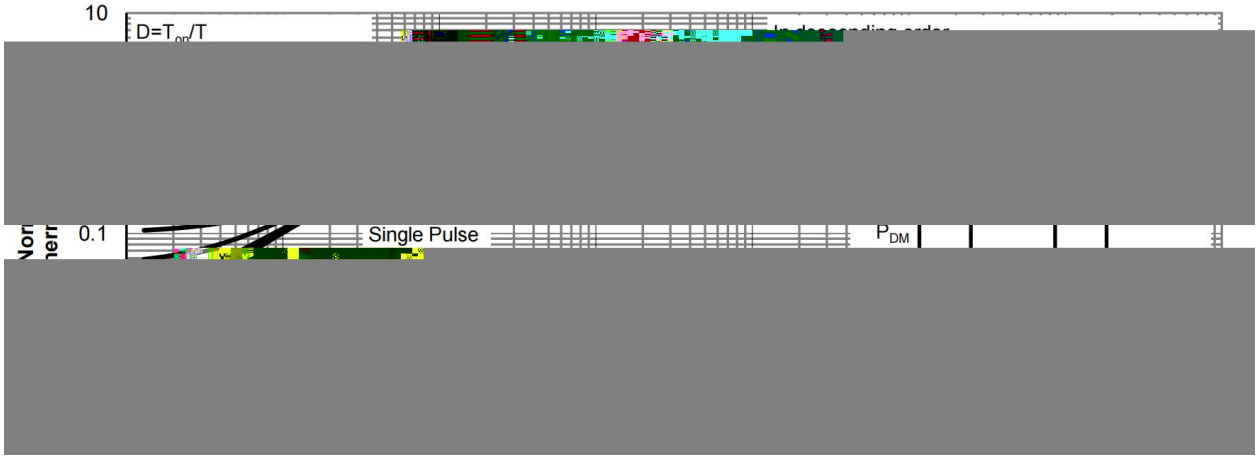
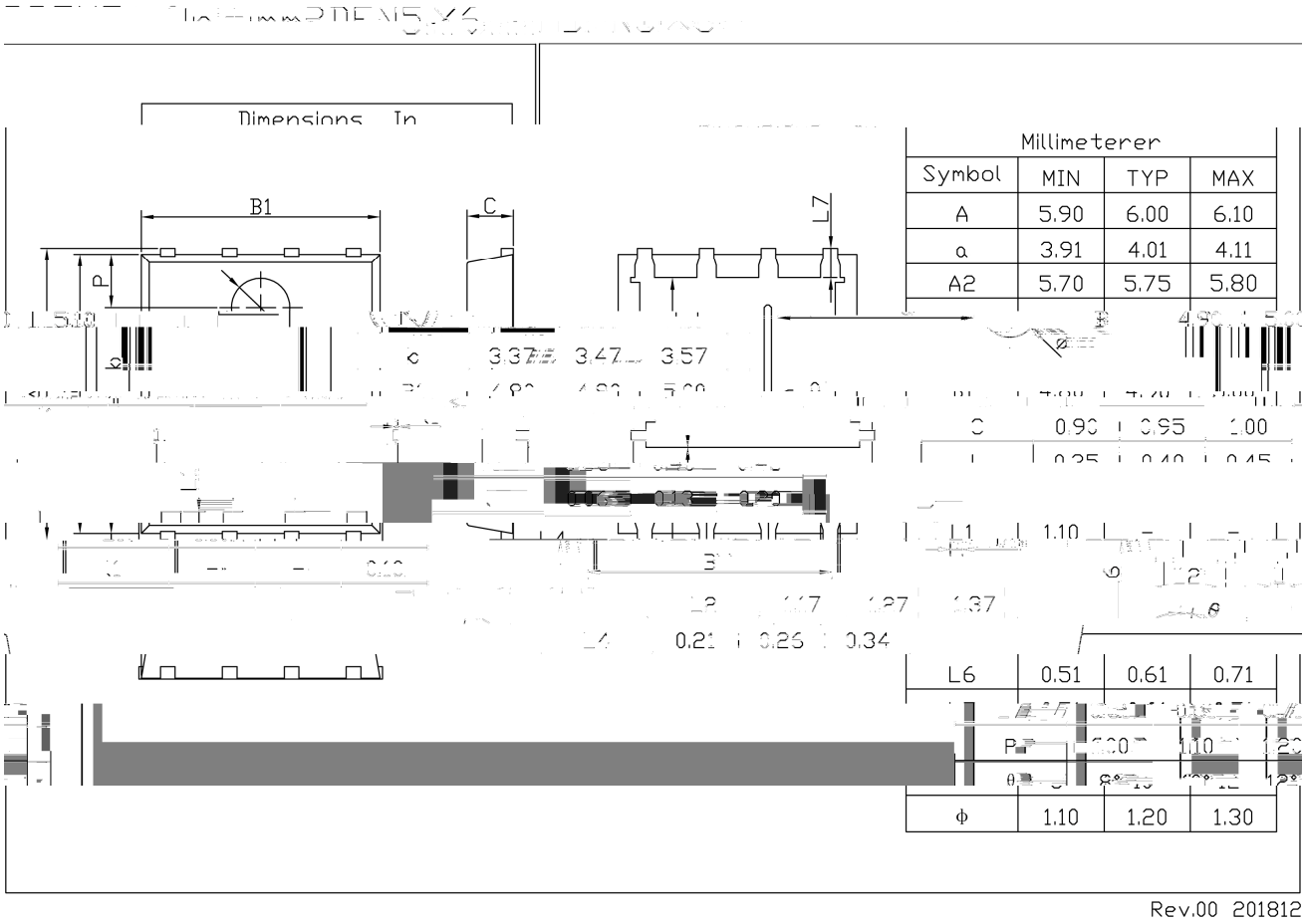
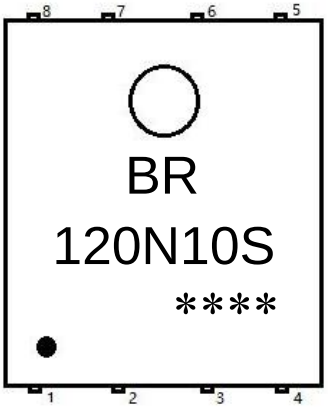


Figure10. Maximum Continuous Drain Current vs Case Temperature




Dimensions In
B1
C
L7
P
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
c
3.37
3.47
3.57
0.90
0.95
1.00
1.10
0.21
0.25
0.34
L6
0.51
0.61
0.71
1.10
1.20
1.30
Rev.00 201812

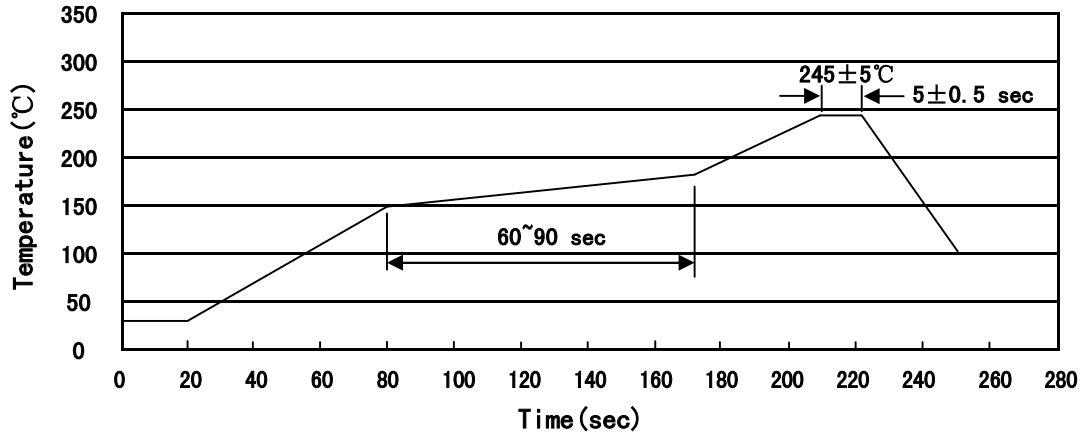


BR

120N10S

Note

BR	Company Code
120N10S	Product Type.



					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.

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

/ REEL

Package Type	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	Outer Box
PDFN5*6	5000	2	10000	6	60000	13”×12	360×360×50	380×335×366