

描述

PDFN3×3A-8L N MOS

N-Channel Enhancement Mode Field Effect Transistor in a PDFN3×3A-8L Plastic Package.

特征

$V_{DS} (V) = 40V$

$I_D = 82A (V_{GS} = \pm 20V)$

$R_{DS(ON)} @ 10V \leq 3mR (Typ. 2.5mR)$

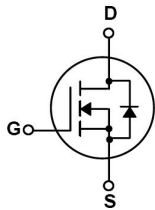
$R_{DS(ON)} @ 4.5V \leq 5mR (Typ. 3.5mR)$

HF Product.

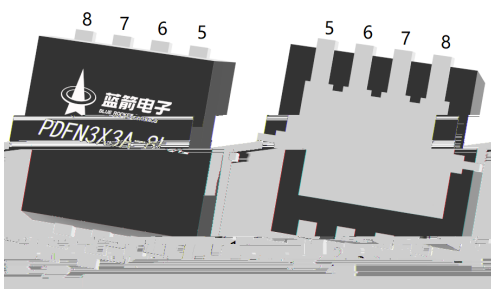
用途

Load Switch Applications, Battery Power Management.

内部等效电路



引脚排列



出脚	定义
Pin1	S
Pin2	S
Pin3	S
Pin4	G
Pin5	D
Pin6	D
Pin7	D
Pin8	D

印章代码

See Marking Instructions.

极限参数

°C

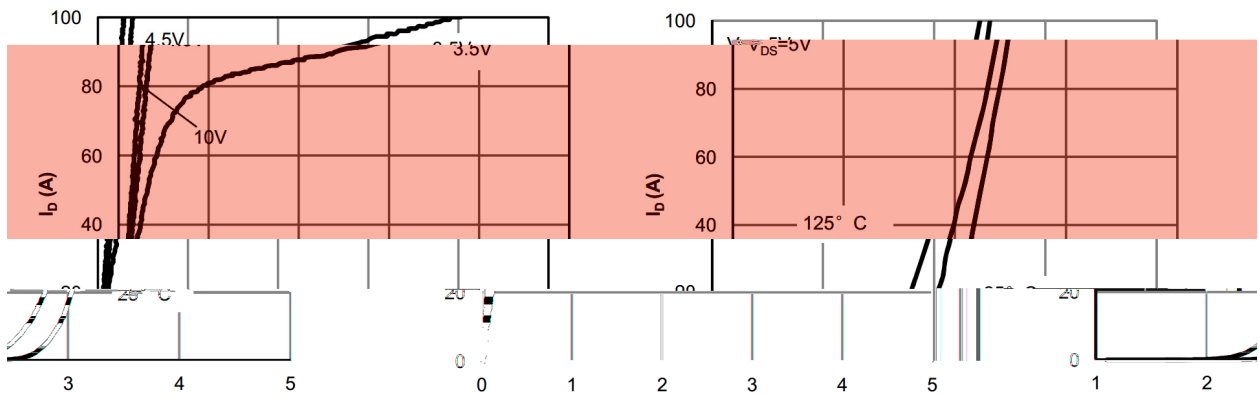
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	40	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	57	A
Drain Current - Pulsed		I_{DM}	137	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy		E_{AS}	348	mJ
Avalanche Current		I_{AS}	33	A
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	37	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	
Junction-to-Ambient	$t \leq 10$	$R_{\theta JA}$	42	/W
Junction-to-Ambient	Steady-State		78	
Junction-to-Case	Steady-State	$R_{\theta JC}$	3.4	

电性能参数

°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.7	3.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		2.5	3	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		3.5	5	m Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		9600		pF
Output Capacitance	C_{oss}			740		
Reverse Transfer Capacitance	C_{rss}			650		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.3		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=20A$		51		nC
Total Gate Charge	$Q_{g(4.5V)}$			23		
Gate Source Charge	Q_{gs}			13.2		
Gate Drain Charge	Q_{gd}			3.1		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1\Omega$ $R_{GEN}=3.0\Omega$		11		ns
Turn-On Rise Time	t_r			11		
Turn-Off Delay Time	$t_{d(off)}$			40		
Turn-Off Fall Time	t_f			10		

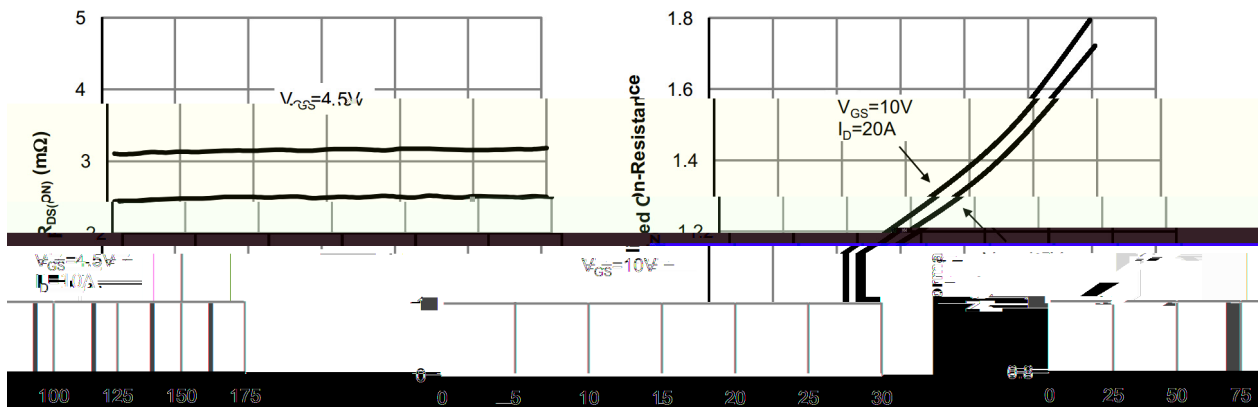
电参数曲线图



Transfer Characteristics

Figure 1: On-Region Characteristics

Figure 2:



On-Resistance vs. Junction Temperature

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

Figure 4: On-Resistance

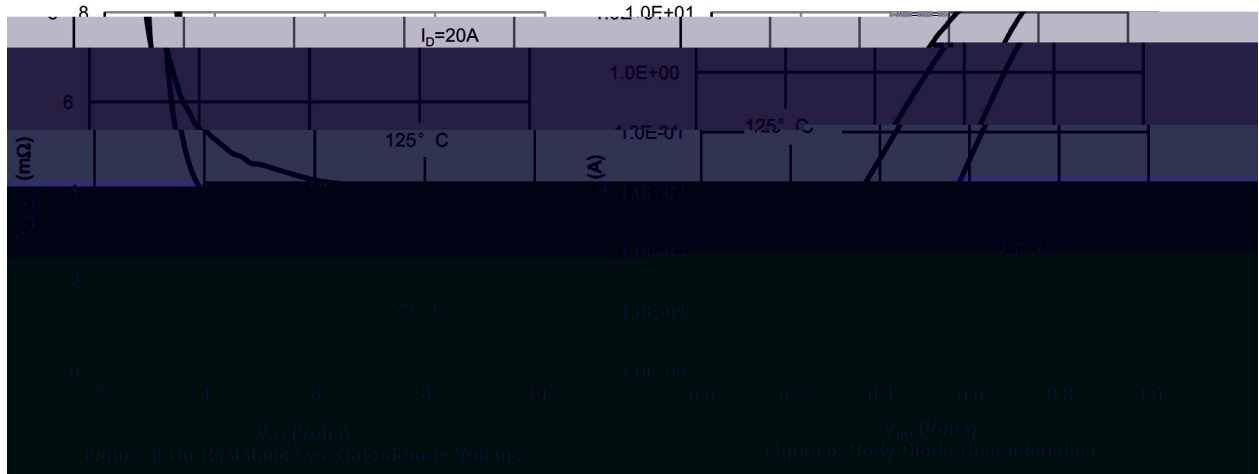


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body Diode Characteristics

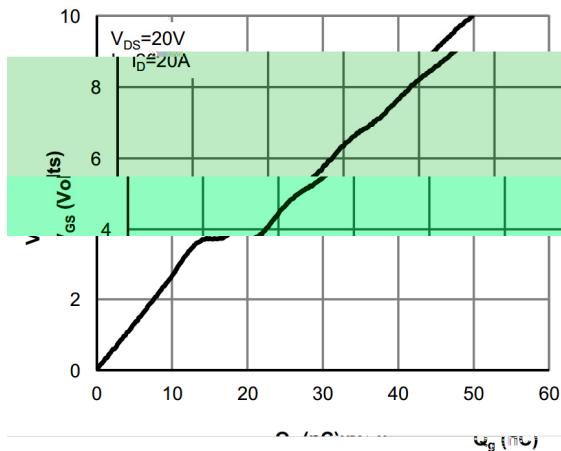
电参数曲线图 /


Figure 7: Gate-Charge Characteristics

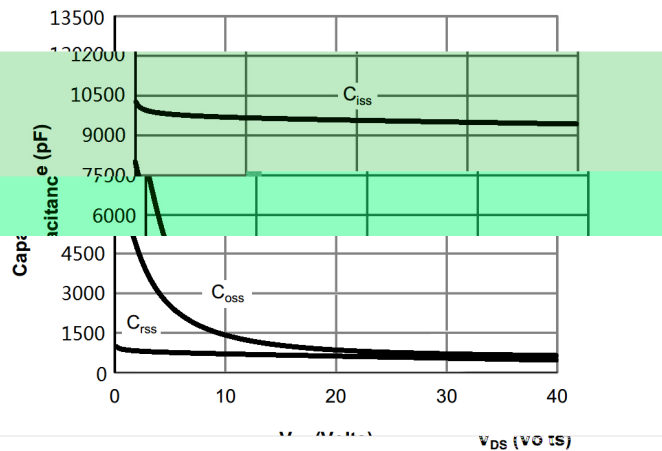


Figure 8: Capacitance Characteristics

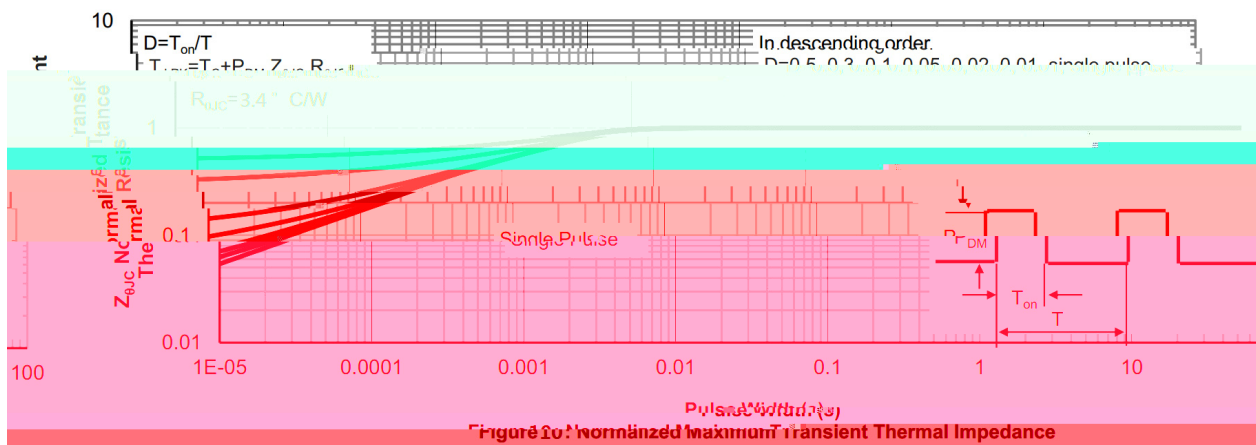
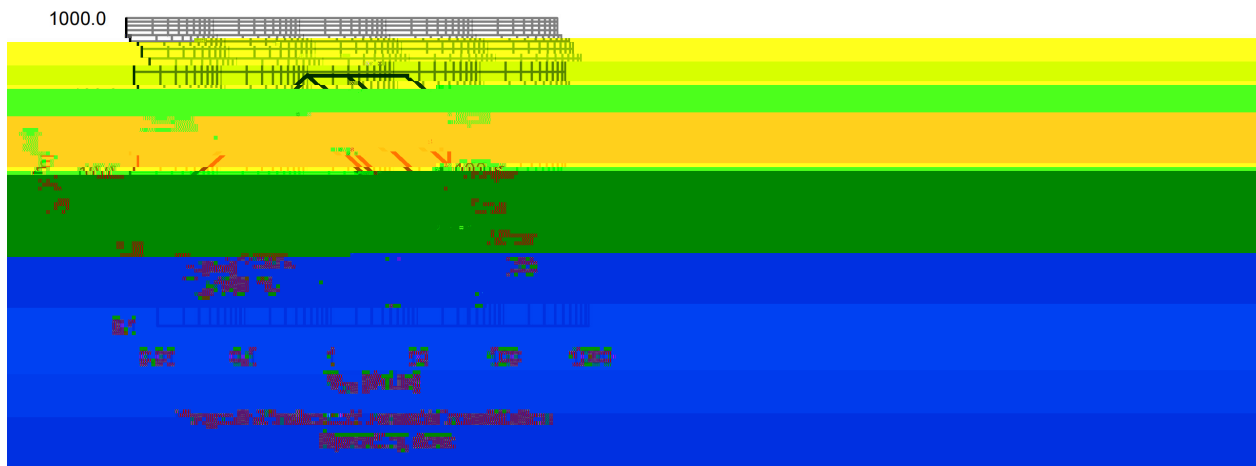
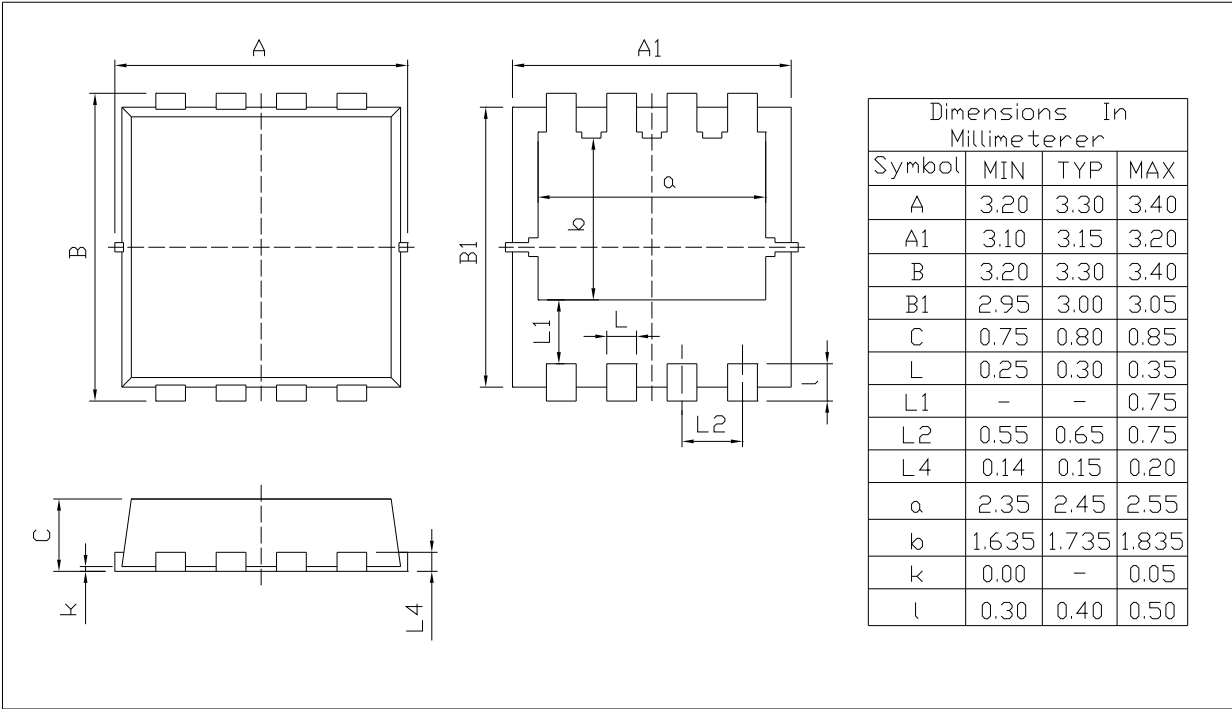


Figure 10: Normalized Maximum Transient Thermal Impedance

外形尺寸图

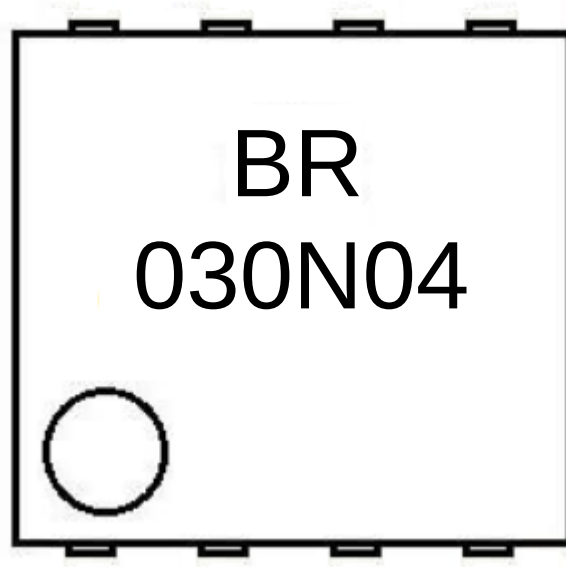
PDFN3X3A-8L

Unit:mm



Rev.00 202011

印章说明



BR

030N04

Note:

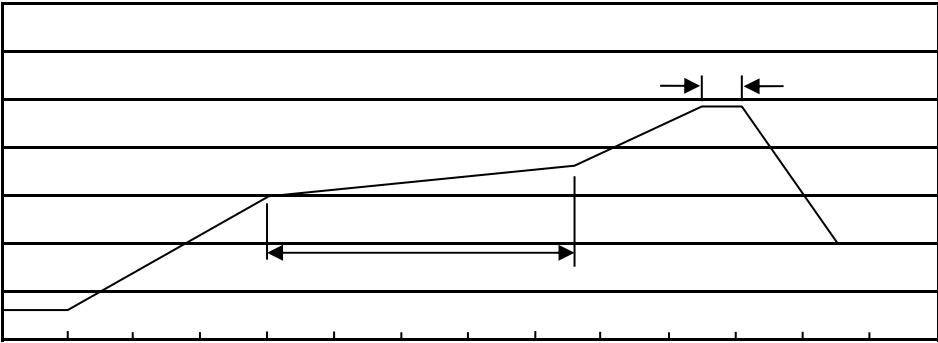
BR: Company Code

030N04: Product Type Code

****: Lot No. Code, code change with Lot No

回流焊温度曲线图 无铅

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.

耐焊接热试验条件

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

包装规格

/ 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
PDFN3×3A-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

使用说明