

描述 / Descriptions

PDFN5×6 封装 P 沟道场效应管。

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

特征 / Features

$V_{DS} (V) = -100V$ $I_D = -73A (V_{GS} = \pm 20V)$

$R_{DS(ON)} @ -10V \leq 19m\Omega (Typ. 17m\Omega)$

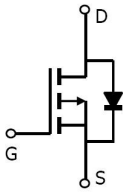
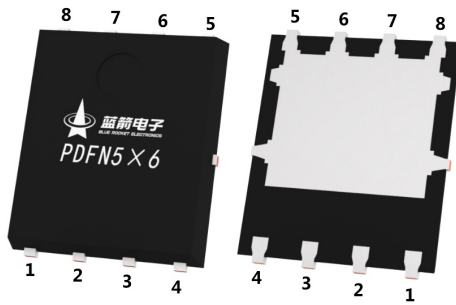
$R_{DS(ON)} @ -4.5V \leq 21m\Omega (Typ. 18.5m\Omega)$

无卤产品。HF Product.

用途 / Applications

电机驱动器，DC-DC 转换器。

Motor drivers, DC-DC Converter.

内部等效电路 / Equivalent Circuit**引脚排列 / 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

印章代码 / Marking

见印章说明。

See Marking Instructions.

极限参数 / Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DS}	-100	V
Drain Current	I_D^* ($T_C=25^{\circ}\text{C}$)	-73	A
	I_D^* ($T_C=100^{\circ}\text{C}$)	-51	A
Drain Current - Pulsed	$I_{DM}^{*,**}$	-166	A
Gate-Source Voltage	V_{GS}	± 20	V
Continuous-Source Current	I_S	-73	A
Single Pulsed Avalanche Energy ($V_{DD}=-50\text{V}, L=-1.0\text{mH}$)	E_{AS}	744	mJ
Drain power dissipatio	$P_{tot}(T_C=25^{\circ}\text{C})$	250	W
Storage Temperature	T_{stg}	-55 to 175	$^{\circ}\text{C}$
Junction Temperature	T_J	175	$^{\circ}\text{C}$
Thermal Resistance- Junction to Ambient	$R_{\theta JA}^*$	56	$^{\circ}\text{C/W}$
Thermal Resistance- Junction to Case	$R_{\theta JC}^*$	0.6	$^{\circ}\text{C/W}$

Notes :

- * Surface Mounted on 1 in² pad area, $t \leq 10$ sec
- ** Pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$
- *** Limited by bonding wire

电性能参数 / Electrical Characteristics(Ta=25°C Unless Otherwise Noted)

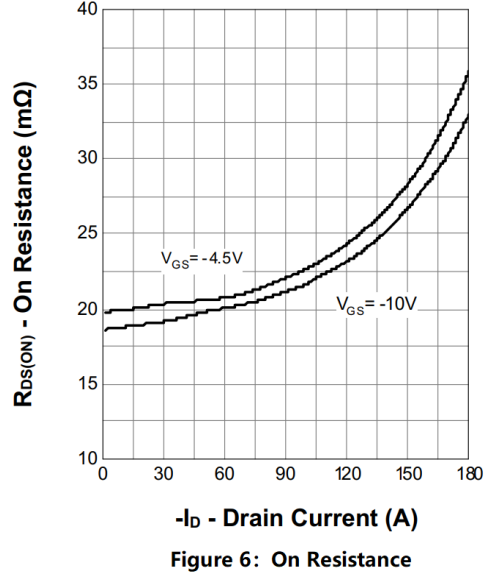
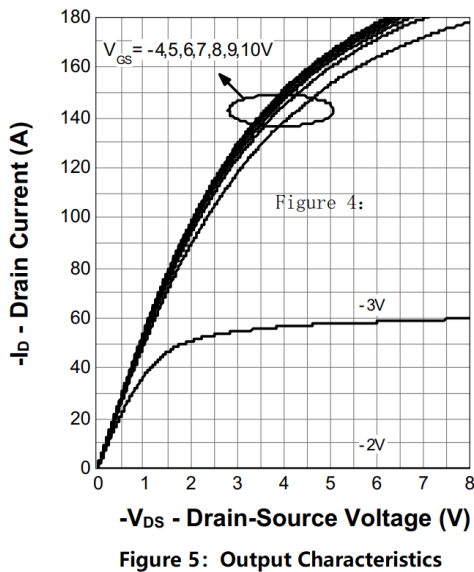
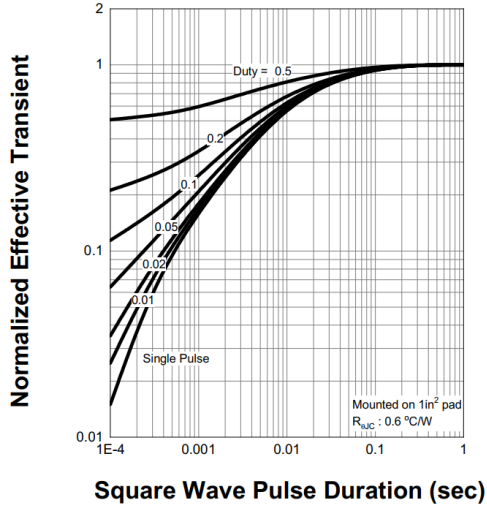
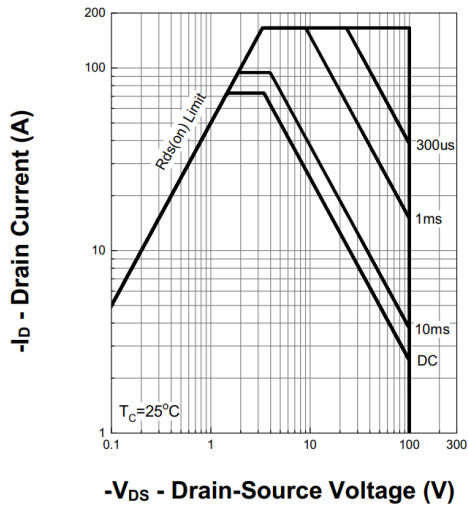
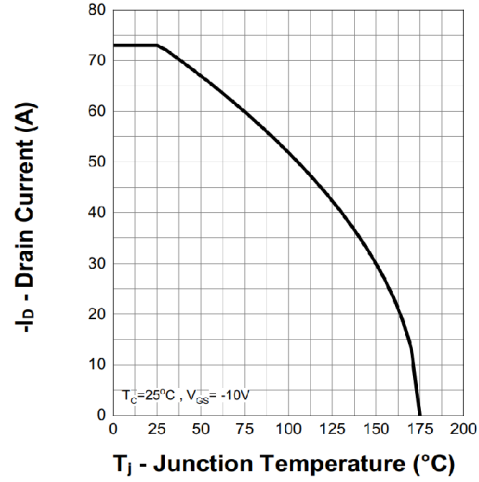
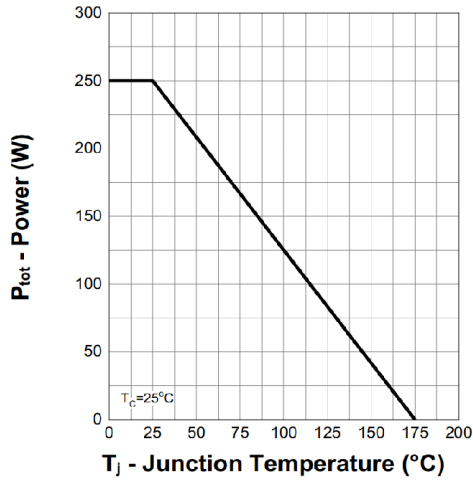
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = -250\mu A, V_{GS} = 0V$	-100			V
Drain Leakage Current	I_{DSS}	$V_{DS} = -80V, V_{GS} = 0V$			-1	μA
Gate Leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1.0		-2.5	V
On-State Resistance	$R_{DS(ON)}^a$	$V_{GS} = -10V, I_D = -30A$		17	19	m Ω
		$V_{GS} = -4.5V, I_D = -20A$		18.5	21	
Diode Forward Voltage	V_{SD}^a	$I_S = -30A, V_{GS} = 0V$			-1.3	V
Reverse Recovery Time	t_{rr}	$I_D = -30A, V_{GS} = 0V$ $dI_{SD}/dt = 100A/\mu s$		41		nS
Reverse Recovery Charge	Q_{rr}			75		nC
Input Capacitance	C_{iss}	$V_{GS} = 0, V_{DS} = -50V$ $f = 1MHz$		14265		pF
Output Capacitance	C_{oss}			301		
Reverse Transfer Capacitance	C_{rss}			30		
Total Gate Charge	Q_g	$V_{GS} = -10V, V_{DS} = -50V$ $I_D = -30A$		245		nC
Gate-Source Charge	Q_{gs}			56		
Gate-Drain Charge	Q_{gd}			27		
Turn-on Delay Time	$t_{d(ON)}$	$V_{GS} = -10V, V_{DS} = -50V$ $R_L = 1.66\Omega, R_G = 3.9\Omega$ $I_D = -30A$		13		ns
Turn-on Rise Time	t_r			49		
Turn-off Delay Time	$t_{d(OFF)}$			329		
Turn-off Fall Time	t_f			115		

Notes :

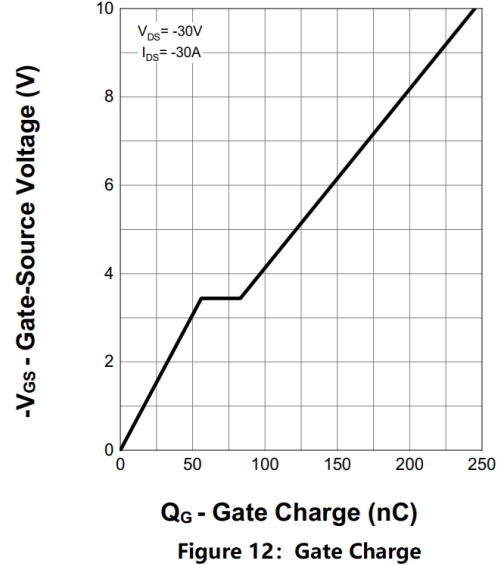
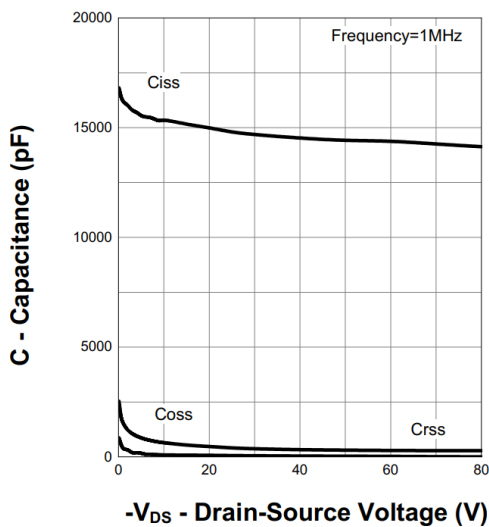
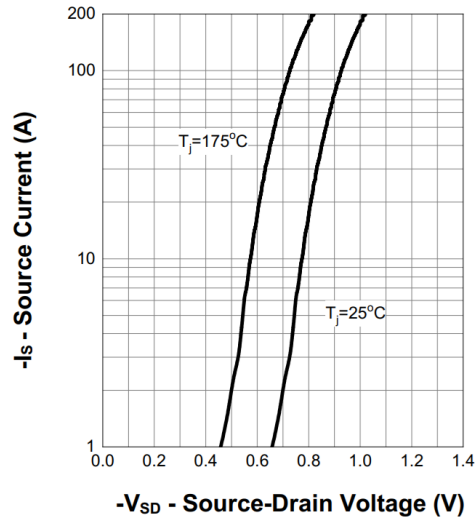
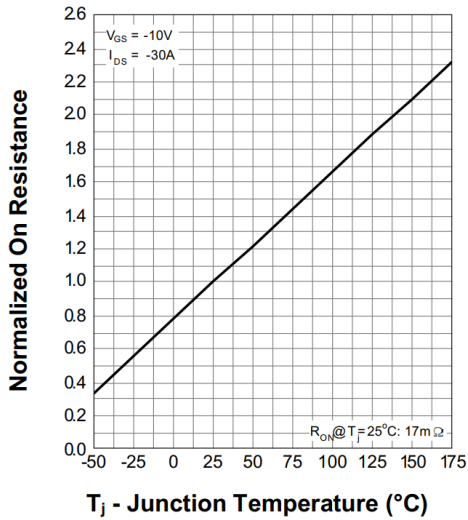
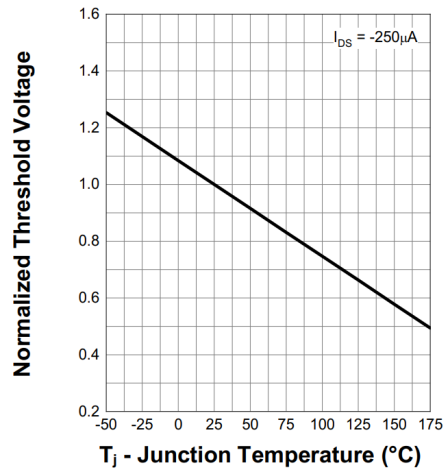
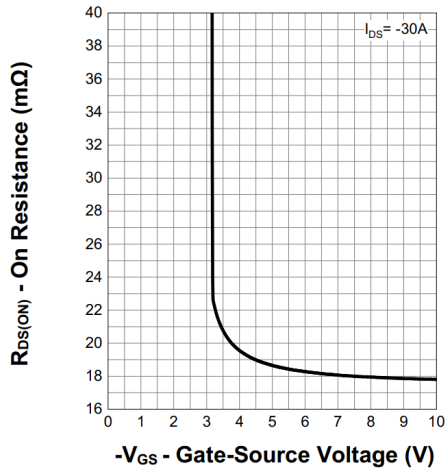
a : Pulse test ; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

b : Guaranteed by design, not subject to production testing

电参数曲线图 / Electrical Characteristic Curve

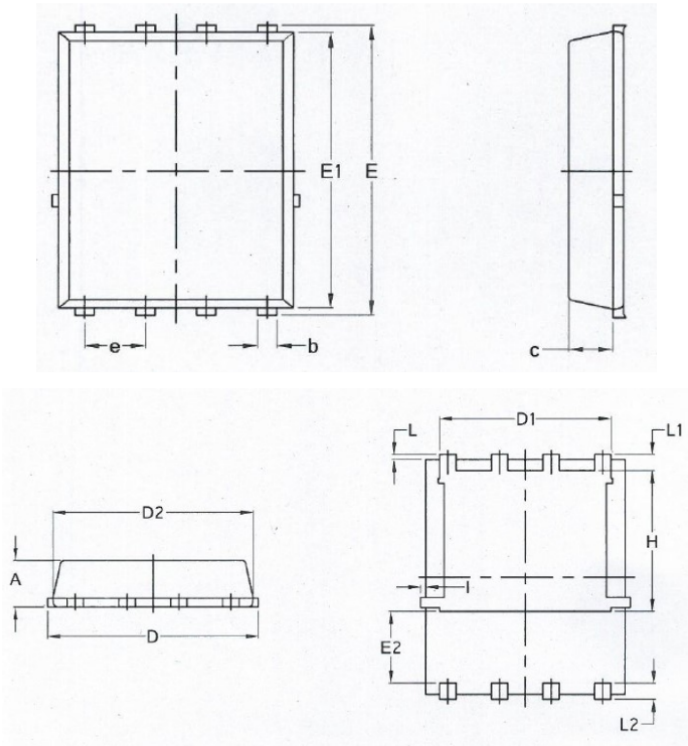


电参数曲线图 / Electrical Characteristic Curve



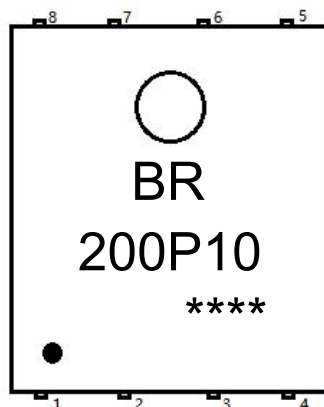
外形尺寸图 / Package Dimensions

PDFN5x6 - 8L Package



Symbol	Dimensions In Millimeters	
	MIN.	MAX.
A	1.030	1.170
b	0.340	0.480
c	0.824	0.970
D	4.800	5.400
D1	4.110	4.310
D2	4.800	5.000
E	5.950	6.150
E1	5.650	5.850
E2	1.600	-
e	1.27 BSC	
L	0.050	0.250
L1	0.380	0.500
L2	0.380	0.500
H	3.300	3.500
I	-	0.180

印章说明 / Marking Instructions



说明：

BR： 为公司代码

200P10： 为产品型号

****： 为生产批号代码，随生产批号变化

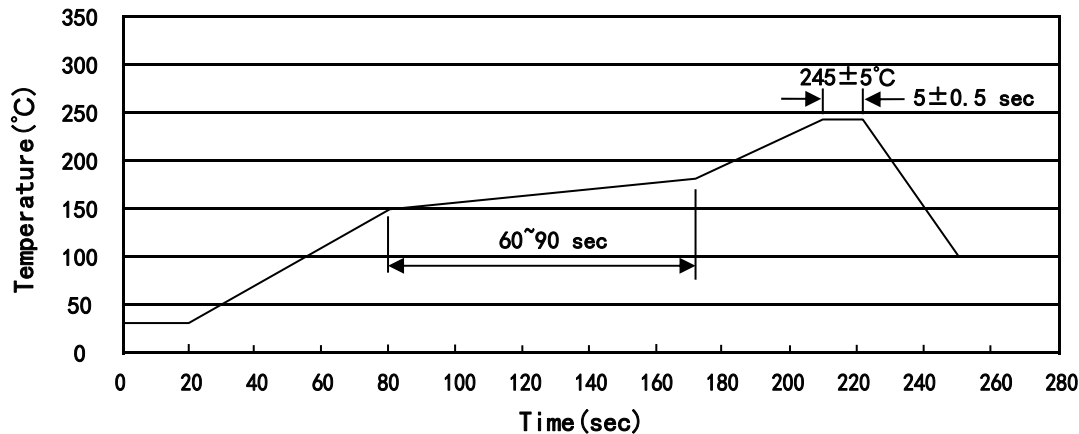
Note：

BR： Company Code

200P10： 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)



说明：

- 1、预热温度 150~180°C，时间 60~90sec；
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec；
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

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

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / 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	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366

使用说明 / Notices

本文档中提供的所有信息均受法律免责声明的约束。

All information provided in this document is subject to legal disclaimers.