

描述 / Descriptions

SOP-8 塑封封装 P 道场效应管。

P-CHANNEL MOSFET in a SOP-8 Plastic Package.

特征 / Features

$V_{DS} = -60V$

$I_D = -6A (V_{GS} = \pm 20V)$

$R_{DS(ON)} @ -10V \leq 80m\Omega$ (Typ. 61m Ω)

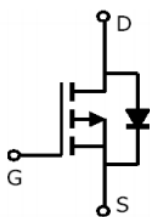
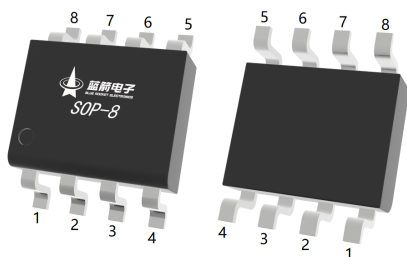
$R_{DS(ON)} @ -4.5V \leq 120m\Omega$ (Typ. 77m Ω)

无卤产品。HF Product.

用途 / Applications

器件适合用作负载开关或用于 PWM 应用。

Device is suitable for use as a load switch or in PWM applications.

内部等效电路 / Equivalent Circuit**引脚排列 / Pinning**

PIN 1 : S

PIN 2 : S

PIN 3 : S

PIN 4 : G

PIN 5 : D

PIN 6 : D

PIN 7 : D

PIN 8 : D

印章代码 / Marking

见印章说明。See Marking Instructions.


极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Drain–Source Voltage		V _{DSS}	-60	V
Gate–Body Leakage Voltage		V _{GSS}	±20	V
Drain Current - Continuous		I _D	-6	A
Power Dissipation (Surface Mounted on FR4 Board, t ≤ 10 sec.)		P _D	5.3	W
Operating and Storage Temperature Range		T _J , T _{STG}	-55~150	°C
Maximum Junction-to-Ambient	t ≤ 10s	R _{θJA}	40	°C/W
Maximum Junction-to-Ambient	Steady-State		75	°C/W
Maximum Junction-to-Lead	Steady-State	R _{θJL}	23.5	°C/W

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

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	$V_{(BR)DS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-60	-71		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1	-2.1	-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-2A$		61	80	mΩ
		$V_{GS}=-4.5V$ $I_D=-1A$		77	120	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			-1.0	μA
Gate-Body Leakage.	I_{GSS}	$V_{GS}=-20V$			-100	nA
		$V_{GS}=20V$			100	nA
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$ $T_J=25^\circ C$			-1.2	V
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		1600		pF
Output Capacitance	C_{oss}			400		
Reverse Transfer Capacitance	C_{rss}			300		
Total Gate Charge	$Q_{g(10V)}$	$V_{DS}=-30V$ $V_{GS}=-10.0V$ $I_D=-4A$		18		nC
Total Gate Charge	$Q_{g(4.5V)}$			9.1		
Gate-to-Source Charge	Q_{gs}			2.7		
Gate-to-Drain Charge	Q_{gd}			3.1		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-30V$ $V_{GS}=-10V$ $R_L=7.5\Omega$ $R_G=3\Omega$		8.5		ns
Turn-On Rise Time	t_r			4.0		
Turn-Off Delay Time	$t_{d(off)}$			32		
Turn-Off Fall Time	t_f			8.0		

电参数曲线图 / Electrical Characteristic Curve

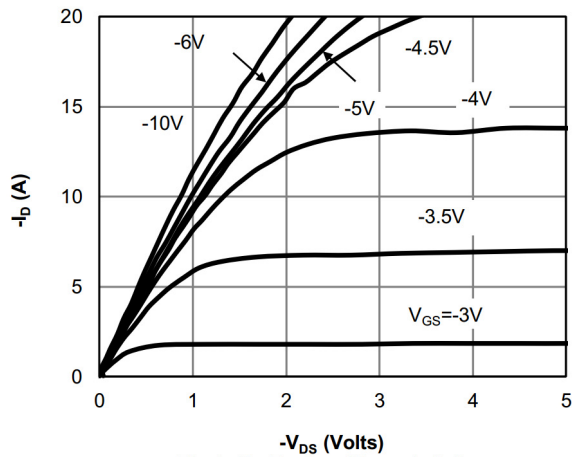


Fig 1: On-Region Characteristics

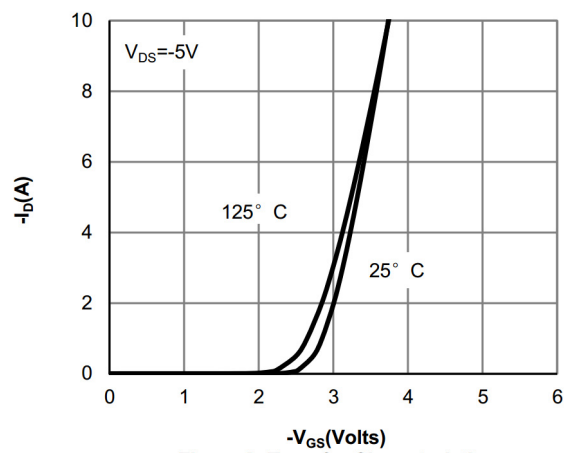


Figure 2: Transfer Characteristics

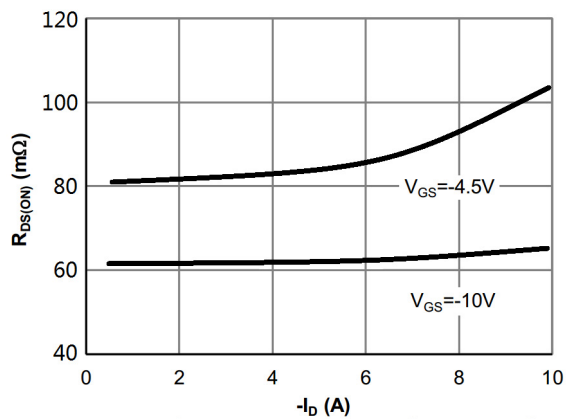


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

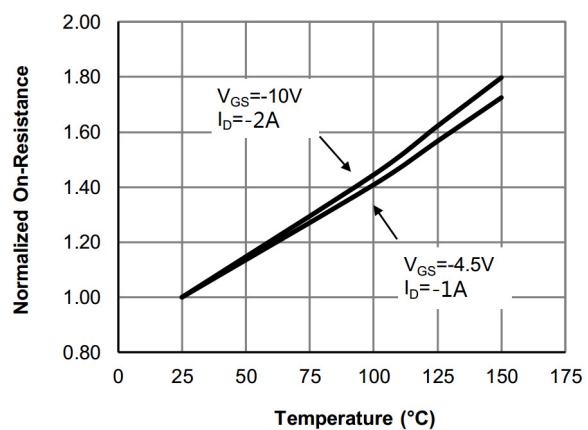


Figure 4: On-Resistance vs. Junction Temperature

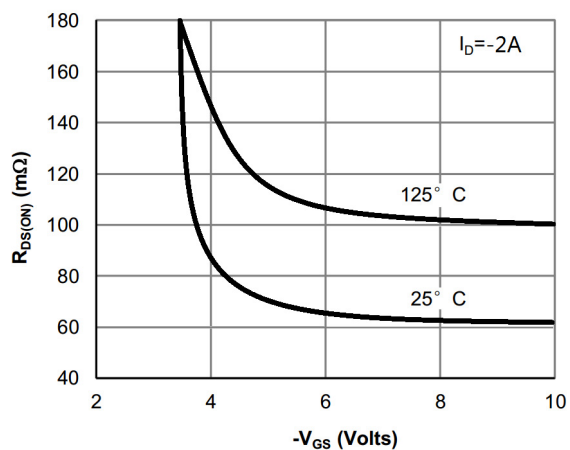


Figure 5: On-Resistance vs. Gate-Source Voltage

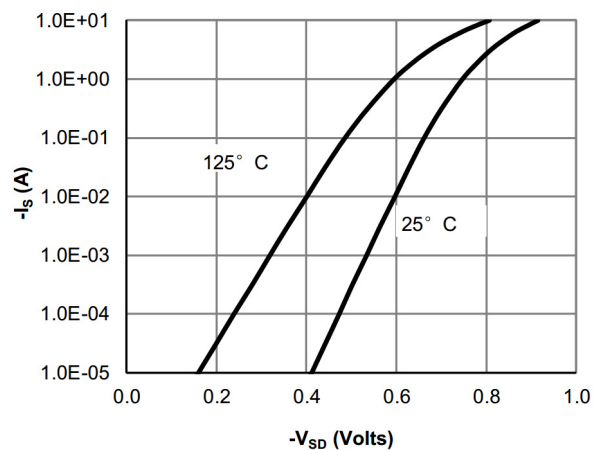


Figure 6: Body-Diode Characteristics

电参数曲线图 / Electrical Characteristic Curve

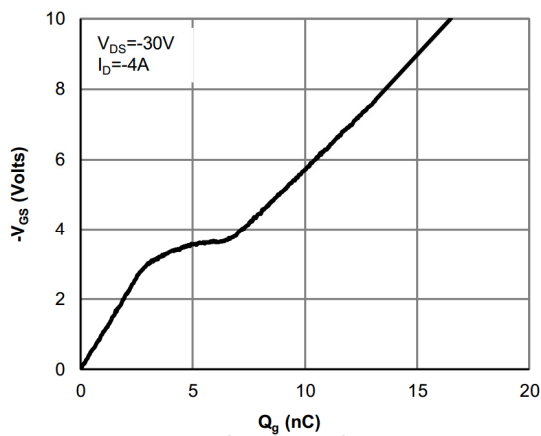


Figure 7: Gate-Charge Characteristics

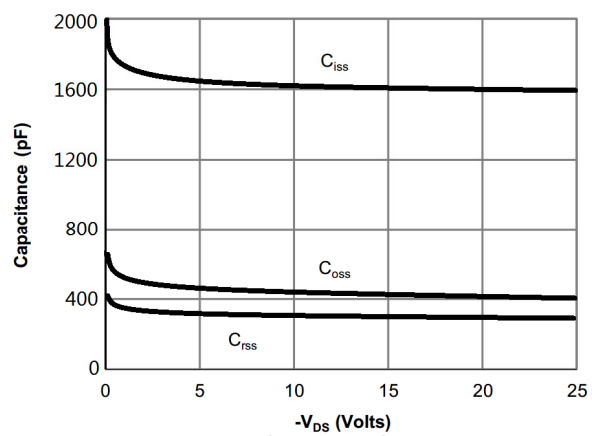


Figure 8: Capacitance Characteristics

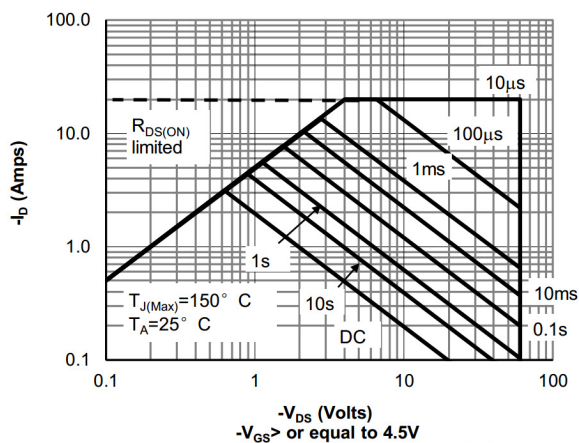


Figure 9: Maximum Forward Biased Safe Operating Area

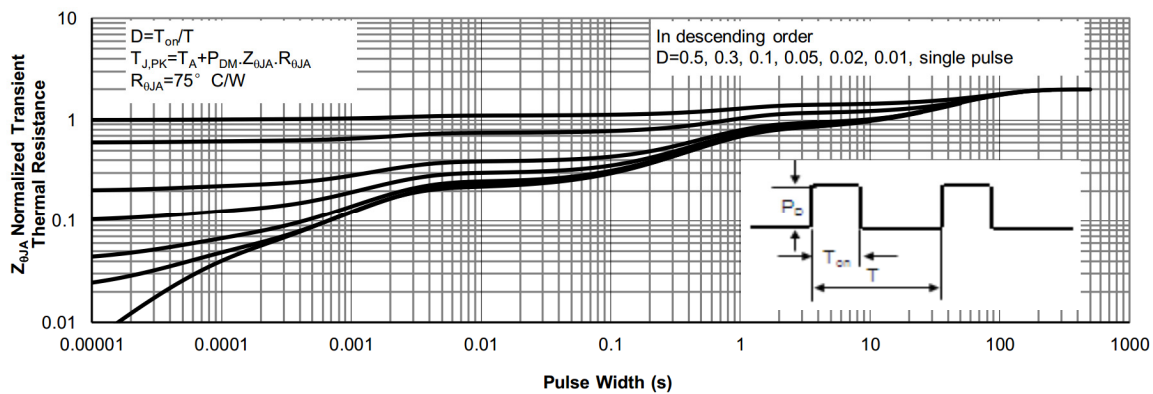
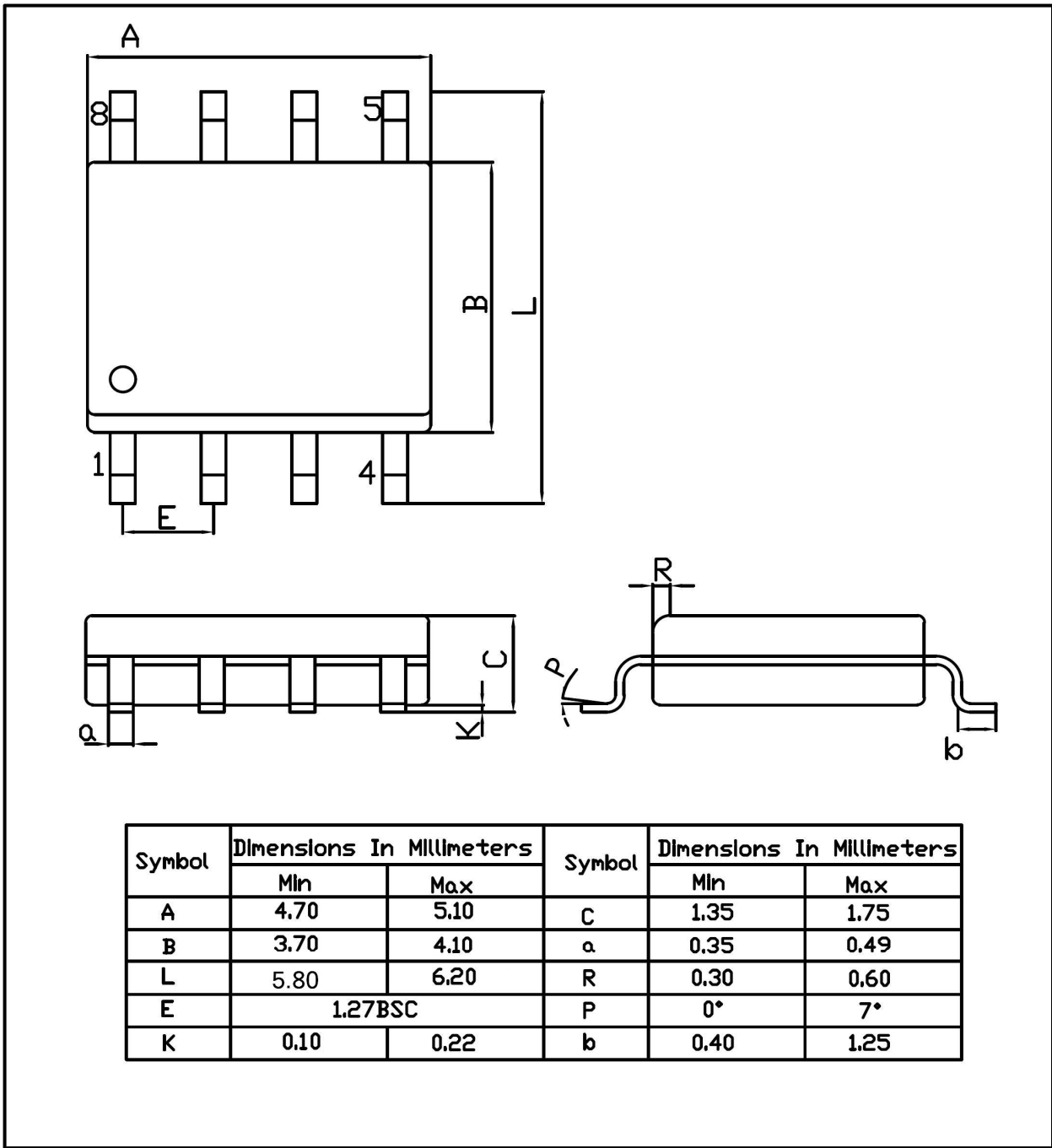


Figure 10: Normalized Maximum Transient Thermal Impedance

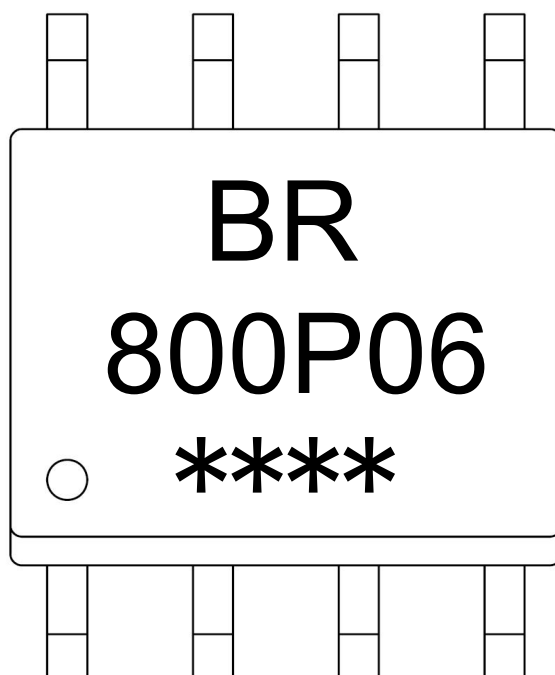
外形尺寸图 / Package Dimensions

SOP-8

Unit:mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

800P06： 为型号代码

****： 为生产批号代码，随生产批号变化

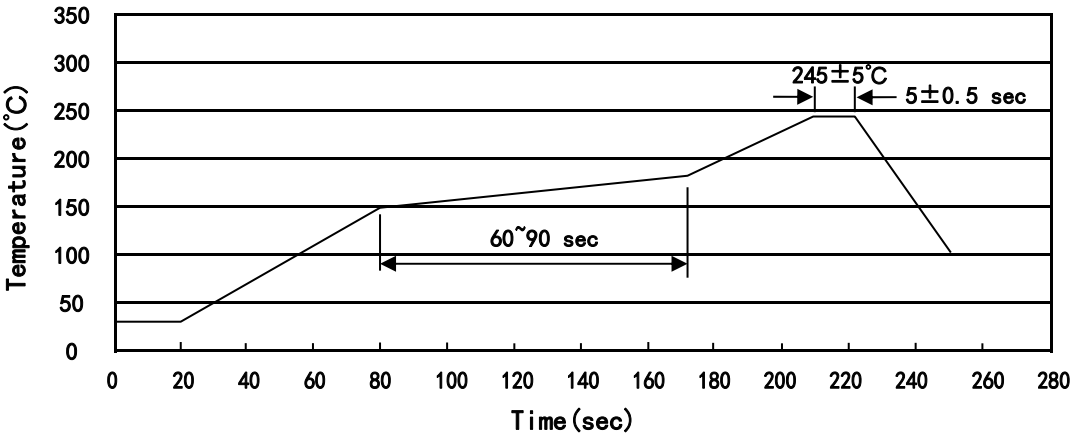
Note:

BR: Company Code

800P06: Product Type

****: 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℃，时间 60 ~ 90sec;
 - 2、峰值温度 245±5℃，时间持续为 5±0.5sec;
 - 3、焊接制程冷却速度为 2 ~ 10℃/sec.
- Note:

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

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

温度：260±5℃ 时间：10±1 sec. Temp.:260±5℃ 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
SOP/ESOP-8	4,000	2	8,000	6	48,000	13" ×12	360×360×50	380×335×366

使用说明 / Notices