

描述 / Descriptions

SOP-8 塑封封装 P 沟道 MOS 场效应管。

P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

特征 / Features

$V_{DS} (V) = -30V$

$I_D = -14A (V_{GS} = \pm 25V)$

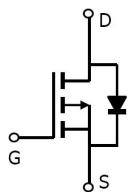
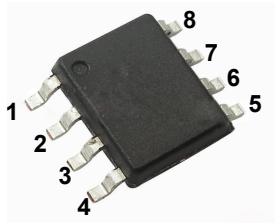
$R_{DS(ON)} < 14m\Omega (V_{GS} = -10V)$

无卤产品。HF Product.

用途 / Applications

用于电源管理，便携式设备和电池供电系统。

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

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}	-30	V
Gate-Source Voltage		V_{GSS}	± 25	V
Continuous Drain Current		$I_D (T_a=25^\circ\text{C})$	-14	A
Pulsed Drain Current		I_{DM}	-56	A
Power Dissipation for Single Operation		$P_D (T_a=25^\circ\text{C})$	3.1	W
Maximum Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ\text{C}$
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	40	$^\circ\text{C/W}$
Thermal Resistance-Junction to Ambient	Steady-State		75	$^\circ\text{C/W}$
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	24	$^\circ\text{C/W}$

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	BV_{DSS}	$I_D = -250\mu A$ $V_{GS} = 0V$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -24V$ $V_{GS} = 0V$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V$ $V_{GS} = \pm 25V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$ $I_D = -250\mu A$	-1.0	-1.5	-3.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V$ $I_D = -10A$		11	14	m Ω
		$V_{GS} = -4.5V$ $I_D = -10A$		14	24	
Diode Forward Voltage	V_{SD}	$I_S = -1A$ $V_{GS} = 0V$			-1.0	V
Total Gate Charge	$Q_{g(10V)}$	$V_{GS} = -10V$ $V_{DS} = -15V$ $I_D = -14A$		35		nC
Total Gate Charge	$Q_{g(4.5V)}$			17		
Gate-Source Charge	Q_{gs}			5.7		
Gate-Drain Charge	Q_{gd}			8.8		
Gate Resistance	R_g	$V_{GS} = 0V$ $V_{DS} = 0V$ $f = 1MHz$		7		Ω
Input Capacitance	C_{iss}	$V_{GS} = 0V$ $V_{DS} = -25V$ $f = 1MHz$		2210		pF
Output Capacitance	C_{oss}			150		
Reverse Transfer Capacitance	C_{rss}			255		
Turn-on Delay Time	$t_{d(on)}$	$V_{GS} = -10V$ $V_{DS} = -15V$ $R_L = 1.25\Omega$ $R_{GEN} = 3\Omega$		11		ns
Turn-on Rise Time	t_r			7.5		
Turn-off Delay Time	$t_{d(off)}$			43.5		
Turn-off Fall Time	t_f			17.5		

电参数曲线图 / Electrical Characteristic Curve

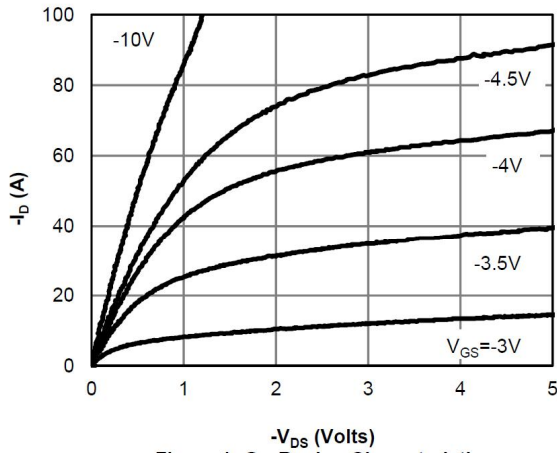


Figure 1: On-Region Characteristics

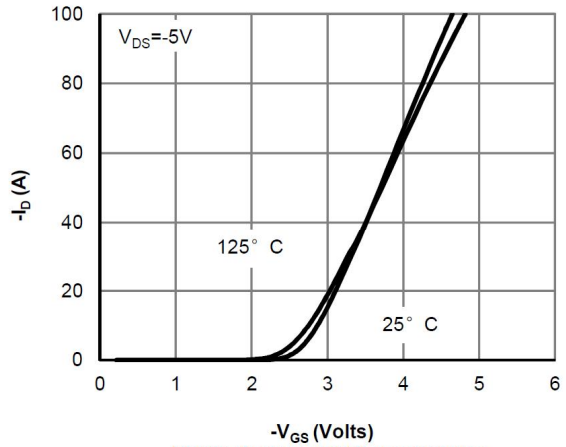


Figure 2: Transfer Characteristics

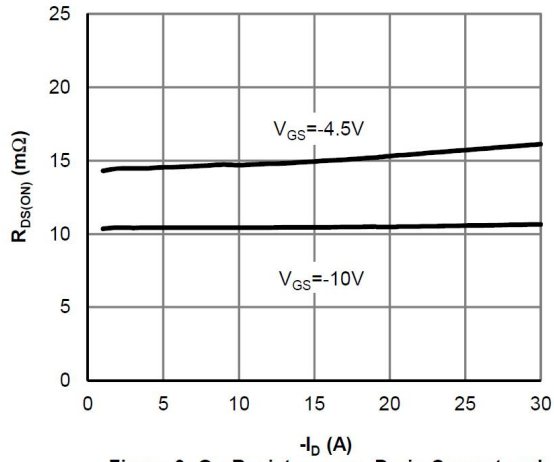


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

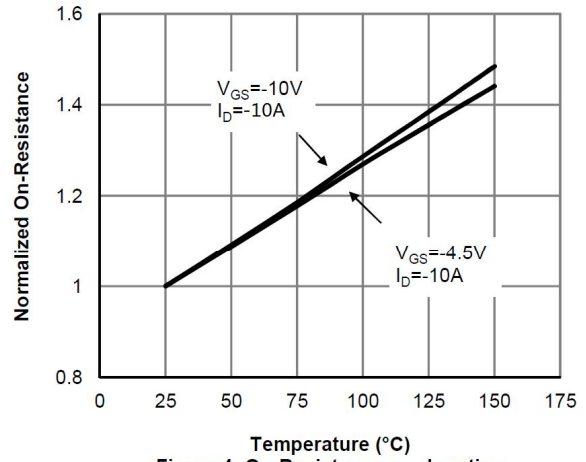


Figure 4: On-Resistance vs. Junction Temperature

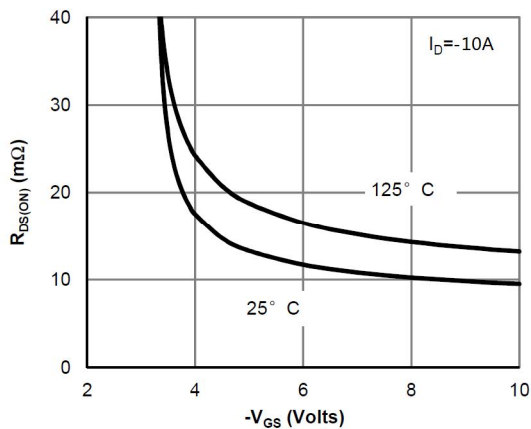


Figure 5: On-Resistance vs. Gate-Source Voltage

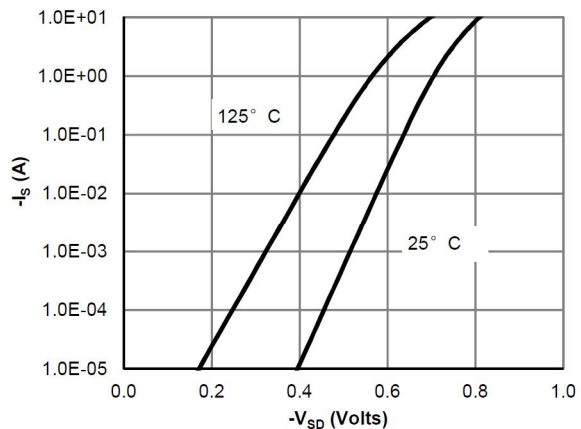
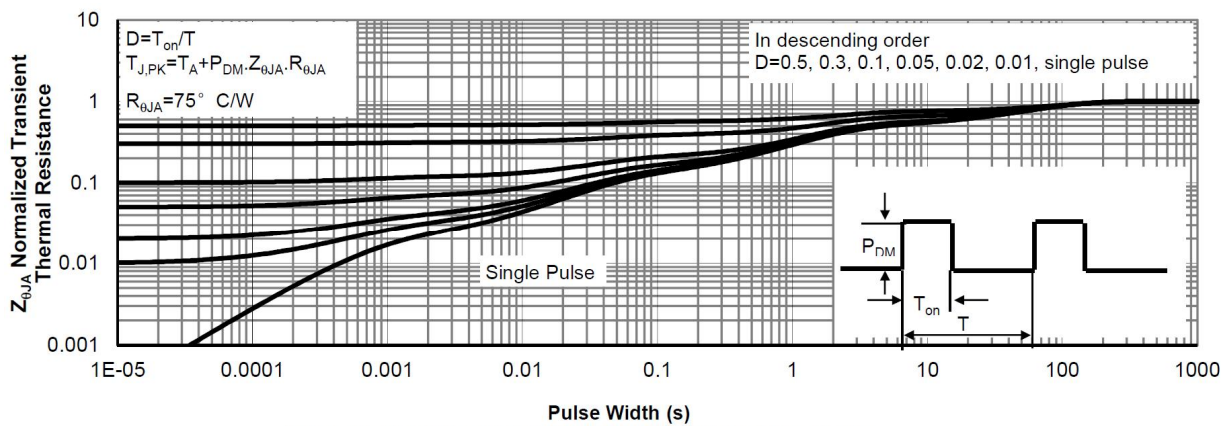
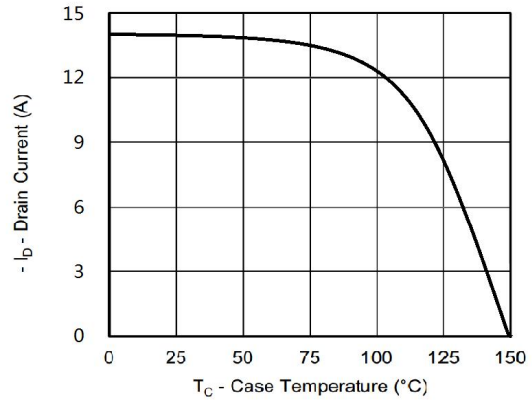
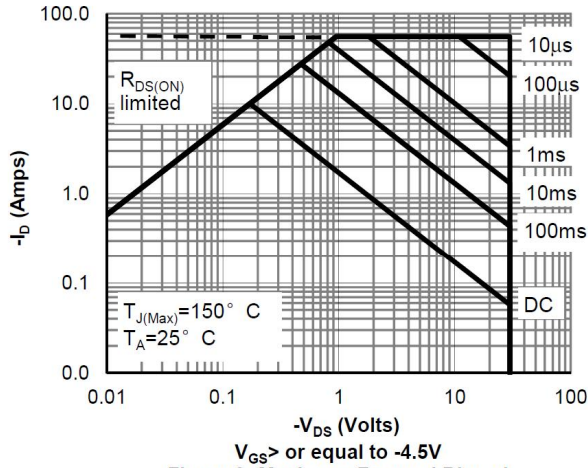
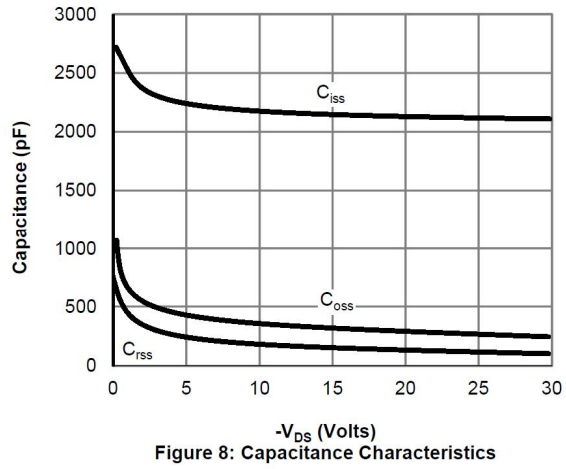
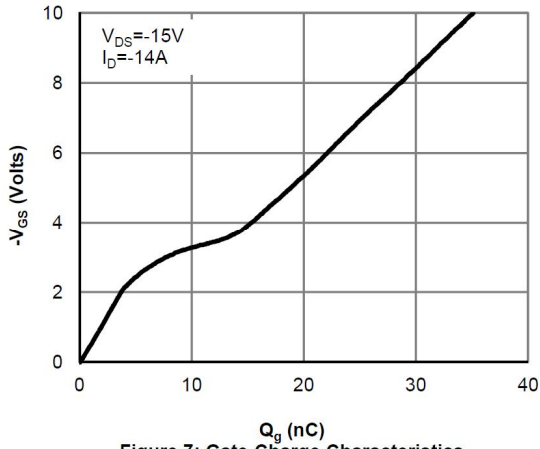


Figure 6: Body-Diode Characteristics

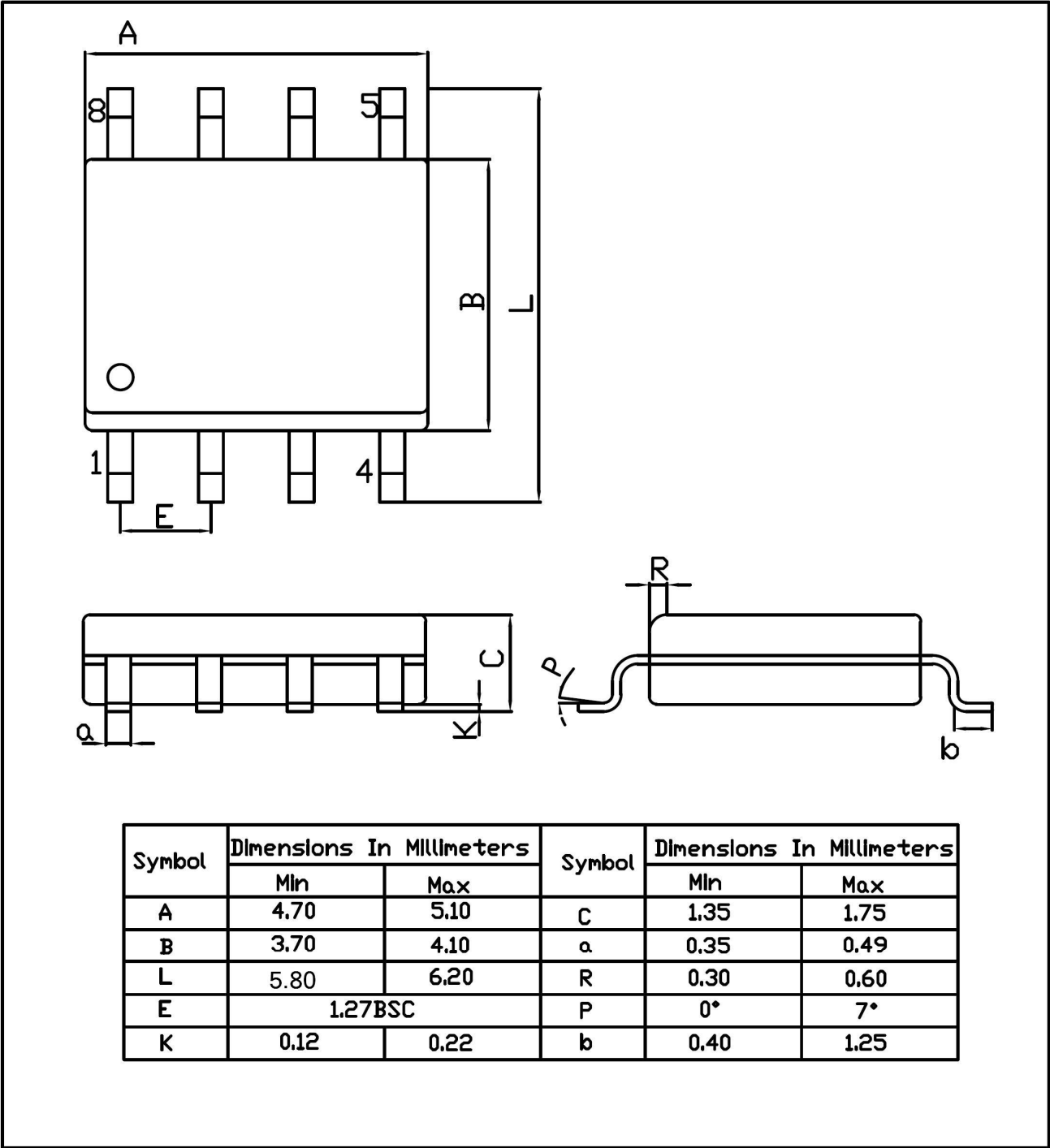
电参数曲线图 / Electrical Characteristic Curve



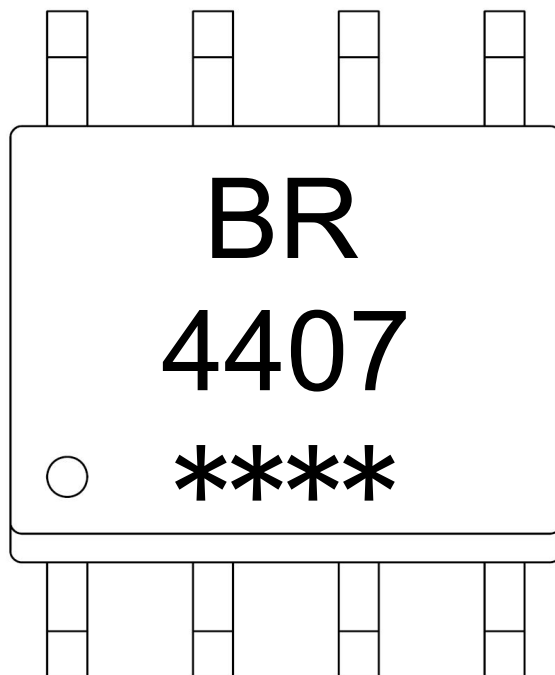
外形尺寸图 / Package Dimensions

SOP-8

Unit:mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

4407： 为型号代码

****： 为生产批号代码，随生产批号变化

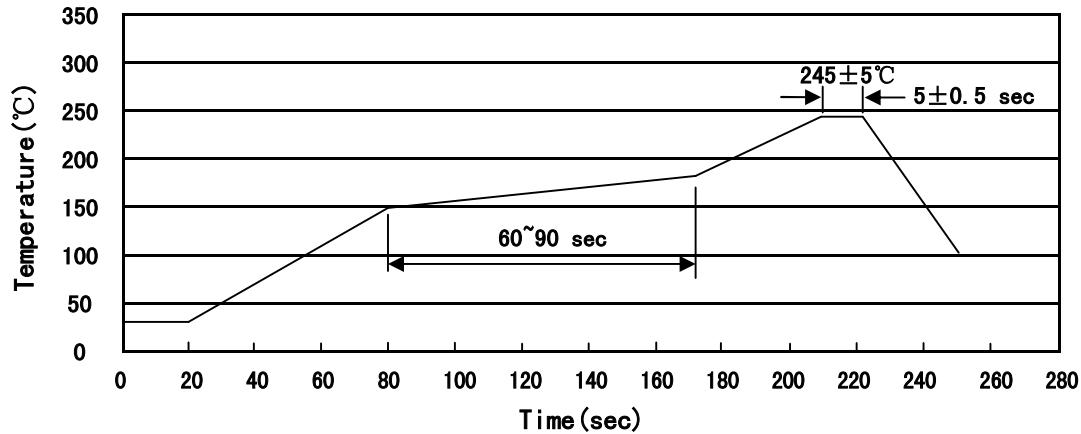
Note:

BR: Company Code

4407: 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°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
SOP/ESOP-8	4,000	2	8,000	6	48,000	13" ×12	360×360×50	380×335×366

使用说明 / Notices