

描述 / Descriptions

SOP-8 塑封封装双通道电压比较器。Dual Voltage Comparator in a SOP-8 Plastic Package.

特征 / Features

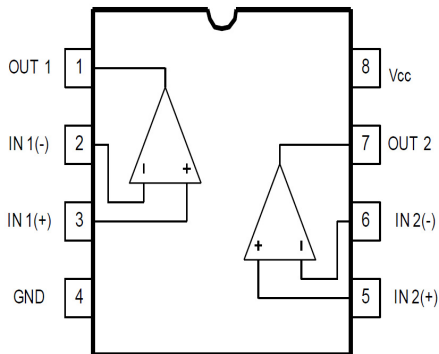
- ◆ 工作电源电压范围宽，单电源 ($V_{CC}=2V\sim 36V$) 或双电源 ($V_{CC}=\pm 1V\sim \pm 18V$) 均可工作。
- ◆ 输入共模电压范围接近地电平。
- ◆ 低功耗电流： $I_{CC}=0.8mA$ (典型值)。
- ◆ 低输入偏置电流 $I_{bias}=25nA$ (典型值)。
- ◆ 输出与TTL，DTL和CMOS等逻辑系统兼容。
- ◆ 无卤产品。

- ◆ Wide operating supply range, Single or dual supply operation ($V_{CC}=2V\sim 36V$ or $V_{CC}=\pm 1V\sim \pm 18V$).
- ◆ Input common-mode voltage includes ground.
- ◆ Low supply current drain: $I_{CC}=0.8mA$ (Typical).
- ◆ Low input bias current $I_{bias}=25nA$ (Typical).
- ◆ Output compatible with TTL, DTL, and CMOS logic system.
- ◆ Halogen-free Product.

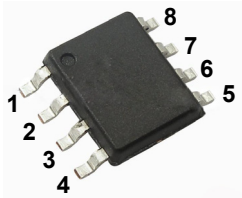
用途 / Applications

基本比较器电路，低频运算放大电路和 MOS 时钟发生器
Basic comparator circuit, Low frequency operation and amplification circuit, MOS clock generator.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 见内部等效电路 / PIN See Equivalent Circuit.

印章代码 / Marking

见印章说明 / See Marking Instructions

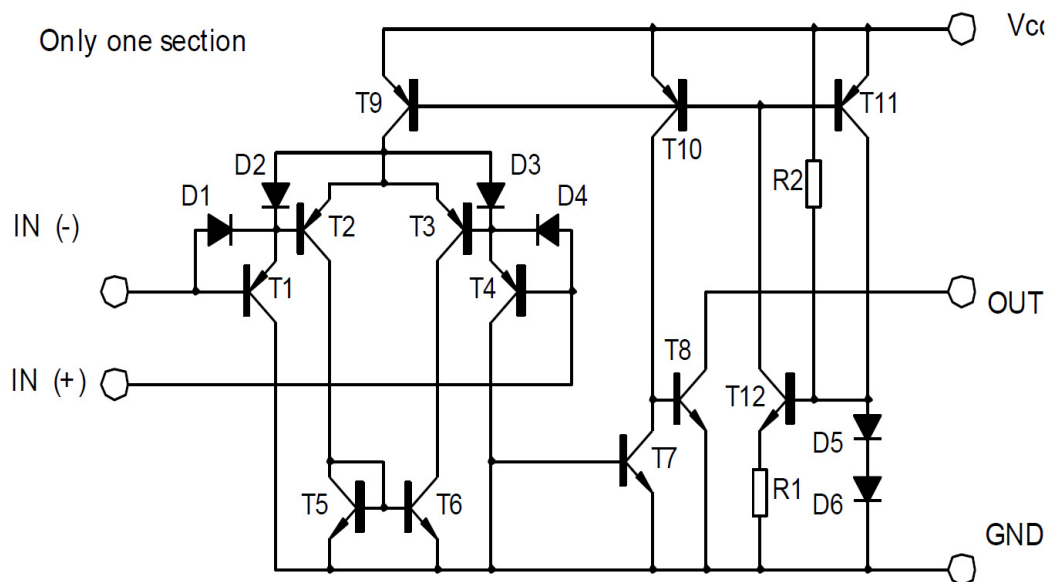
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Supply Voltage	V _{CC}	±18 or 36	V
Differential input voltage	V _{I(DIFF)}	36	V
Input Voltage	V _I	-0.3~36	V
Power Dissipation	P _D	570	mW
Operating Temperature	T _{opr}	0 ~ +70	°C
Storage Temperature	T _{stg}	-65 ~ +150	°C

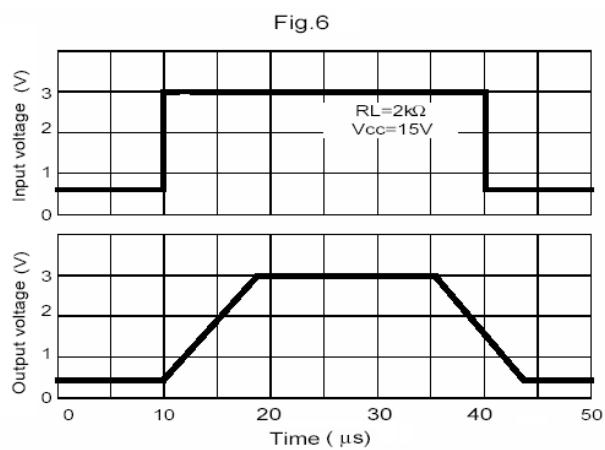
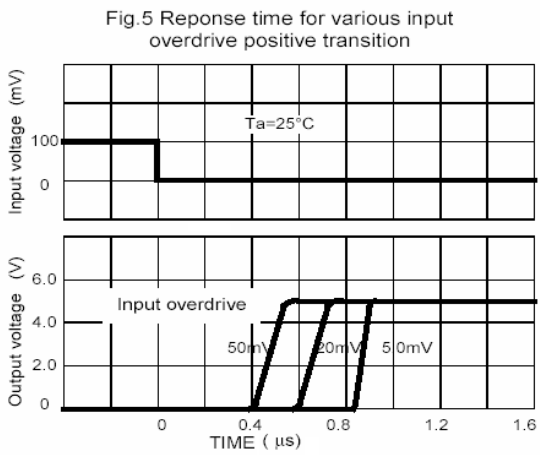
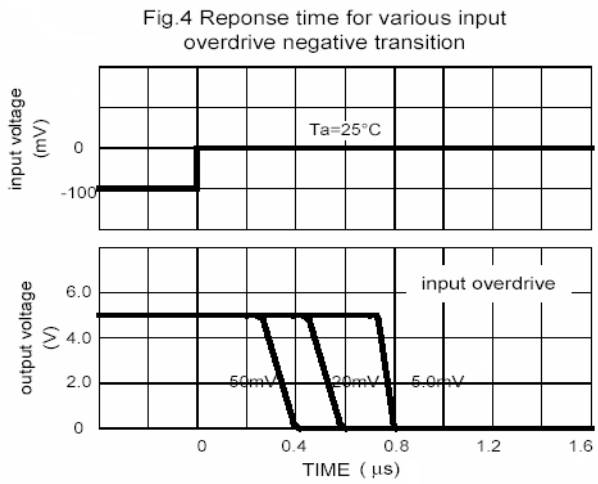
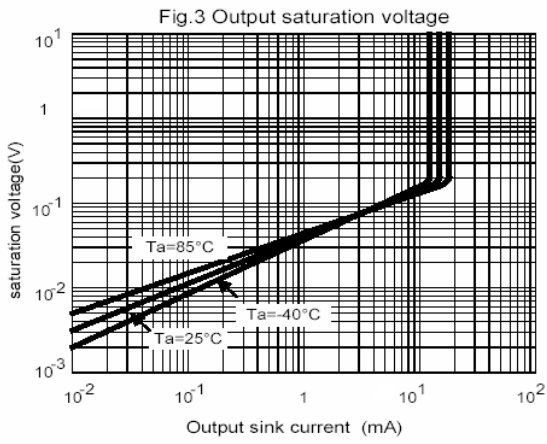
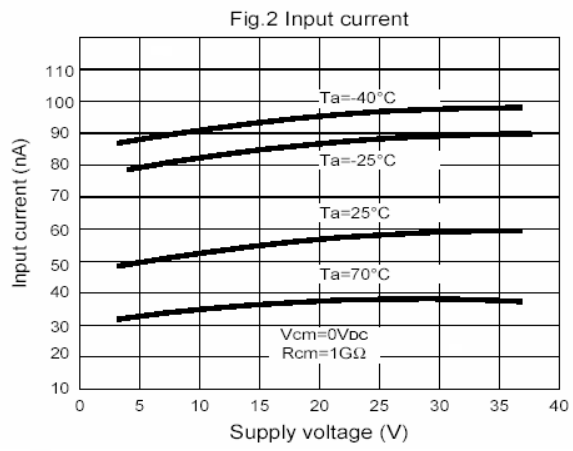
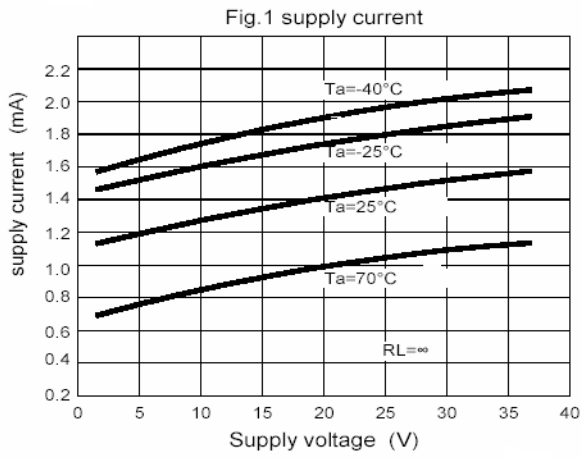
电性能参数 / Electrical Characteristics(Ta=25°C)

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
Input offset voltage	V _{IO}	V _{CM} =0 to V _{CC} -1.5 V _{o(p)} =1.4V ,Rs=0		±1.0	±5.0	mV
Input offset current	I _{IO}			±5.0	±50	nA
Input Bias current	I _b			25	250	nA
Common Mode Input Voltage Range	V _{I(R)}		0		V _{CC} -1.5	V
Supply Current	I _{CC}	R _L =∞		0.6	1.0	mA
		R _L =∞ V _{CC} =30V		0.8	2.5	mA
Large signal Voltage Gain	G _V	V _{CC} =15V R _L >15kΩ	50	200		V/mV
Large signal response time	T _{Ires}	V _i =TTL logic wing, V _{ref} =1.4V V _{RL} =5V R _L =5.1 kΩ		350		ns
Response time	T _{res}	V _{RL} =5V R _L =5.1 kΩ		1400		ns
Output sink current	I _{sink}	V _{i(-)} >1V V _{i(+)} =0V V _{o(p)} <1.5V	6	18		mA
Output saturation voltage	V _{sat}	V _{i(-)} >1V V _{i(+)} =0V I _{sink} =4mA		160	400	mV
output leakage current	I _{leakage}	V _{i(+)} =1V V _{i(-)} =0 V _{o(p)} =5V		0.1		nA

原理框图 / Functional Block Diagram



电参数曲线图 / Electrical Characteristic Curve



电参数曲线图 / Electrical Characteristic Curve

Fig.7 voltage Follower pulse response (small signal)

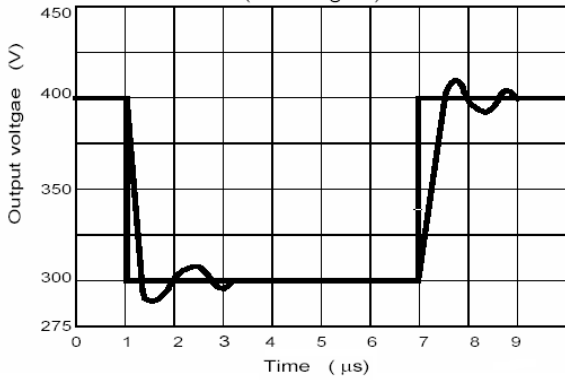


Fig.8 Large signal Frequency Response

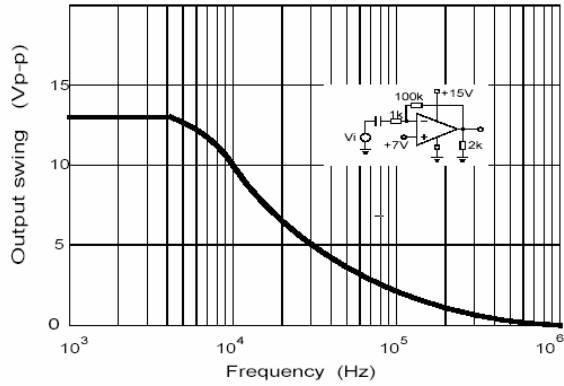


Fig.9 Output Characteristics current sourcing

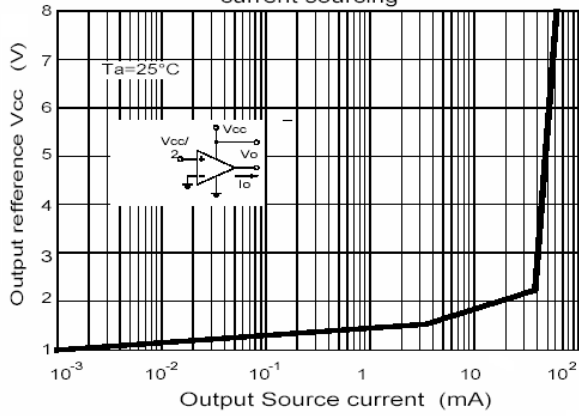


Fig.10 Output Characteristics Current sinking

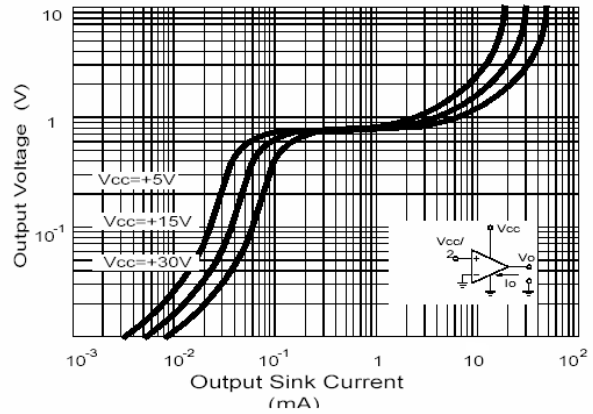
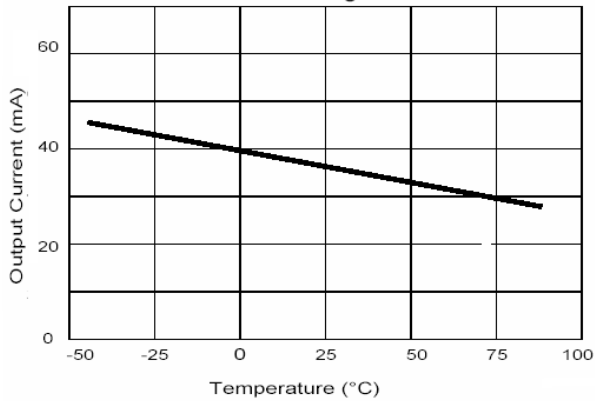


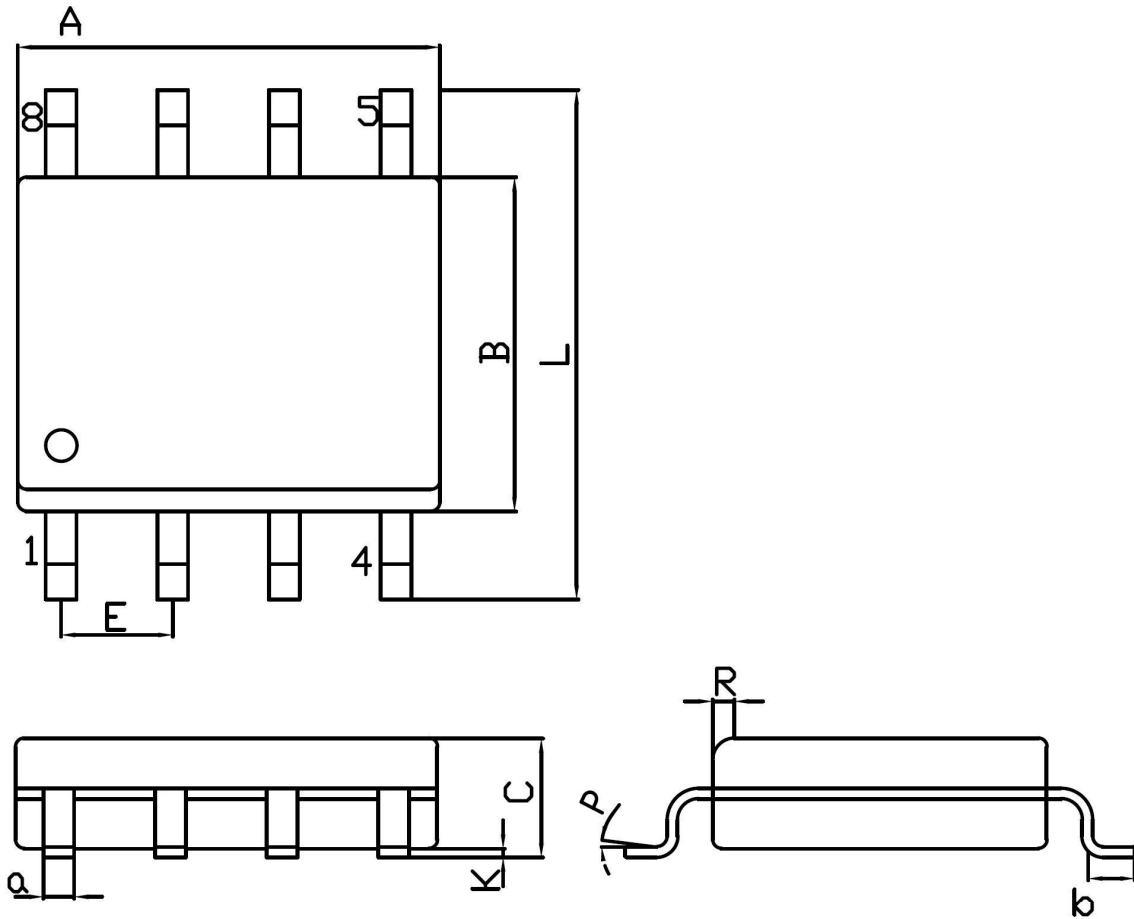
Fig.11 Current Limiting



外形尺寸图 / Package Dimensions

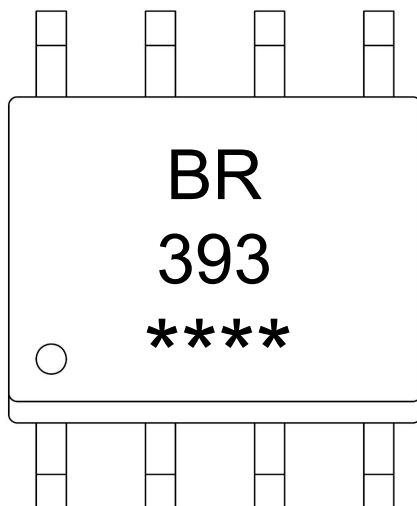
SOP-8

Unit:mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.70	5.10	C	1.35	1.75
B	3.70	4.10	a	0.35	0.49
L	5.80	6.20	R	0.30	0.60
E	1.27BSC		P	0°	7°
K	0.12	0.22	b	0.40	1.25

印章说明 / Marking Instructions



说明：

BR： 为公司代码

393： 为型号代码

****： 为生产批号代码，随生产批号变化

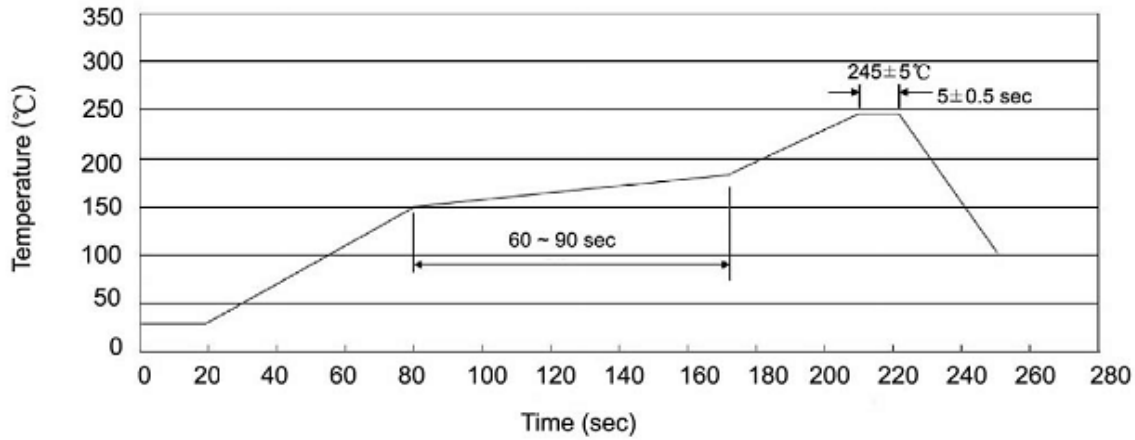
Note:

BR: Company Code.

393: 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