

描述 / Descriptions

TO-251 塑封封装单向可控硅。Thyristor in a TO-251 Plastic Package.

特征 / Features

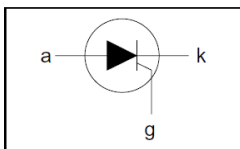
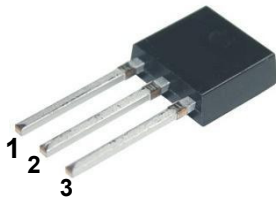
提供可靠的消费级应用，如温控，照明，调速等。

The consumption level provide reliable applications, such as temperature, lighting, speed, etc.

用途 / Applications

应用于高压控制电路。

Applied to high Voltage control circuit.

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

PIN1 : Cathode

PIN 2 : Anode

PIN 3 : Gate

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。See Marking Instructions.

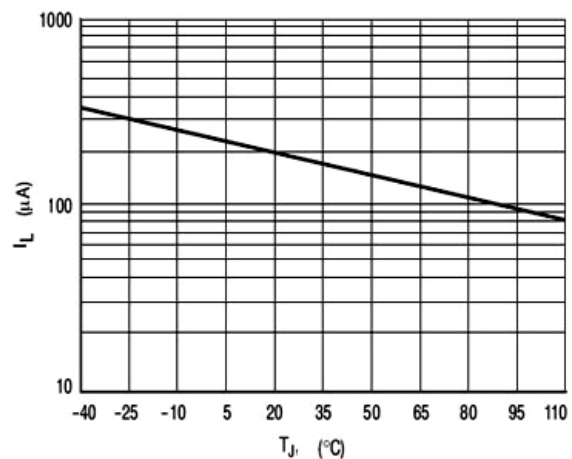
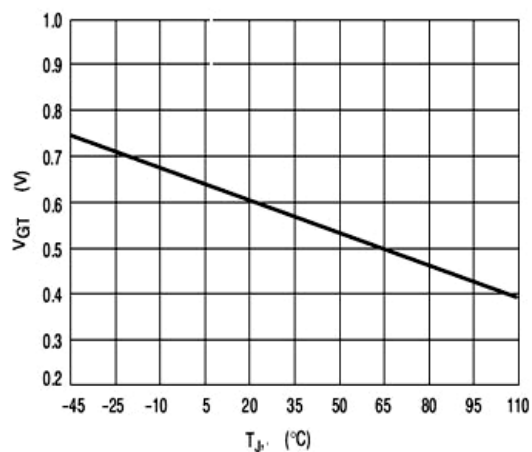
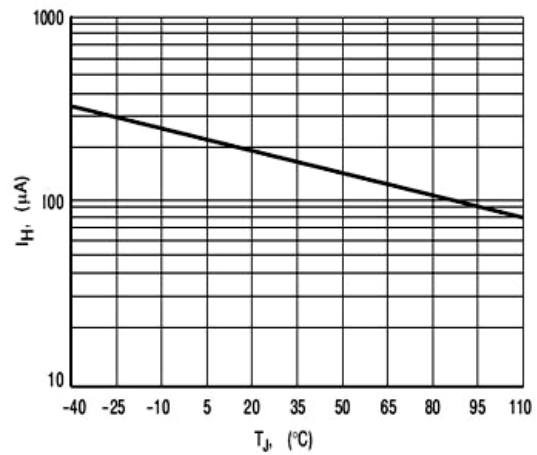
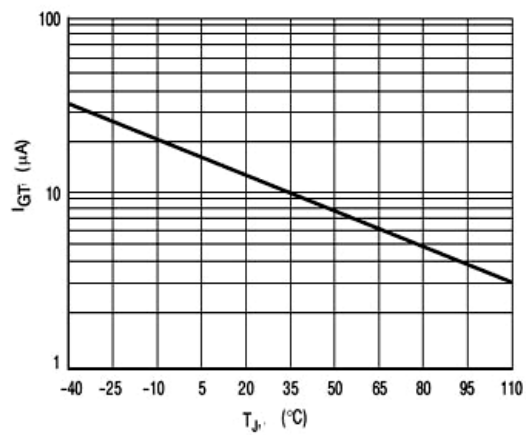
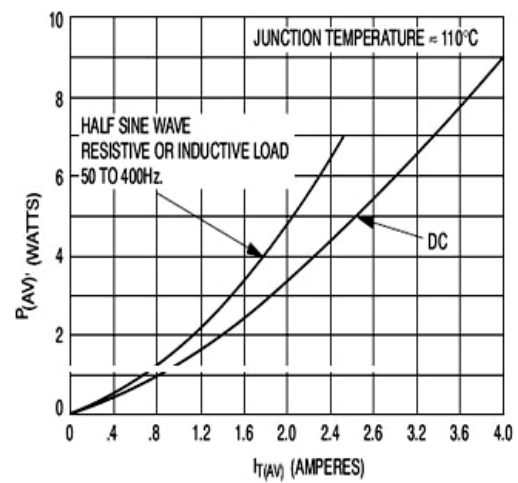
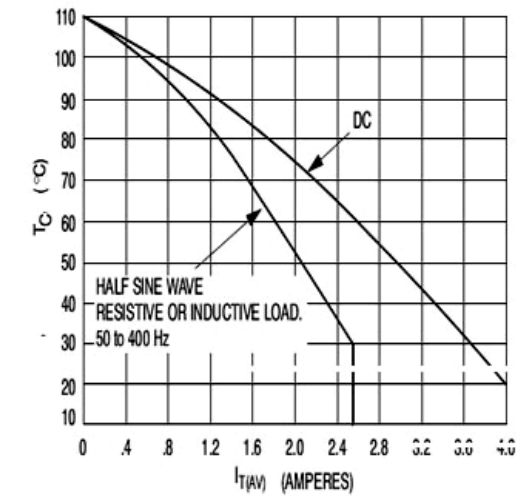

极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating	单位 Unit
Repetitive peak off-state voltages	V_{DRM} , V_{RRM}	$R_{GK}=1K$ $T_C=-40$ to $110^{\circ}C$	C106B C106D C106M 200 400 600	V
RMS on-state current	$I_{T(RMS)}$	$T_C=80^{\circ}C$	4	A
Average on-state current	$I_{T(AV)}$	$T_C=80^{\circ}C$	2.55	A
Non-repetitive peak on-state current	I_{TSM}	1/2 Cycle, Sine Wave, 60Hz, $T_J=+110^{\circ}C$	20	A
I_t^2 for fusing	I_t^2t	$t=8.3ms$	1.65	A ² S
Peak gate power	P_{GM}	$T_C=80^{\circ}C$	500	mW
Peak Average power	$P_{G(AV)}$	$T_C=80^{\circ}C$	100	mW
Peak gate current	I_{GM}	$T_C=80^{\circ}C$	0.2	A
Junction Temperature	T_J		-40~+110	°C
Storage Temperature Range	T_{stg}		-40~+150	°C

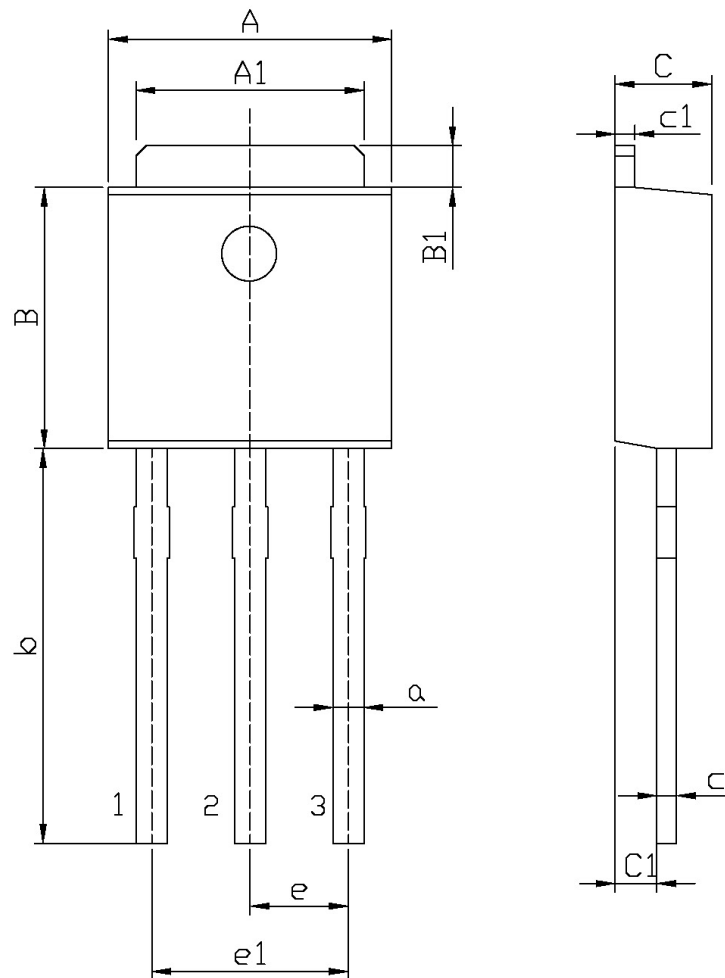
电性能参数 / Electrical Characteristics(Ta=25°C)

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
Repetitive peak off-state current	I_{DRM} , I_{RRM}	$V_{AK}=\text{Rated } V_{DRM} \text{ or } V_{RRM}$ $R_{GK}=1K\Omega$	$T_C=25^{\circ}C$		10	μA
			$T_C=+110^{\circ}C$		100	
On-state voltage	V_{TM}	$I_{TM}=4.0A$ $tp=380\mu S$			2.2	V
Gate trigger current	I_{GT}	$V_{AK}=6.0V_{dc}$ $R_L=100\Omega$	$T_C=25^{\circ}C$	15	200	μA
			$T_C=-40^{\circ}C$	35	500	
Gate trigger voltage	V_{GT}	$V_{AK}=6.0V_{dc}$ $R_L=100\Omega$	$T_C=25^{\circ}C$	0.4	0.60	V
			$T_C=-40^{\circ}C$	0.5	0.75	
Holding current	I_H	$V_{AK}=12.0V_{dc}$ $R_{GK}=1K\Omega$	$T_C=25^{\circ}C$	0.19	3.0	mA
			$T_C=-40^{\circ}C$	0.33	6.0	
			$T_C=+110^{\circ}C$	0.07	2.0	
Latching current	I_L	$V_{AK}=12.0V_{dc}$ $I_G=20mA$	$T_C=25^{\circ}C$	0.20	5.0	mA
			$T_C=-40^{\circ}C$	0.35	7.0	
Critical rate of rise of off-state voltage	dv/dt	$V_{AK}=\text{Rated } V_{DRM}$, $R_{GK}=1K\Omega$ $T_C=110^{\circ}C$		8.0		V/us

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

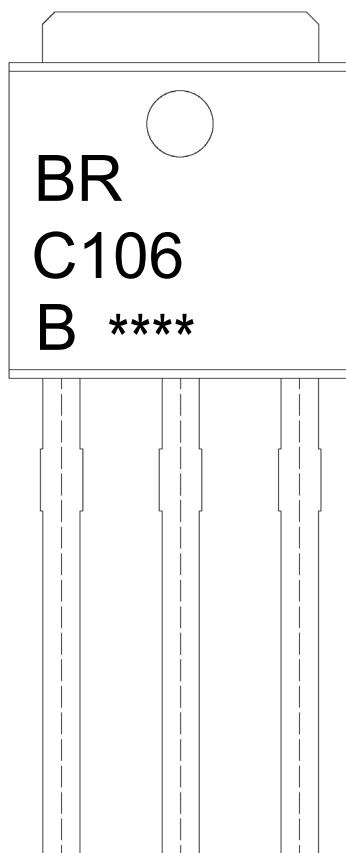


单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	6.45	6.75	a	0.50	0.70
A1	5.10	5.50	b	9.00	9.40
B	5.95	6.25	c	0.45	0.55
B1	0.95	1.25	c1	0.45	0.55
C	2.20	2.40	e	2.24	2.34
C1	0.95	1.15	e1	4.43	4.73

TO-251

印章说明 / Marking Instructions



说明：

BR： 为公司代码

C106： 为型号代码

B： 为耐压分档

****： 为生产批号代码，随生产批号变化。

Note:

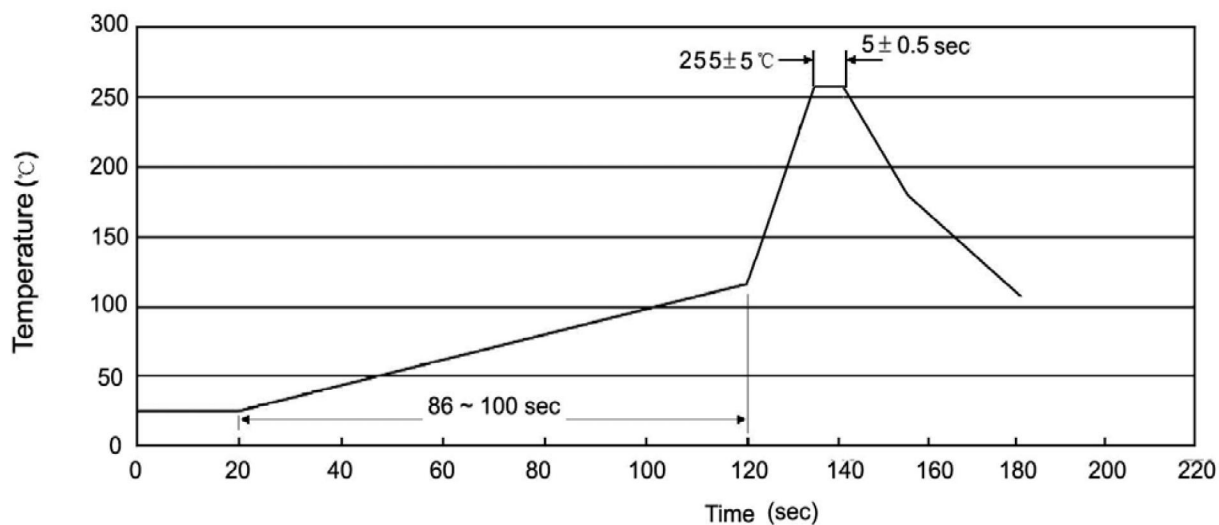
BR: Company Code.

C106: Product Type.

B: Withstand Voltage Symbol

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

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±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:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±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：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-251	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

使用说明 / Notices