

描述 / Descriptions

TO-220 塑封封装 双向可控硅。Triac in a TO-220 Plastic Package.

特征 / Features

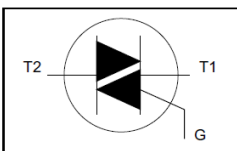
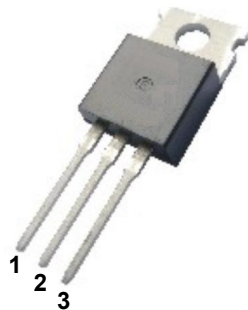
高双向瞬态电压能力和高热循环性能。

high bidirectional transient and blocking voltage capability and high thermal cycling performance.

用途 / Applications

主要用于马达控制，工业和家庭照明灯，加热控制和静电开关。

Typical applications include motor control, industrial and domestic lighting, heating and static switching.

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

PIN1 : Main Terminal 1 PIN 2 : Main Terminal 2 PIN 3 : Gate

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

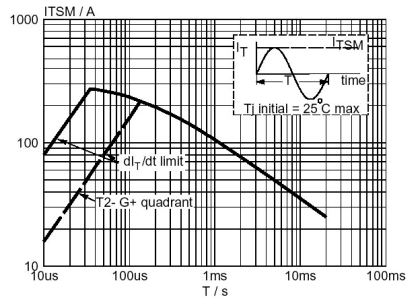
见印章说明。See Marking Instructions.

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

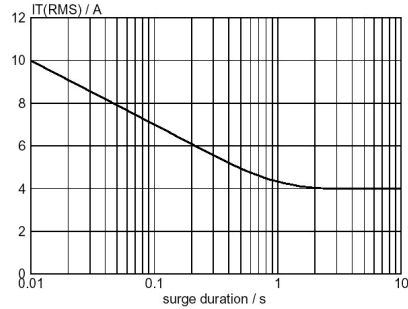
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Repetitive peak off-state voltages	V_{DRM}	500 600 800	V
RMS on-state current	$I_{\text{T(RMS)}}$	4.0	A
Non-repetitive peak on-state current	$I_{\text{TSM}(t=20\text{ms})}$	25	A
Non-repetitive peak on-state current	$I_{\text{TSM}(t=16.7\text{ms})}$	27	A
I^2t for fusing	$I^2t_{(t=10\text{ms})}$	3.1	A ² S
Repetitive rate of rise of on-state current after triggering	$di_{\text{T}}/dt_{(\text{T2+G+})}$	50	A/ μ S
Peak gate current	I_{GM}	2.0	A
Peak gate voltages	V_{GM}	5.0	V
Peak gate power	P_{GM}	5.0	W
Average gate power	$P_{\text{G(AV)}}$	0.5	W
Junction Temperature	T_{j}	125	°C
Storage Temperature Range	T_{stg}	-40~150	°C

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

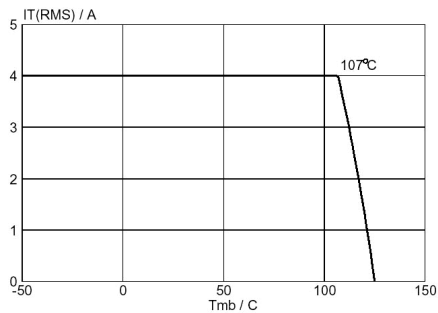
参数 Parameter	符号 Symbol	测试条件 Test Conditions		最小值 Min	典型值 Typ		最大值 Max				单位 Unit
Gate trigger current	I_{GT}	BT134-			F/G	E		E	F	G	mA
		$V_D=12V$ $I_T=0.1A$	T2+G+		5.0	2.5	35	10	25	50	
			T2+G-		8.0	4.0	35	10	25	50	
			T2-G-		11	5.0	35	10	25	50	
			T2-G+		30	11	70	25	70	100	
Latching current	I_L	$V_D=12V$ $I_{GT}=0.1A$	T2+G+		7.0	3.0	20	15	20	20	mA
			T2+G-		16	10	30	20	30	45	
			T2-G-		5.0	2.5	20	15	20	30	
			T2-G+		7.0	4.0	30	20	30	45	
Holding current	I_H	$V_D=12V$ $I_{GT}=0.1A$			5.0	2.2	15	15	15	30	mA
On-state voltage	V_T	$I_T=5.0A$			1.4		1.7				V
Gate trigger voltage	V_{GT} (I-II-III)	$V_D=12V$ $I_T=0.1A$			0.7		1.5				V
		$V_D=400V, I_T=0.1A,$ $T_j=125^{\circ}C$		0.25	0.4						
Off-state leakage current	I_D	$V_D=V_{DRM(max)}$ $T_j=125^{\circ}C$			0.1		0.5				mA
Critical rate of rise of off-state current	t_{gt}	$I_{TM}=6A, V_D=V_{DRM}$ $I_G=0.1A$ $di_g/dt=5A/\mu s$			2.0						μs
Repetitive peak off-state current	dV_D/dt	$V_D=67\% V_{DRM}$ gate open $T_i=125^{\circ}C$			250						V/ μs

电参数曲线图 / Electrical Characteristic Curve


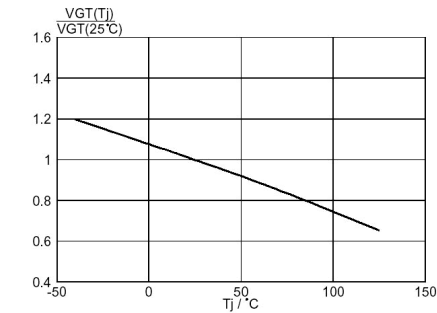
Maximum permissible non-repetitive peak on-state current I_{TSM} , versus pulse width t_p , for sinusoidal currents, $t_p \leq 20\text{ms}$.



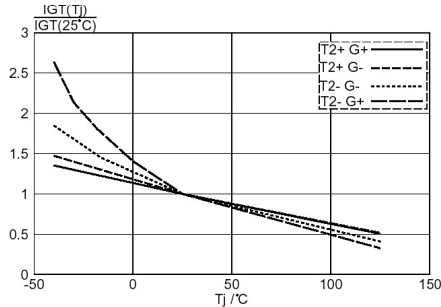
Maximum permissible repetitive rms on-state current $I_{T(RMS)}$, versus surge duration, for sinusoidal currents, $f = 50\text{Hz}$; $T_{mb} \leq 107^\circ\text{C}$.



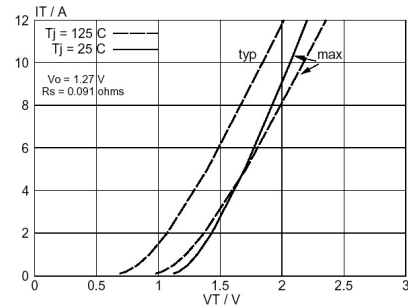
Maximum permissible rms current $I_{T(RMS)}$, versus mounting base temperature T_{mb} .



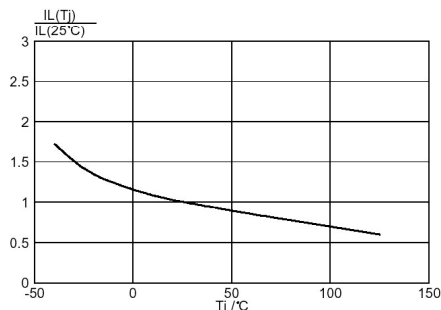
Normalised gate trigger voltage $V_{GT}(T) / V_{GT}(25^\circ\text{C})$, versus junction temperature T_J .



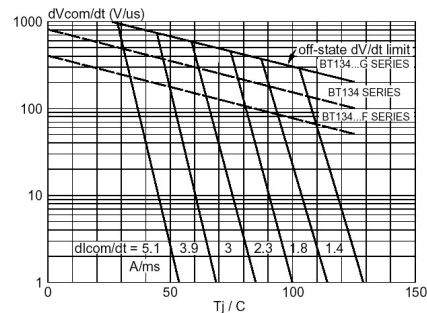
Normalised gate trigger current $I_{GT}(T) / I_{GT}(25^\circ\text{C})$, versus junction temperature T_J .



Typical and maximum on-state characteristic.



Normalised latching current $I_L(T) / I_L(25^\circ\text{C})$, versus junction temperature T_J .

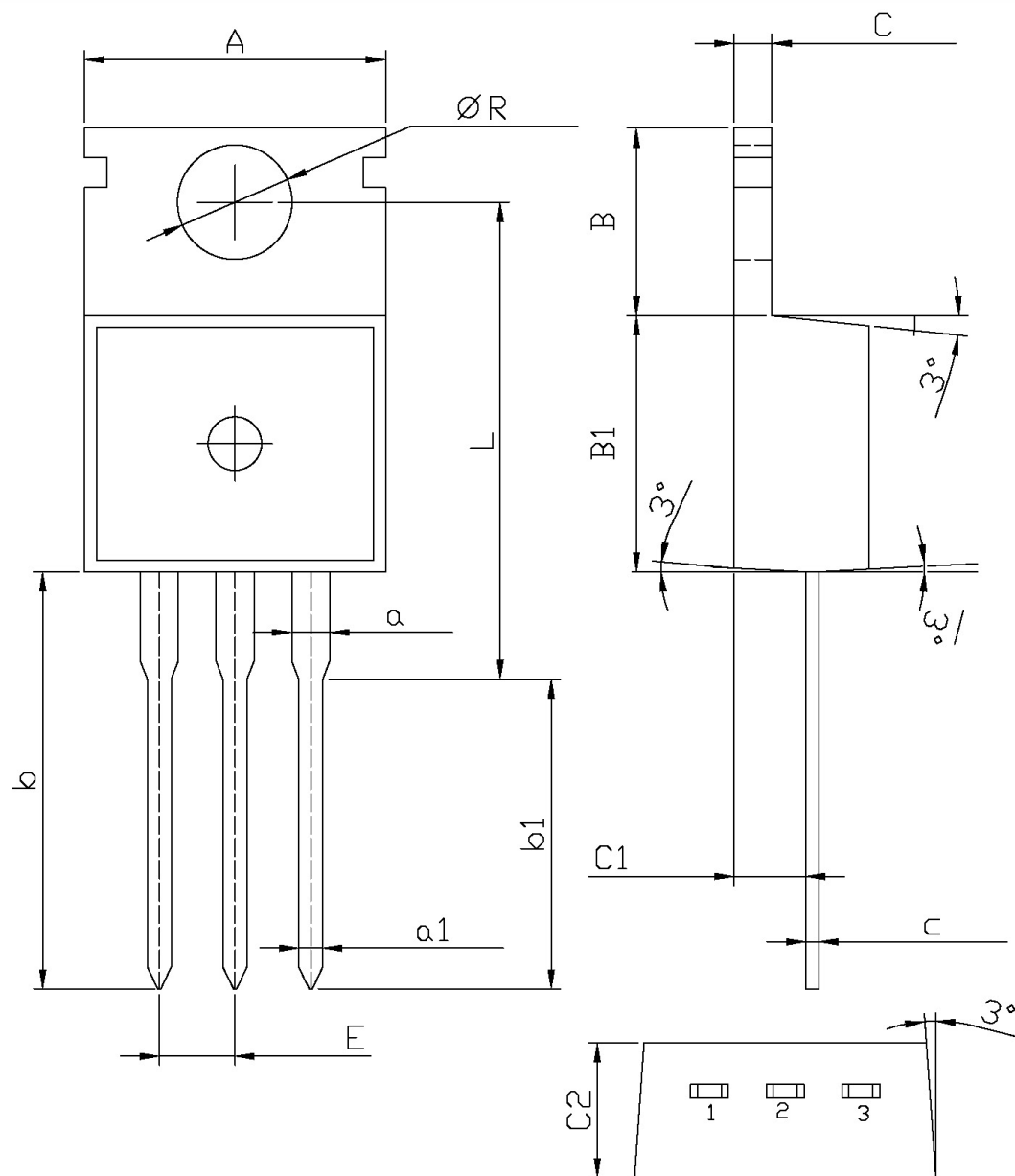


Typical commutation dV/dt versus junction temperature, parameter commutation dI_T/dt . The triac should commute when the dV/dt is below the value on the appropriate curve for pre-commutation dI_T/dt .

外形尺寸图 / Package Dimensions

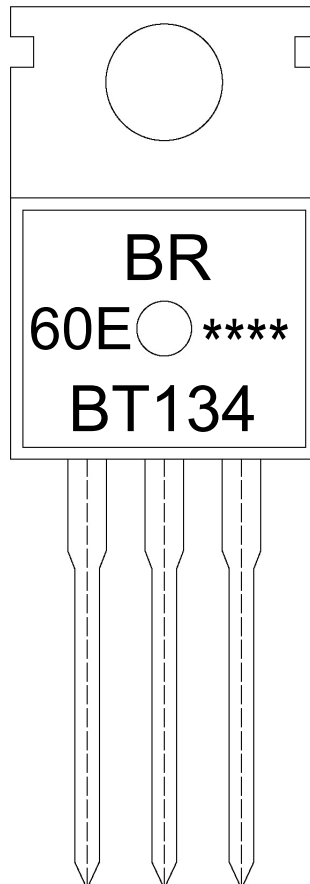
T□-220

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
L	15.7	16.1	B1	9.0	9.4
b	12.6	13.6	C1	2.2	2.6
b1	9.6	10.6	a1	0.7	0.9
a	1.22	1.32	c	0.4	0.6
E	2.34	2.74	C2	4.3	4.7

印章说明 / Marking Instructions



说明：

BR： 为公司代码

BT134： 为型号代码

60E： 为 V_{RRM} 、 I_{GT} 分档代码

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

BT134: Product Type.

60E: V_{RRM} 、 I_{GT} Bracket code

****: 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-220/F	200	10	2,000	5	10,000	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-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

使用说明 / Notices