

**描述 / Descriptions**

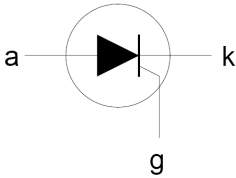
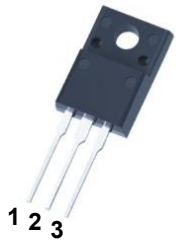
TO-220F 塑封封装 双向可控硅。Triac in a TO-220F Plastic Package.

**特征 / Features**

大电流可控硅，高可靠性和稳定性。  
High current triac, High reliability and stability.

**用途 / Applications**

一般用途。  
General purpose of application.

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

PIN 1 : 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.

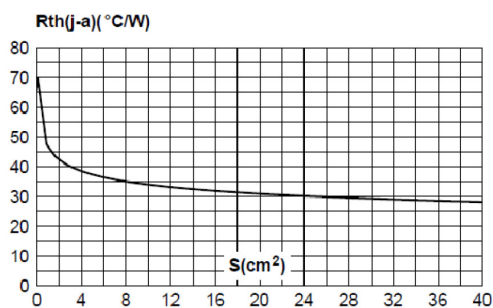
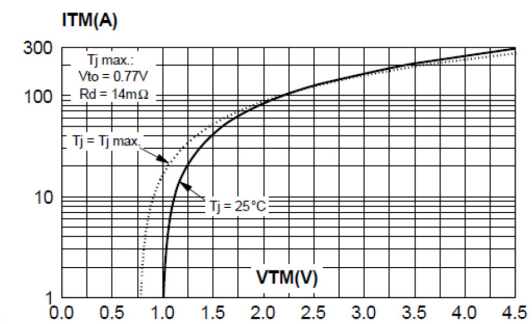
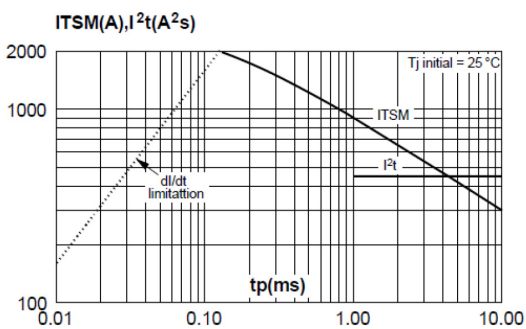
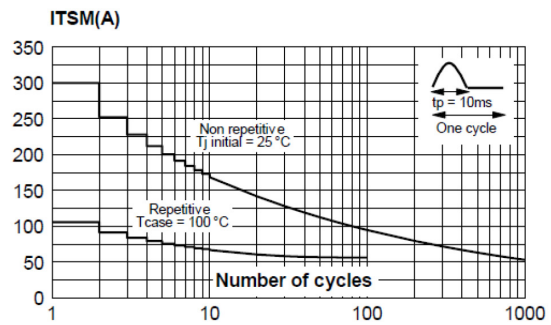
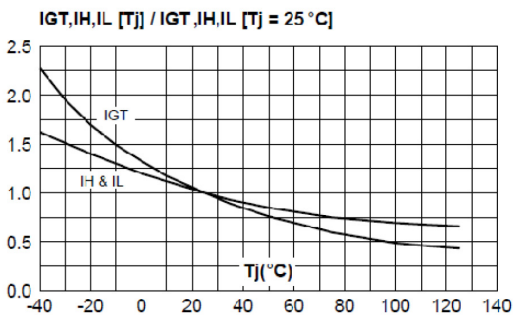
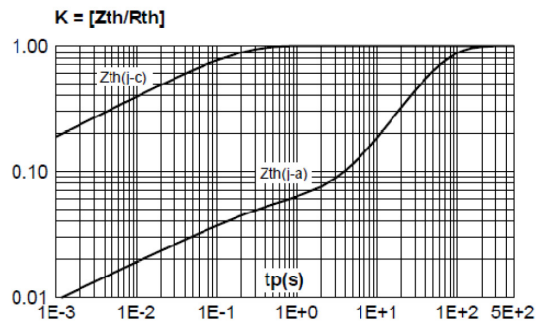
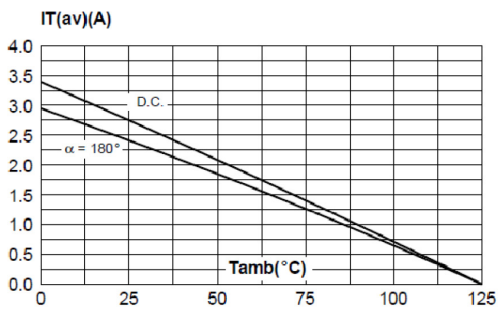
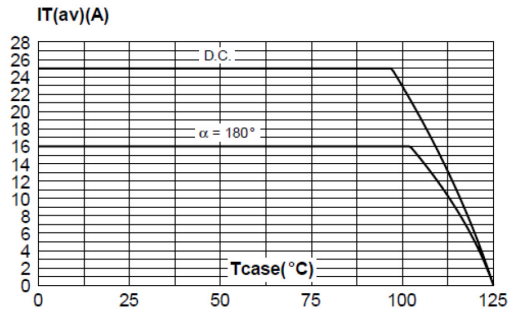
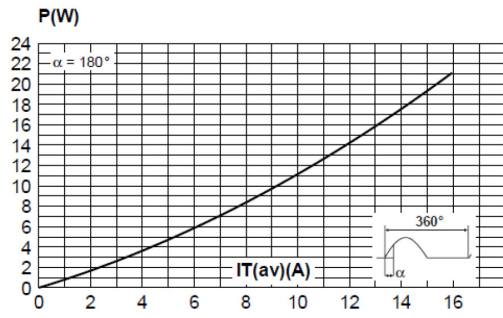
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Repetitive peak off-state voltages	$V_{DRM}/V_{RRM}$	600	V
On-state rms current(full sine wave $T_C=100^\circ\text{C}$ )	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current( $T_J=25^\circ\text{C}$ )	$I_{TSM(tp=10ms)}$	300	A
Non repetitive surge peak on-state current( $T_J=25^\circ\text{C}$ )	$I_{TSM(tp=8.3ms)}$	314	A
$I^2t$ value for fusing	$I^2t_{(tp=10ms)}$	450	$\text{A}^2\text{s}$
Critical rate of rise of on-state current $I_G=2xI_{GT}$ , $t_r \leq 100 \text{ ns}$ (F=60Hz $T_J=125^\circ\text{C}$ )	dI/dt	50	$\text{A}/\mu\text{s}$
Peak gate current( $t_p=20\mu\text{s}$ $T_J=125^\circ\text{C}$ )	$I_{GM}$	4.0	A
Average gate power dissipation( $T_J=125^\circ\text{C}$ )	$P_{G(AV)}$	1.0	W
Operating junction temperature range	$T_J$	-40~+125	$^\circ\text{C}$
Storage junction temperature range	$T_{stg}$	-40~+150	$^\circ\text{C}$
Junction to ambient	$R_{th(j-a)}$	60	$^\circ\text{C}/\text{W}$
Junction to case for DC	$R_{th(j-c)}$	1	

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

符号 Symbol	测试条件 Test Conditions		数值 Value	单位 Unit	
$I_{GT}$	$V_D=12\text{V}$ $R_L=33\Omega$	Min.	4	mA	
		Max.	40		
$V_{GT}$		Max.	1.3	V	
$V_{GD}$	$V_D=V_{DRM}$ $R_L=3.3\text{K}\Omega$ $T_J=125^\circ\text{C}$	Min.	0.2	V	
$I_H$	$I_T=500\text{mA}$ Gate open	Max.	50	mA	
$I_L$	$I_G=1.2I_{GT}$	Max.	90	mA	
$dV/dt$	$V_D=67\%V_{DRM}$ Gate open $T_J=125^\circ\text{C}$	Min.	1000	$\text{V}/\mu\text{s}$	
$V_{TM}$	$I_{TM}=50\text{A}$ $t_p=380\mu\text{s}$ $T_J=25^\circ\text{C}$	Max.	1.6	V	
$V_{T0}$	Threshold voltage $T_J=125^\circ\text{C}$	Max.	0.77	V	
$R_d$	Dynamic resistance $T_J=125^\circ\text{C}$	Max.	14	m $\Omega$	
$I_{DRM}$ $I_{RRM}$	$V_{DRM}=V_{RRM}$	$T_J=25^\circ\text{C}$	Max.	5	$\mu\text{A}$
		$T_J=125^\circ\text{C}$		4	mA

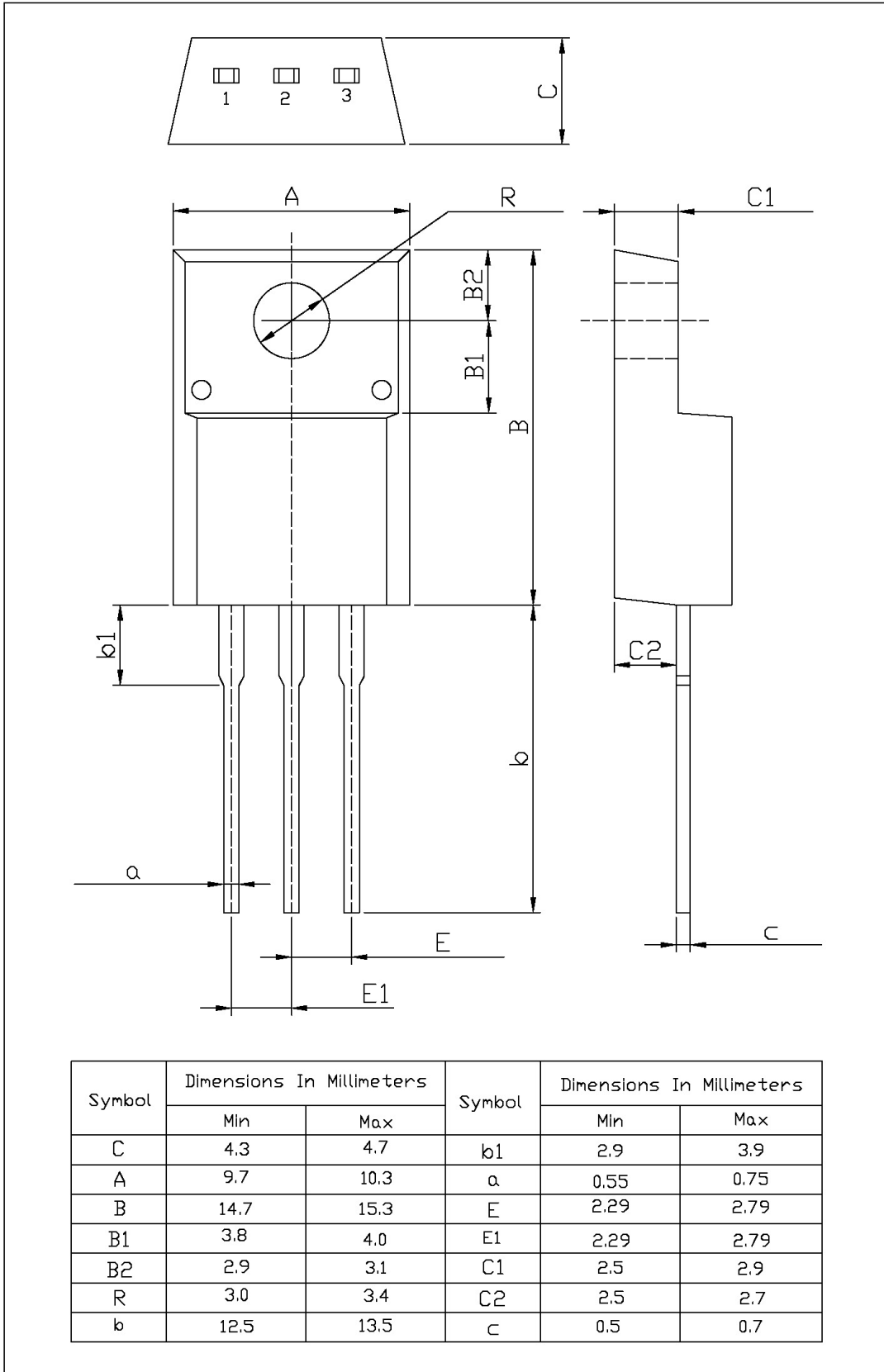
**电参数曲线图 / Electrical Characteristic Curve**



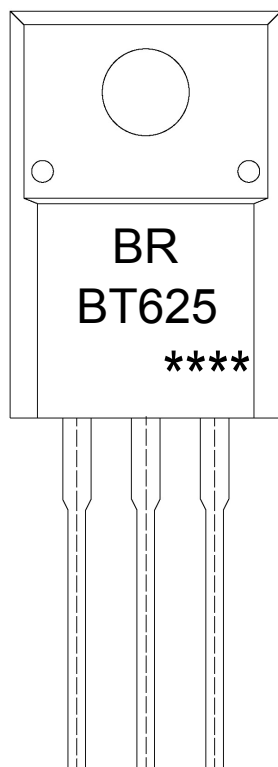
外形尺寸图 / Package Dimensions

TO-220F

单位: mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

BT625： 为产品型号

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

BT625: Product Type.

\*\*\*\*: 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 <sup>3</sup> )		
	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 <sup>3</sup> )		
	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**