

# MCR22

Rev.E Mar.-2016

## 描述 / Descriptions

TO-92 塑封封装单向可控硅。Thyristor in a TO-92 Plastic Package.

## 特征 / Features

断态电压临界上升率高，大电流时正向导通电压低。

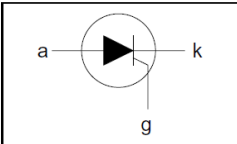
High dv/dt, very Low Forward "On" Voltage at High Current.

## 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 : Anode

PIN 2 : Gate

PIN 3 : Cathode

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

见印章说明。See Marking Instructions.

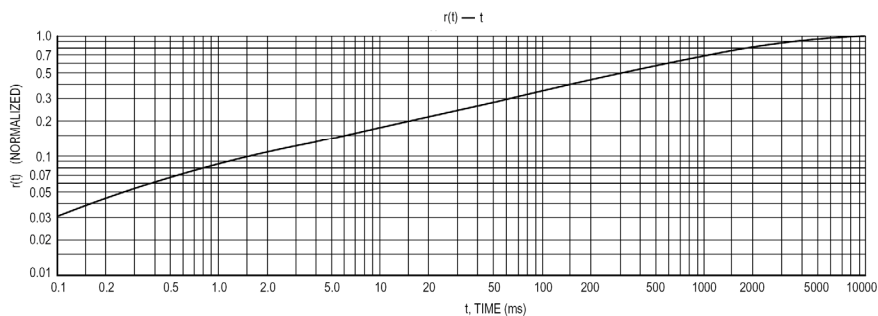
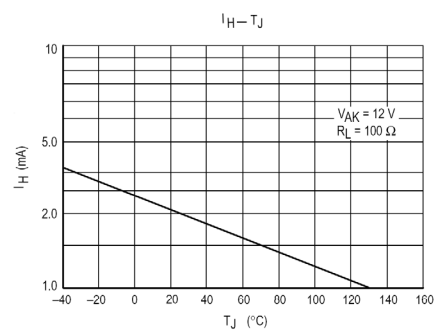
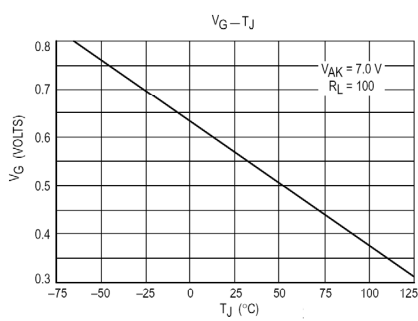
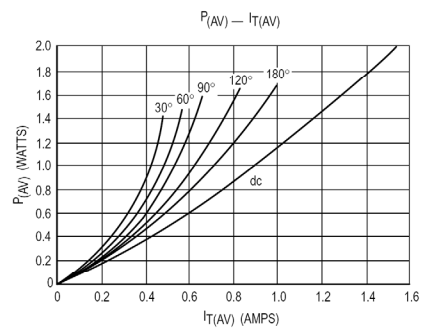
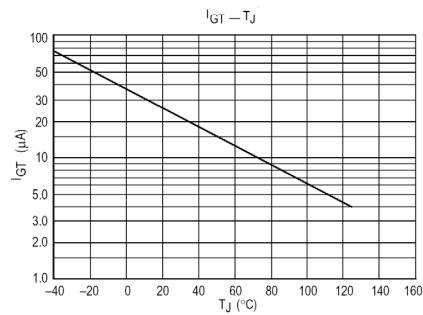
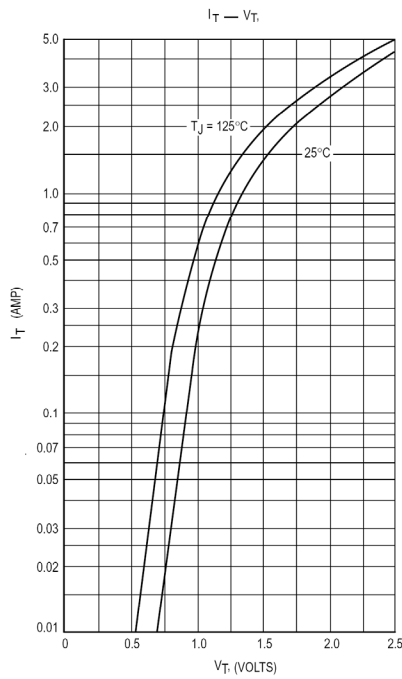
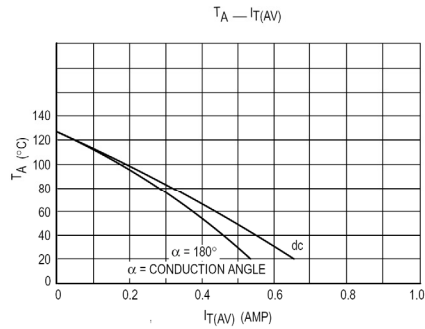
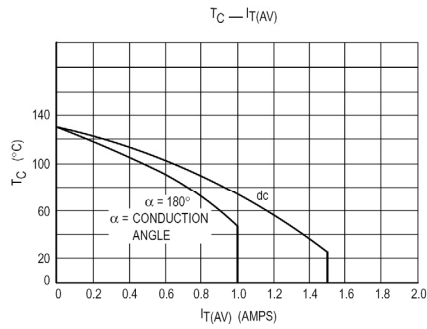
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	测试条件 Test Conditions		数值 Rating	单位 Unit
Repetitive peak off-state voltages	$V_{DRM}$ · $V_{RRM}$	$R_{GK}=1K$ $T_C=25$ to $125^{\circ}C$	MCR 22-2	50	V
			MCR 22-3	100	
			MCR 22-4	200	
			MCR 22-6	400	
			MCR 22-8	600	
RMS on-state current	$I_{T(RMS)}$	$T_A=80^{\circ}C$		1.5	A
Non-repetitive peak on-state current	$I_{TSM}$	1/2 Cycle, Sine Wave, 60Hz, $T_A=25^{\circ}C$		15	A
$I_t^2$ for fusing	$I^2t$	$t=8.3ms$		0.9	A <sup>2</sup> S
Peak gate power	$P_{GM}$	$T_A=25^{\circ}C$		500	mW
Peak Average power	$P_{G(AV)}$	$T_A=25^{\circ}C$		100	mW
Peak gate current	$I_{FGM}$	$T_A=25^{\circ}C$ (300 $\mu$ S, 120 PPS)		0.2	A
Peak Reverse Gate Voltage	$V_{RGM}$	$T_A=25^{\circ}C$		5.0	V
Junction Temperature	$T_j$			-40~125	$^{\circ}C$
Storage Temperature Range	$T_{stg}$			-40~150	$^{\circ}C$

**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	$I_{DRM}$ $I_{RRM}$	$V_{AK}=\text{Rated}$ $V_{DRM}$ or $V_{RRM}$	$T_c = 25^{\circ}C$			10	$\mu$ A
			$T_c = +110^{\circ}C$			200	
On-state voltage	$V_{TM}$	$I_{TM}=1.0A$			1.2	1.7	V
Gate trigger current	$I_{GT}$	$V_{AK}=6.0Vdc$ , $R_L=100\Omega$	$T_c = 25^{\circ}C$			200	$\mu$ A
			$T_c = -40^{\circ}C$			500	
Gate trigger voltage	$V_{GT}$	$V_{AK}=7.0Vdc$ , $R_L=100\Omega$	$T_c = 25^{\circ}C$			0.8	V
			$T_c = -40^{\circ}C$			1.2	
Holding current	$I_H$	$V_{AK}=12.0Vdc$	$T_c = 25^{\circ}C$		2	5	mA
			$T_c = -40^{\circ}C$			10	
Critical rate of rise of off-state voltage	dv/dt	$T_C=125^{\circ}C$			25		V/us

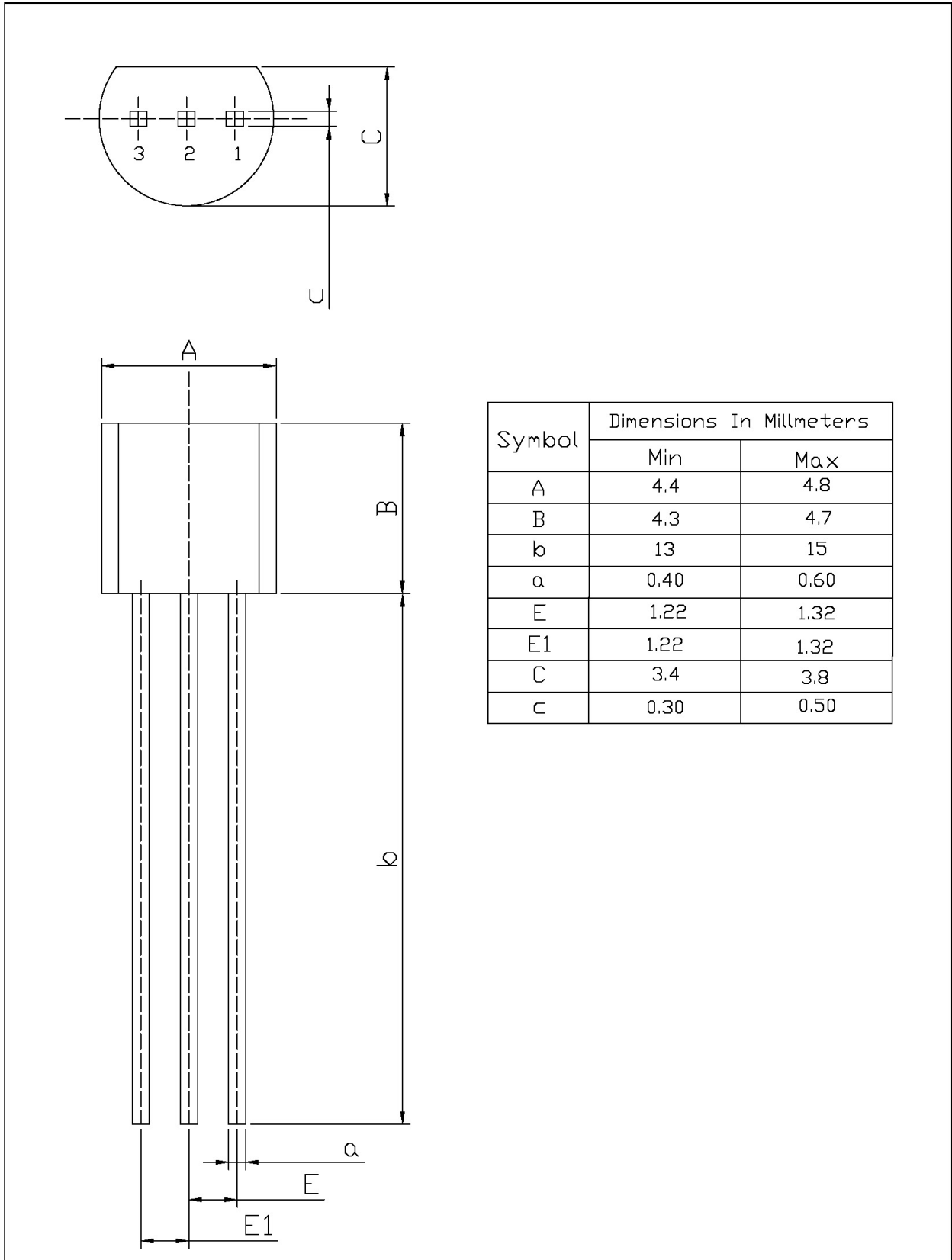
**电参数曲线图 / Electrical Characteristic Curve**



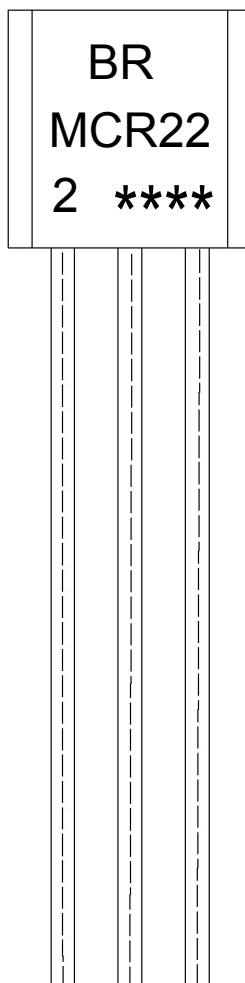
外形尺寸图 / Package Dimensions

T0-92

Unit: mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

MCR22： 为产品型号

2： 为规格代码

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

MCR22: Product Type.

2: Specification 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: mm3)		
	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-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

编带包装 / AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

**使用说明 / Notices**