

<b>DCR55</b>		
	单向可控硅 THYRISTOR	版本号 201603-A

## 产品概述 GENERAL DESCRIPTION

DCR55 单向可控硅采用穿通隔离台面结构,复合玻璃钝化PN结表面保护工艺技术, dv/dt高,可靠性高,适用于控温、调光、马达控制。

DCR55 Thyristor is fabricated using separation diffusion processes ,the junction termination areas are passivated with glass. Thanks to highly dv/dt and reliability,the Triacs series is suitable for domestic lighting ,heating and motor speed controllers.

## 主要参数 MAIN CHARACTERISTICS

参数 Parameter	数值 Value	单位 Unit
$I_{T(RMS)}$	55	A
$V_{DRM}/V_{RRM}$	600/800/1000/1200	V
$I_{GT}$	$\leq 80$	mA

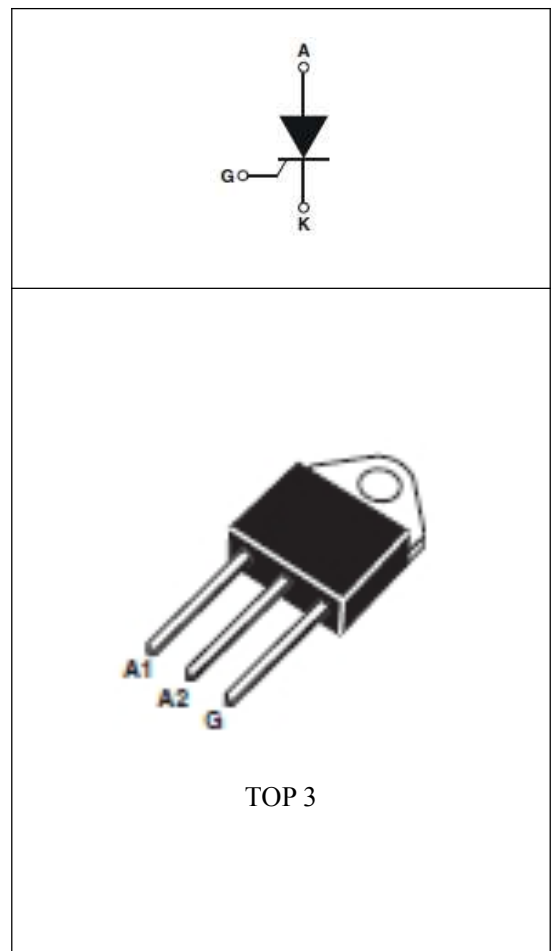
## 产品特性 FEATURES

- dv/dt高
- 通态压降低
- Rohs环保产品
- Highly dv/dt
- Low on-state voltage
- Rohs Products

## 应用领域 APPLICATIONS

主要应用于调光、控温、马达控制。

domestic lighting ,heating and motor speed controllers.



## 极限值(除非另有规定, Tj=25℃) ABSOLUTE RATINGS

(Tj=25℃, unless otherwise specified)

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
I <sub>T(RMS)</sub>	RMS 通态电流 RMS on-state current (full sine wave)	T <sub>c</sub> =100℃	55 A
I <sub>TSM</sub>	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=10ms	525 A
I <sup>2</sup> t	I <sup>2</sup> t 耗散值 I <sup>2</sup> t value for fusing	T <sub>p</sub> =10ms	1250 A <sup>2</sup> s
di/dt	通态电流上升值 Critical rate of rise of on-state current	F=60Hz, Tj=125℃	100 A/μs
I <sub>GM</sub>	门极峰值电流 Peak gate current	T <sub>p</sub> =20μs, Tj=125℃	8 A
P <sub>G(AV)</sub>	平均门极耗散功率 Average gate power dissipation	Tj=125℃	1 W
T <sub>stg</sub>	贮存结温范围 Storage junction temperature range		-40+150 ℃
T <sub>j</sub>	工作结温范围 Operating junction temperature range		-40+150 ℃

## 电参数(除非另有规定, Tj=25℃) ELECTRICAL CHARACTERISTICS

(Tj=25℃, unless otherwise specified)

参数 Parameter	符号 Symbol	规范值 Value	单位 Unit	测试条件 Test Conditions
触发电流 Gate trigger current	I <sub>GT</sub>	≤80	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
触发电压 Gate trigger voltage	V <sub>GT</sub>	≤1.5	V	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
维持电流 Holding current	I <sub>H</sub>	≤150	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
擎住电流 Latching current	I <sub>L</sub>	≤90	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
电压上升率 Rise of off- state voltage	dv/dt	≥400	V/μS	V <sub>D</sub> =67%V <sub>DRM</sub>
通态压降 Peak on-state voltage	V <sub>TM</sub>	≤1.7	V	I <sub>T</sub> =80A
断态漏电流 Peak repetitive forward blocking current	I <sub>DRM</sub>	≤10	μA	V <sub>RRM</sub> =V <sub>DRM</sub> , Tj = 25℃
	I <sub>RRM</sub>	≤4	mA	V <sub>RRM</sub> =V <sub>DRM</sub> , Tj = 125℃

## 热特性 THERMAL RESISTANCES

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
R <sub>th(j-c)</sub>	Junction to case(AC)	0.9	℃/W
R <sub>th(j-a)</sub>	Junction to ambient	50	℃/W

## 特征曲线 ELECTRICAL CHARACTERISTICS (CURVES)

图1 最大耗散功率与平均通态电流关系

Fig.1.Maximum Power Dissipation Versus

Average on-state current

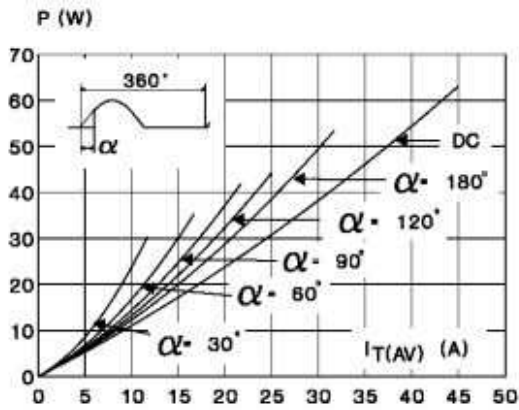


图3 通态特性

Fig.3.On-State Characteristics

图2 平均通态电流与Tc温度关系

Fig.2. IT(AV) On-state Current Versus TL

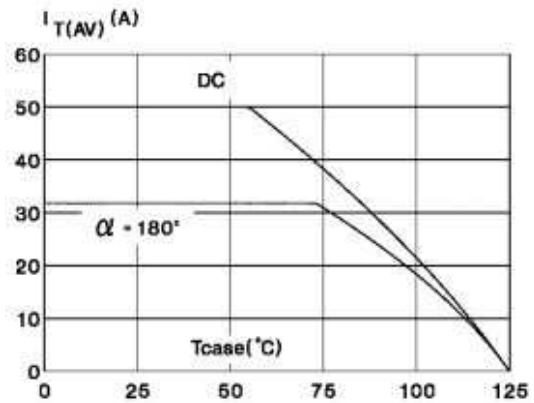


图4 通态浪涌峰值电流与周期数关系

Fig.4.Surge Peak On-state Current Versus Number Cycles

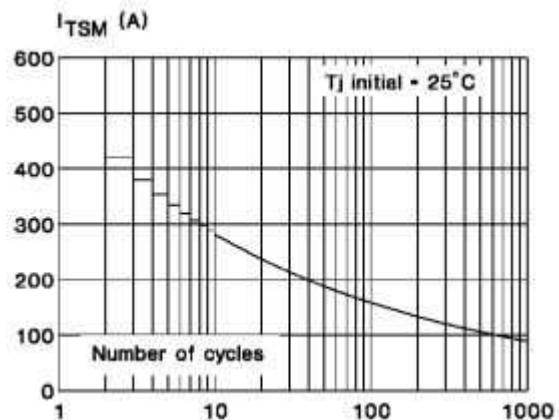
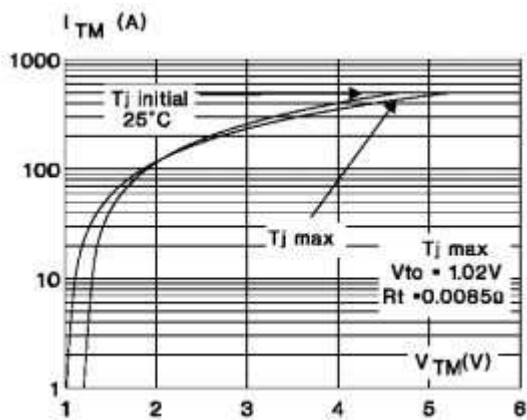
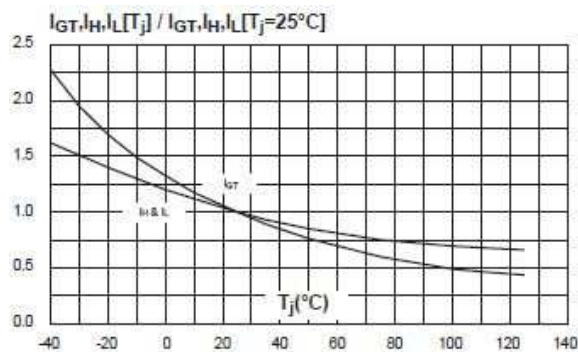


图5 IGT、IH、IL相对值（相对于25°C）与结温关系

Fig.5.Relative Variation Of Gate Trigger Current

, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



封装尺寸 PACKAGE MECHANICAL DATA

TOP 3

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.4	4.6	0.173	0.181
B	1.45	1.55	0.057	0.061
C	14.35	15.60	0.565	0.614
D	0.5	0.7	0.020	0.028
E	2.7	2.9	0.106	0.114
F	15.8	16.5	0.622	0.650
G	20.4	21.1	0.815	0.831
H	15.1	15.5	0.594	0.610
J	5.4	5.65	0.213	0.222
K	3.4	3.65	0.134	0.144
ØL	4.08	4.17	0.161	0.164
P	1.20	1.40	0.047	0.055
R	4.60 typ.		0.181 typ.	

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