

**描述 / Descriptions**

TO-220 塑封封装 双向可控硅。

Triac in a TO-220 Plastic Package.

**特征 / Features**

高转换性能。

High commutation performances.

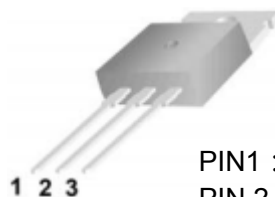
**用途 / Applications**

用于快速双向电压转换和热循环装置。

Use in applications requiring high bidirectional

transient and blocking voltage capability and

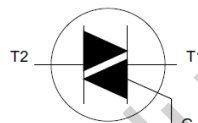
high thermal cycling performance.



PIN1 : Main Terminal 1

PIN 2 : Main Terminal 2

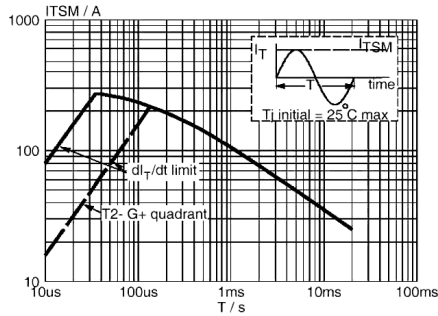
PIN 3 : Gate


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

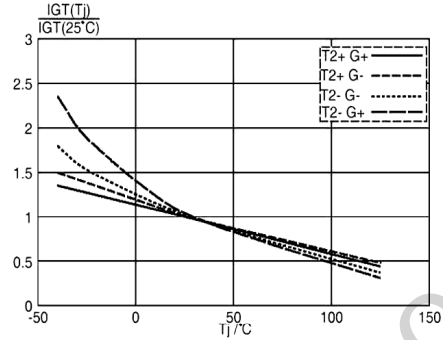
参数 Parameter	符号 Symbol	数值 Rating		单位 Unit
		600	800	
Repetitive peak off-state voltages	$V_{DRM}$	600	800	V
RMS on-state current	$I_{T(RMS)}$	4.0		A
Non-repetitive peak on-state current	$I_{TSM}(t=20ms)$	25		A
Non-repetitive peak on-state current	$I_{TSM}(t=16.7ms)$	27		A
$I^2t$ for fusing	$I^2t_{(t=10ms)}$	3.1		A <sup>2</sup> 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	$P_{G(AV)}$	0.5		W
Junction Temperature	$T_j$	125		°C
Storage Temperature Range	$T_{stg}$	-40~150		°C
Thermal resistance junction to ambient	$R_{th(j-a)}$	60		K/W
Thermal resistance junction to mounting base	$R_{th(j-b)}$	3.0		K/W

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

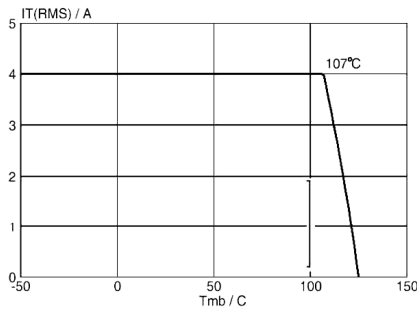
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit	
Gate trigger current	$I_{GT}$	$V_D=12V$ $I_T=0.1A$	T2+G+		2.5	10	mA
			T2+G-		4.0	10	
			T2-G-		5.0	10	
			T2-G+		11	25	
Latching current	$I_L$	$V_D=12V$ $I_{GT}=0.1A$	T2+G+		3.0	15	mA
			T2+G-		10	20	
			T2-G-		2.5	15	
			T2-G+		4.0	20	
Holding current	$I_H$	$V_D=12V$ $I_{GT}=0.1A$		2.2	15	mA	
On-state voltage	$V_T$	$I_T=5.0A$		1.4	1.7	V	
Gate trigger voltage	$V_{GT}$	$V_D=12V$ $I_T=0.1A$		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	$t_{gt}$	$I_{TM}=6A, V_D=V_{DRM(max)}$ $I_G=0.1A$ $di_g/dt=5A/\mu s$		2.0		$\mu s$	
Repetitive peak off-state current	$dV_D/dt$	$V_D=67\% V_{DRM(max)}$ gate open $T_j=125^\circ C$		50		V/ $\mu s$	

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


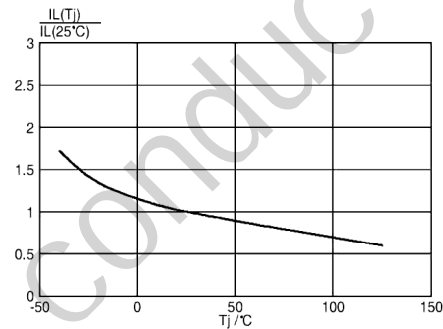
Maximum permissible non-repetitive peak on-state current  $I_{TSM}$ , versus pulse width  $t_p$ , for sinusoidal currents,  $t_p \leq 20\text{ms}$ .



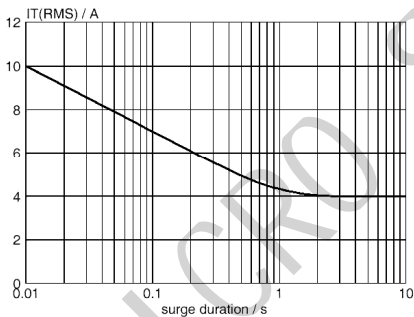
Normalised gate trigger current  $I_{GT}(T_j) / I_{GT}(25^\circ\text{C})$ , versus junction temperature  $T_j$ .



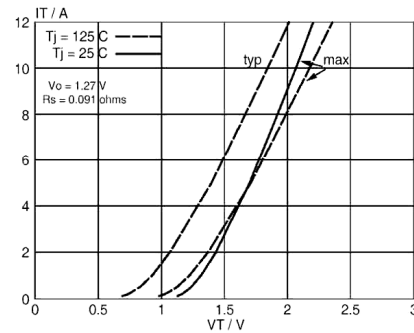
Maximum permissible rms current  $I_T(RMS)$ , versus mounting base temperature  $T_{mb}$ .



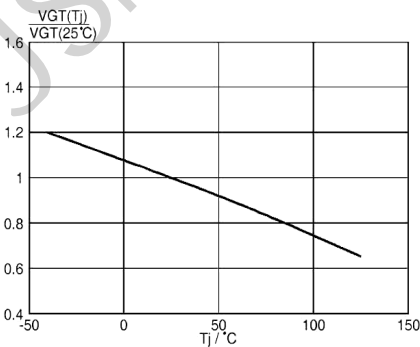
Normalised latching current  $I_L(T_j) / I_L(25^\circ\text{C})$ , versus junction temperature  $T_j$ .



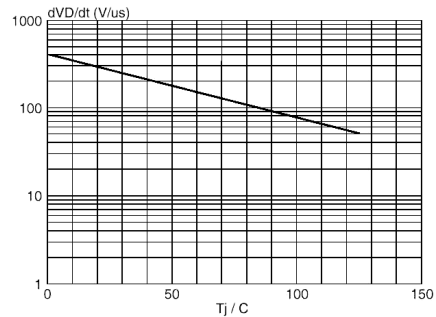
Maximum permissible repetitive rms on-state current  $I_T(RMS)$ , versus surge duration, for sinusoidal currents,  $f = 50\text{Hz}$ ;  $T_{mb} \leq 107^\circ\text{C}$ .



Typical and maximum on-state characteristic.



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

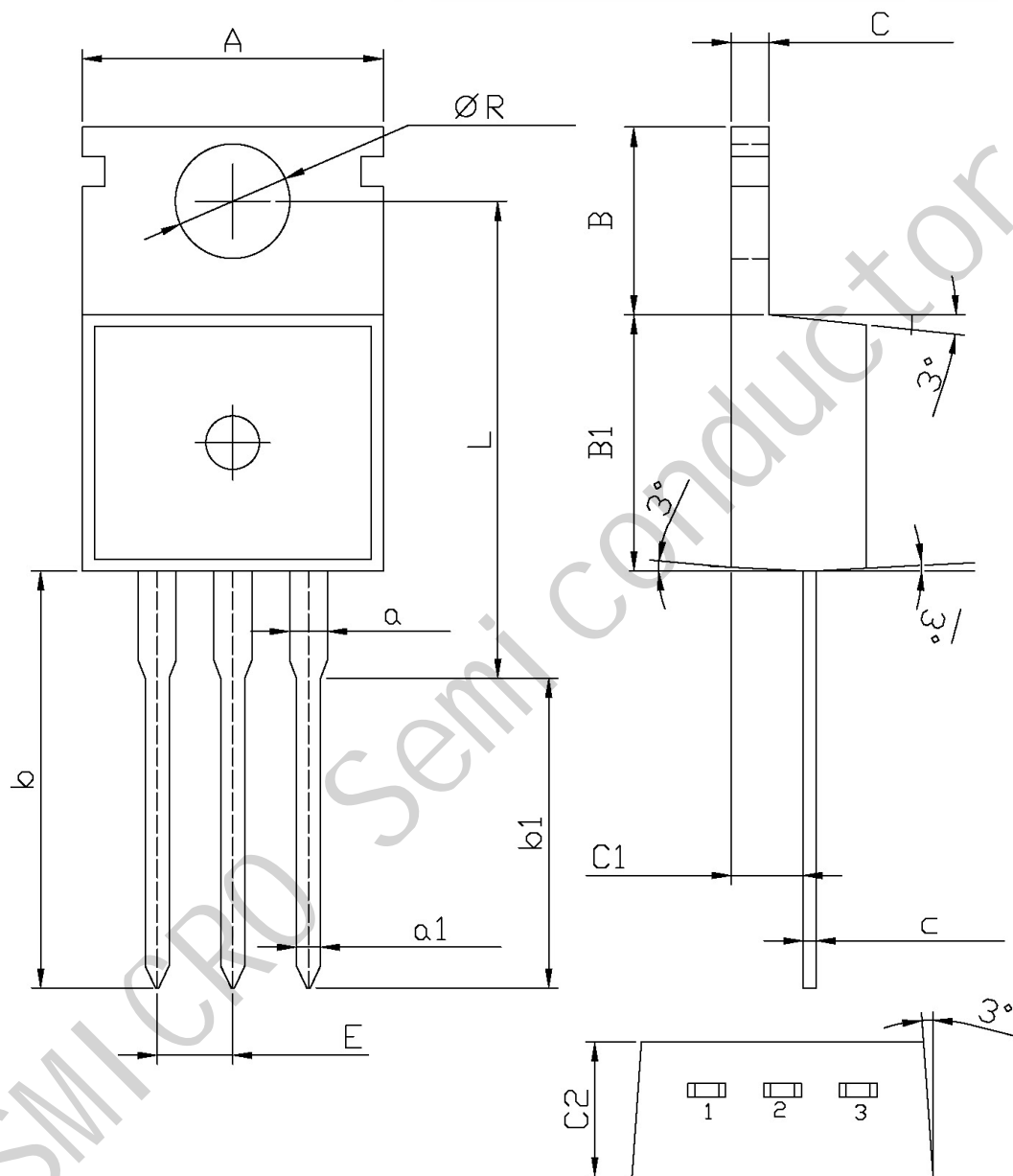


Typical, critical rate of rise of off-state voltage,  $dV_D/dt$  versus junction temperature  $T_j$ .

## 外形尺寸图 / Package Dimensions

TO-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

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