



# 3CT4S

## ● GENERAL DESCRIPTION

Blocking Voltage to 600 Volts

On-State Current Rating of 4 Amperes RMS  
at 100

Uniform Gate Trigger Currents in Three Modes

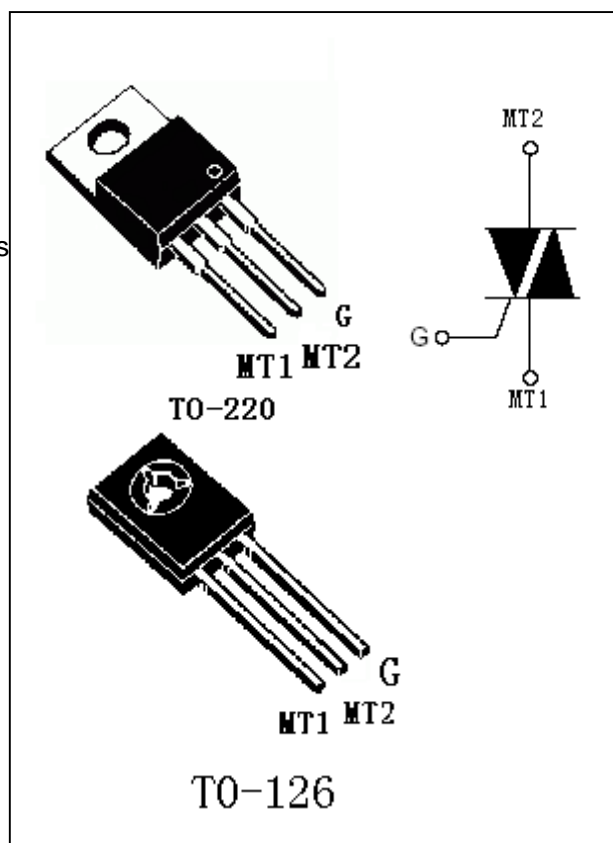
High Immunity to  $dv/dt$  — 500 V/ $\mu$ s minimum  
at 125

High Commutating  $di/dt$  — 6.0 A/ms minimum  
at 125°C

Industry Standard TO-220 Package

3CT16S is triac with its polarity asPNPN.

The 3CT16S is manufactured using P+  
isolation diffusion technology and glass  
passivation technology. The testing and  
experiment means are accord with the  
requirement of << IEC 747-6-1998 >> and  
<< IEC 749:1994 >>



## ABSOLUTE RATINGS (limiting values) (Tc=25 )

Parameter	Symbol	Value and test condition	Unit
RMS on-state current	$I_T (RMS)$	4	A
Non repetitive surge peak on-state current	$I_{TSM}$	30	A
Repetitive peak off-state voltage	$V_{DRM}$	$\pm 400$ , $\pm 500$ , $\pm 600$	V
Average gate power	$P_{GM}$	5	W
Peak gate current	$P_{G(AV)}$	0.5	W
Peak reverse gate current	$V_{RGM}$	5	V
Operation junction temperature	$T_{vj}$	125	
Storage temperature	$T_{stg}$	-40 - 150	



**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25 °C)**

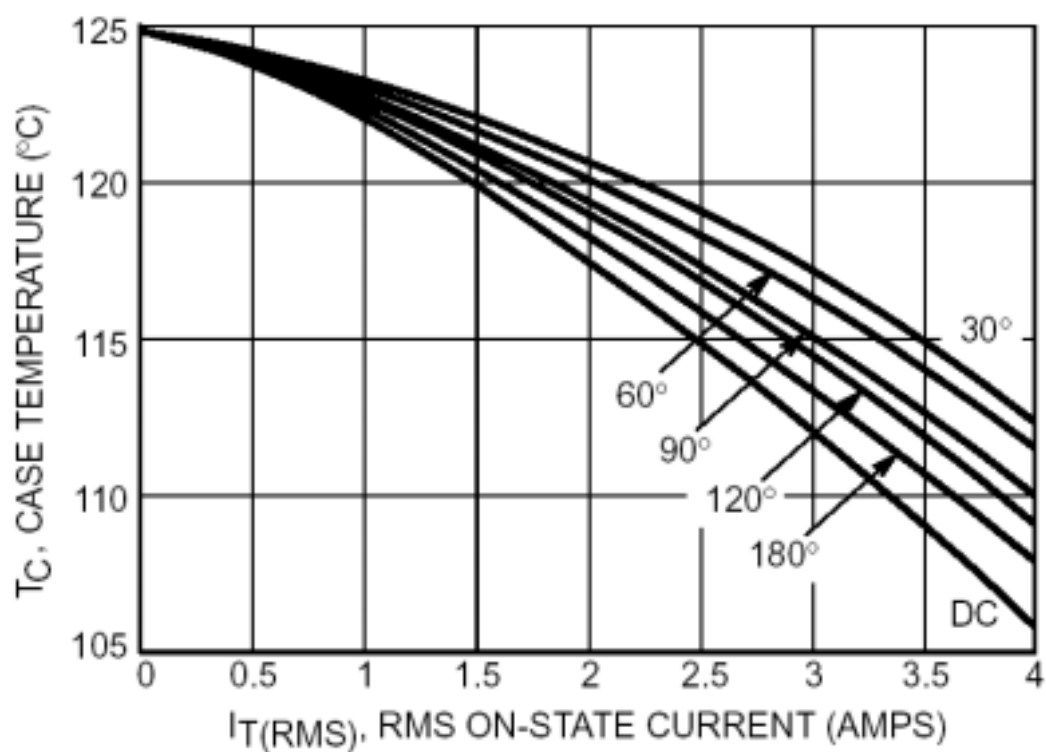
Parameter	Symbol	Condition		Min.	Typ.	Max.	Unit
Peak Repetitive Blocking Current	I <sub>DRM</sub>	V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125 °C, gate open		-	-	0.5	mA
Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =5A		-	1.4	1.7	V
Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100	MT1(-),MT2(+),G(+)		-	10	mA
			MT1(-),MT2(+),G(-)		-	10	mA
			MT1(+),MT2(-),G(-)		-	10	mA
			MT1(+),MT2(-),G(+)			25	mA
Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100	MT1(-),MT2(+),G(+)			1.5	V
			MT1(-),MT2(+),G(-)			1.5	V
			MT1(+),MT2(-),G(-)			1.5	V
			MT1(+),MT2(-),G(+)			1.5	V
Rise of off- state voltage	dV/dt	V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125 °C, gate open		50	-	-	V/μS
Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A		-	-	20	mA

**● THERMAL RESISTANCES**

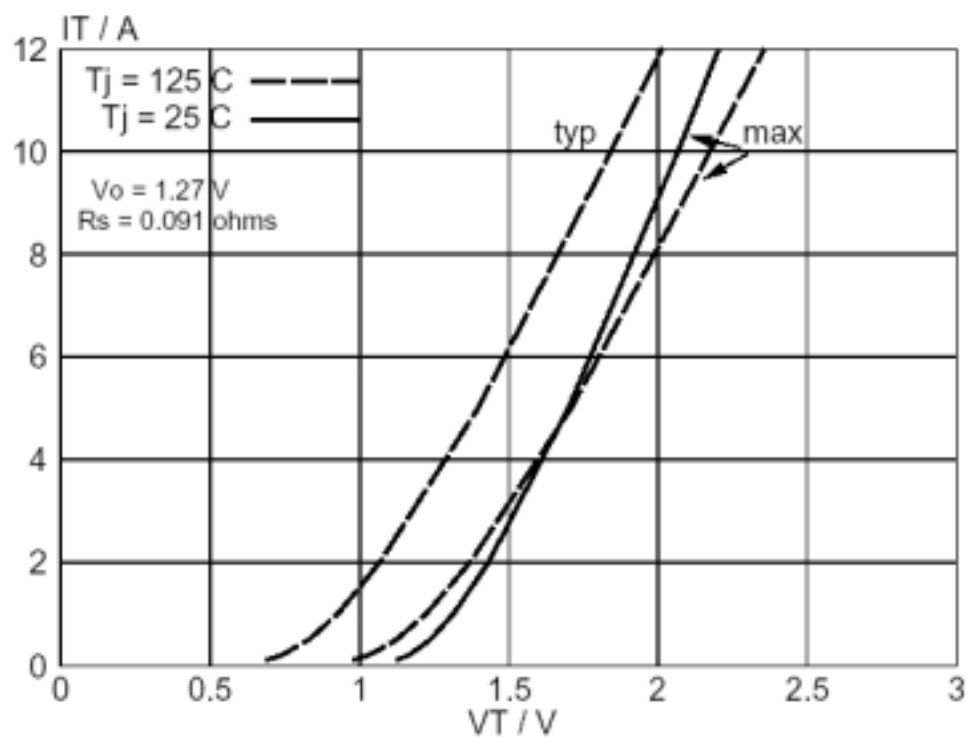
Parameter	Symbol	Test condition	MIN	TYP	MAX	Unit
Thermal resistances	R <sub>th(j-l)</sub>	Junction to lead	-	-	3.0	K/W
	R <sub>th(j-a)</sub>	Junction to ambient	-	60	-	K/W



### RMS on-state current Derating

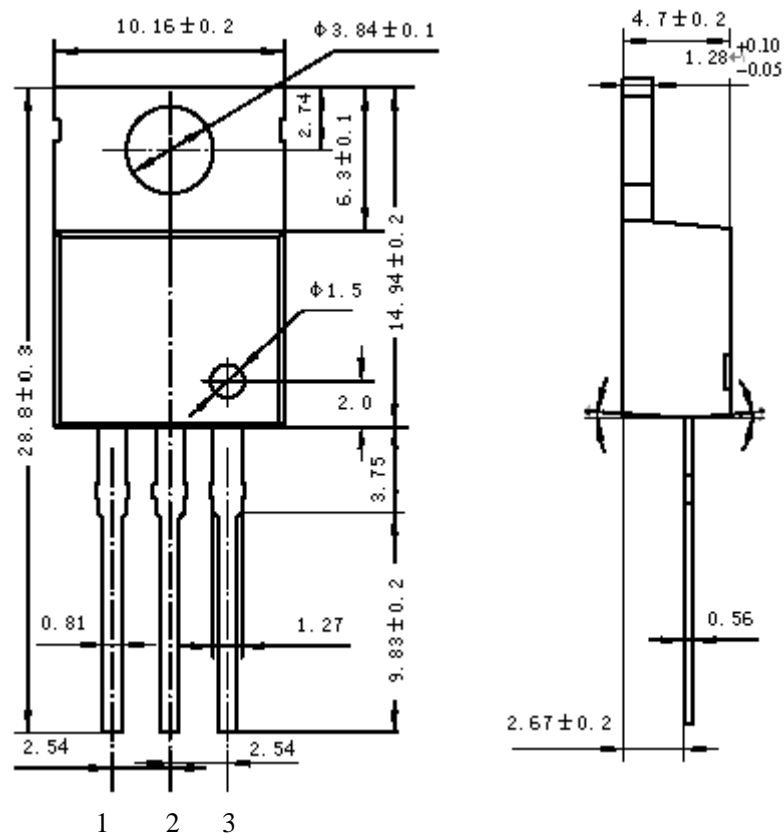


### On-state characteristics (type and maximum values)

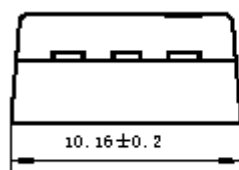


## PACKAGE MECHANICAL DATA

## TO-220



- 1 . MT1 ( main terminal 1 )  
 2 . MT2 ( main terminal 2 )  
 3 . G ( gate )

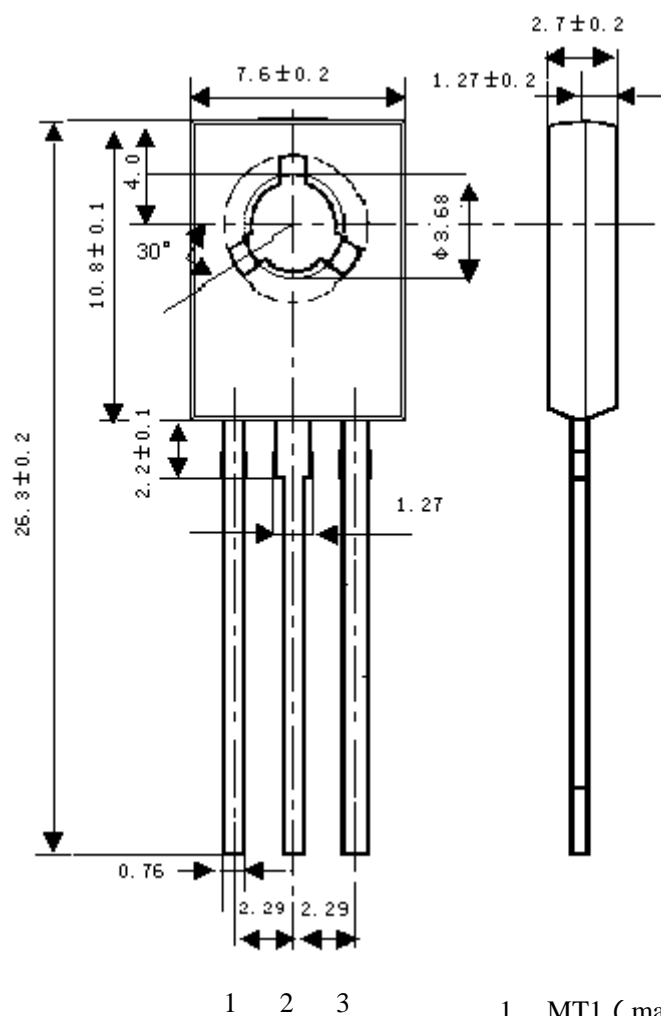


塑封面  $\nabla$  1.6

单位 : mm

## PACKAGE MECHANICAL DATA

## T0-126



单位：mm

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