

## isc Thyristors

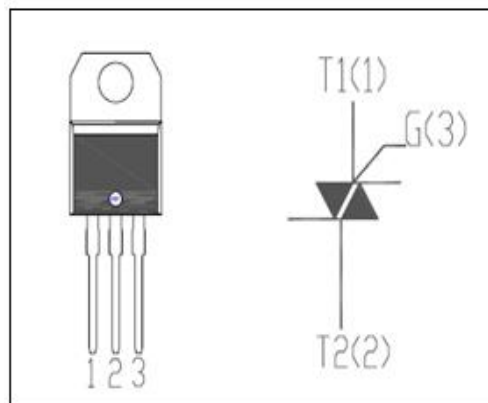
## SC146D

## DESCRIPTION

- With TO-220 packaging
- High operating junction temperature
- Very high commutation performance maximized at each gate sensitivity
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- High temperature, high power motor control
- Solid state relays; heating and cooking appliances
- Switching applications

ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER		MIN	UNIT
$V_{\text{DRM}}$	Repetitive peak off-state voltage		400	V
$V_{\text{RRM}}$	Repetitive peak reverse voltage		400	V
$I_{\text{T(RMS)}}$	RMS on-state current	@ $T_c=80^{\circ}\text{C}$	10	A
$I_{\text{TSM}}$	Surge non-repetitive on-state current	60HZ	120	A
$P_{\text{G(AV)}}$	Average gate power dissipation ( over any 20 ms period )		0.5	W
$T_j$	Operating junction temperature		-40~100	$^{\circ}\text{C}$
$T_{\text{stg}}$	Storage temperature		-40~125	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$  unless otherwise specified)**

SYMBOL	PARAMETER	CONDITIONS		MIN	MAX	UNIT
I <sub>RRM</sub>	Repetitive peak reverse current	V <sub>R</sub> =V <sub>RRM</sub> Rated; V <sub>D</sub> =V <sub>DRM</sub> Rated;	T <sub>j</sub> =25℃ T <sub>j</sub> =100℃		0.01	mA
I <sub>DRM</sub>	Repetitive peak off-state current				0.5	
V <sub>TM</sub>	On-state voltage	I <sub>T</sub> =14A, t <sub>p</sub> =380 μ s			1.65	V
I <sub>GT</sub>	Gate-trigger current	V <sub>D</sub> = 12V; R <sub>L</sub> =100 Ω	I		50	mA
			II		50	
			III		50	
V <sub>GT</sub>	Gate-trigger voltage	V <sub>D</sub> = 12V; R <sub>L</sub> =100 Ω			2.5	V

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