

## isc Thyristors

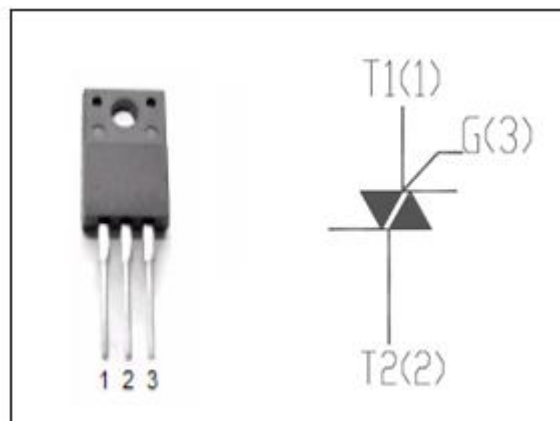
## BT139X-600E

## DESCRIPTION

- With TO-220F packaging
- Operating in 4 quadrants
- Very high commutation performance maximized at each gate sensitivity
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Solid state relays; heating and cooking appliances
- Switching applications

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

SYMBOL	PARAMETER		MAX	UNIT
$V_{\text{DRM}}$	Repetitive peak off-state voltage		600	V
$V_{\text{RRM}}$	Repetitive peak reverse voltage		600	V
$I_{\text{T(AV)}}$	Average on-state current		16	A
$I_{\text{TSM}}$	Surge non-repetitive on-state current	50HZ 60HZ	140 150	A
$P_{\text{G(AV)}}$	Average gate power dissipation ( over any 20 ms period )		0.5	W
$T_j$	Operating junction temperature		-40~125	°C
$T_{\text{stg}}$	Storage temperature		-40~150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°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> =125°C		0.5	mA
I <sub>DRM</sub>	Repetitive peak off-state current					
V <sub>TM</sub>	On-state voltage	I <sub>T</sub> =20A			1.6	V
I <sub>GT</sub>	Gate-trigger current	V <sub>D</sub> =12V; I <sub>T</sub> =0.1A;	I		35	mA
			II		35	
			III		35	
			IV		70	
V <sub>GT</sub>	Gate-trigger voltage	V <sub>D</sub> =12V; I <sub>T</sub> =0.1A;			1.5	V

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