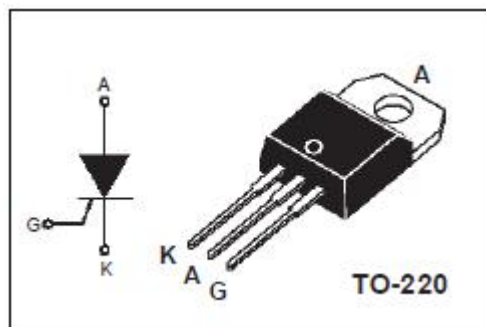


isc Thyristors

BT151-500R

APPLICATIONS

- It is suitable to fit all modes of control found in applications such as overvoltage crowbar protection, motor control circuits in power tools and kitchen aids, in-rush current limiting circuits, capacitive discharge ignition, voltage regulation circuits etc.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

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

SYMBOL	PARAMETER	MIN	UNIT	
V_{DRM}	Repetitive peak off-state voltage	500	V	
V_{RRM}	Repetitive peak reverse voltage	500	V	
$I_{\text{T(AV)}}$	Average on-state current	7.5	A	
$I_{\text{T(RMS)}}$	RMS on-state current	12	A	
I_{TSM}	Surge non-repetitive on-state current	$T_P=10\text{ms}$	100	A
$P_{\text{G(AV)}}$	Average gate power dissipation	over any 20 ms period	0.5	W
T_j	Operating junction temperature	-40~125	$^\circ\text{C}$	
T_{stg}	Storage temperature	-40~150	$^\circ\text{C}$	

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{RRM}	Repetitive peak reverse current	$V_{\text{RM}}=V_{\text{RRM}}, R_{\text{GK}}=220\ \Omega,$	$T_j=25^\circ\text{C}$	5	μA
			$T_j=125^\circ\text{C}$	2	mA
I_{DRM}	Repetitive peak off-state current	$V_{\text{DM}}=V_{\text{DRM}}, R_{\text{GK}}=220\ \Omega$	$T_j=25^\circ\text{C}$	5	μA
			$T_j=125^\circ\text{C}$	2	mA
V_{TM}	On-state voltage	$I_{\text{TM}}=23\text{A}$		1.75	V
I_{GT}	Gate-trigger current	$V_{\text{D}}=12\text{V}; I_{\text{T}}=0.1\text{A}$		15	mA
V_{GT}	Gate-trigger voltage	$V_{\text{D}}=12\text{V}; I_{\text{T}}=0.1\text{A}$		1.5	V
$R_{\text{th(j-c)}}$	Thermal resistance	Junction to case		1.3	$^\circ\text{C/W}$

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