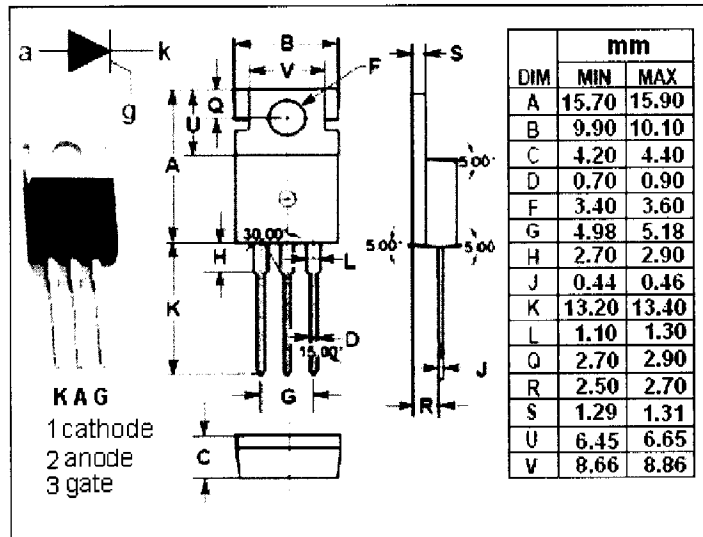


**Thyristors**

**BT151-500R**

**APPLICATIONS**

- For use in applications requiring high bidirectional blocking voltage capability and high thermal cycling performance. Typical applications include motor control, industrial and domestic lighting, heating and static switching.



**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	MIN	UNIT
V <sub>DRM</sub>	Repetitive peak off-state voltage	500	V
V <sub>RPM</sub>	Repetitive peak reverse voltage	500	V
I <sub>T(AV)</sub>	Average on-state current	7.5	A
I <sub>T(RMS)</sub>	RMS on-state current	12	A
I <sub>TSM</sub>	Surge non-repetitive on-state current	120	A
P <sub>GM</sub>	Peak gate power dissipation	5	W
P <sub>G(AV)</sub>	Average gate power dissipation	0.5	W
T <sub>j</sub>	Operating junction temperature	125	°C
T <sub>stg</sub>	Storage temperature	-45~150	°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>RM</sub> =V <sub>RPM</sub> , V <sub>RM</sub> =V <sub>RPM</sub> , T <sub>j</sub> =125°C		0.02 0.5	mA
I <sub>DRM</sub>	Repetitive peak off-state current	V <sub>DM</sub> =V <sub>DRM</sub> , V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125°C		0.02 0.5	mA
V <sub>TM</sub>	On-state voltage	I <sub>TM</sub> = 23A		1.75	V
I <sub>GT</sub>	Gate-trigger current	V <sub>D</sub> = 12V; I <sub>T</sub> = 0.1A		8	mA
V <sub>GT</sub>	Gate-trigger voltage	V <sub>D</sub> = 12V; I <sub>T</sub> = 0.1A		1.5	V
I <sub>H</sub>	Holding current	V <sub>D</sub> = 12V; I <sub>T</sub> = 0.1A		20	mA
R <sub>th(j-c)</sub>	Thermal resistance	Junction to case		1.6	°C/W

