

# **isc** Thyristors

## BT151S-800R

#### **APPLICATIONS**

Mesa glass passivation technology;

Have high blocking voltage and high temperature stability cleaner;

Electric tools such as motor speed controller;

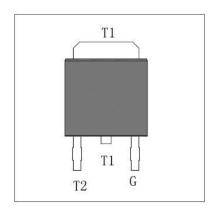
Solid state relay;

Heating controller (temperature);

Other phase control circuit

Minimum Lot-to-Lot variations for robust device

performance and reliable operation



### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	MIN	UNIT
$V_{DRM}$	Repetitive peak off-state voltage	800	V
$V_{RRM}$	Repetitive peak reverse voltage	800	V
I <sub>T(AV)</sub>	On-state current Tc=80℃	7.5	А
I <sub>TSM</sub>	Surge non-repetitive on-state current ,T=10ms	100	Α
P <sub>G(AV)</sub>	Average gate power	0.5	W
di/dt	Repetitive rate of rise of on-state current after triggering Tj=125 $^{\circ}\!$	50	A/us
l <sup>2</sup> t	$I^2$ t for fusing t = 10 ms	50	A <sup>2</sup> S
Ідм	Peak gate current tp=20us ,Tj=125℃	2	Α
Tj	Operating Junction temperature	-40 ~+125	${\mathbb C}$
T <sub>stg</sub>	Storage temperature	-40 ~+150	${\mathbb C}$

isc website: www.iscsemi.com

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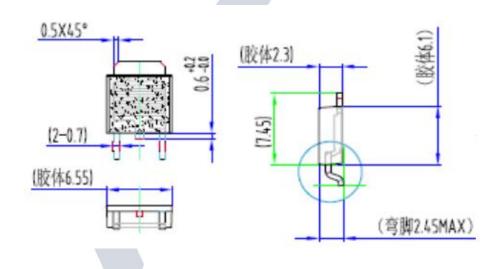


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#### **ELECTRICAL CHARACTERISTICS (TC=25℃ unless otherwise specified)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I <sub>RRM</sub>	Repetitive peak reverse current	V <sub>RRM</sub> =800V, Tj=125℃			0.5	mA
I <sub>DRM</sub>	Repetitive peak off-state current	V <sub>DRM</sub> =800V, Tj=125℃			0.5	mA
V <sub>TM</sub>	On-state voltage	I <sub>TM</sub> = 24A			1.5	V
I <sub>GT</sub>	Gate-trigger current	V <sub>D</sub> =12V; R <sub>L</sub> =100Ω			15	mA
V <sub>GT</sub>	Gate-trigger voltage	V <sub>D</sub> =12V; R <sub>L</sub> =100Ω			1.5	V
I <sub>H</sub>	Holding current	I <sub>T</sub> =0.5A			30	mA
dv/dt	Critical rate of rise of off-state voltage	V <sub>D</sub> =0.67V <sub>DRM</sub> Tj=125℃	200			V/us
R <sub>th(j-c)</sub>	Thermal resistance junction to mounting base	in free air		1.75		°C/W



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