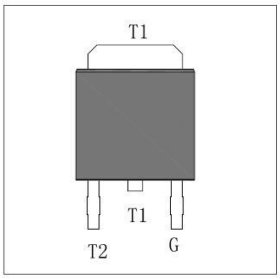
isc Thyristors BT151S-500R

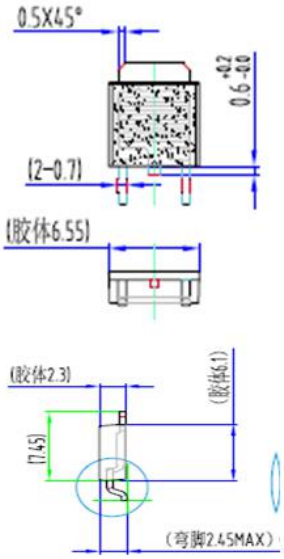
APPLICATIONS

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(T_a=25℃)

SYMBOL	PARAMETER	MIN	UNIT
V_{DRM}	Repetitive peak off-state voltage	500	V
V_{RRM}	Repetitive peak reverse voltage	500	V
$I_{T(AV)}$	On-state current Tc=80℃	7.5	A
I_{TSM}	Surge non-repetitive on-state current T_P=10ms	80	A
$P_{G(AV)}$	Average gate power	1	W
di/dt	Repetitive rate of rise of on-state current after triggering Tj=125℃	50	A/us
I^2t	I^2t for fusing t = 10 ms	64	A^2S
I_{GM}	Peak gate current tp=20us ,Tj=125℃	4	A
T_j	Operating Junction temperature	-40 ~+125	℃
T_{stg}	Storage temperature	-40 ~+150	℃



ELECTRICAL CHARACTERISTICS (TC=25℃ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{RRM}	Repetitive peak reverse current	V_{RRM}=500V, Tj=125℃			1	mA
		V_{RRM}=500V, Tj=25℃			5	uA
I_{DRM}	Repetitive peak off-state current	V_{DRM}=500V, Tj=125℃			1	mA
		V_{DRM}=500V, Tj=25℃			5	uA
V_{TM}	On-state voltage	I_{TM}= 24A			1.5	V
I_{GT}	Gate-trigger current	V_D=12V; R_L=100Ω			6	mA
V_{GT}	Gate-trigger voltage	V_D=12V; R_L=100Ω			1.5	V
I_H	Holding current	I_T=0.5A			30	mA
IL	Latching current	I_G=1.2I_{GT}		60	100	mA
dv/dt	Critical rate of rise of off-state voltage	V_D=2/3V_{DRM} Tj=125℃	500			V/us
$R_{th(j-c)}$	Thermal resistance junction to mounting base	in free air		1.75		℃/W

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