



BT152

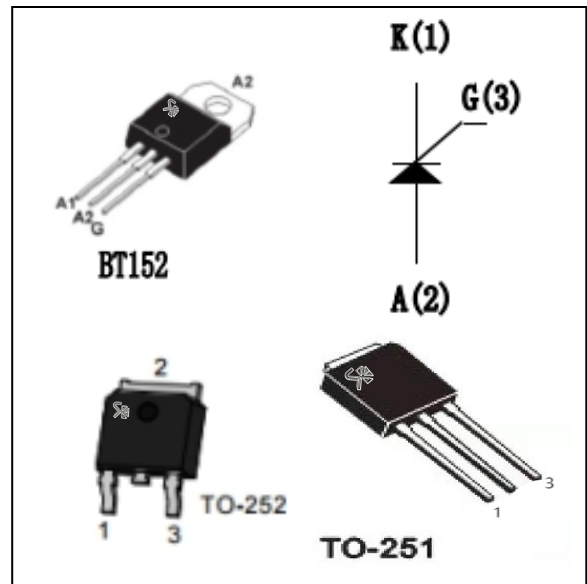
Silicon Controlled Rectifier

Features

- PNP four-layer silicon unidirectional device;
- With independent intellectual property rights of single-side grooving technology, table glass passivation process;
- Multilayer metallized electrode on the back;
- High blocking voltage and high temperature stability

Application

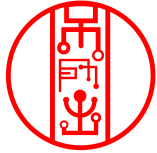
- Solid state relay;
- Phase-controlled circuit;
- Adjustable heating controller;
- Speed control controller;



MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETER	SYMBOL	Conditions	Limits	Units
RMS On-state Current	$I_{T(RMS)}$	$T_c=90^{\circ}\text{C}$	12	A
Non repetitive surge peak on-state current	I_{TSM}	$F=50\text{HZ}$ $t=20\text{ms}$	120	A
I^2t value for fusing	I^2t	$t_p=10\text{ms}$	144	A^2S
Critical rate of rise of on-state current	di/dt	$T_j=125^{\circ}\text{C}$	50	A/us
Peak gate current	I_{GM}	$t_p=20\mu\text{s}$ $T_j=125^{\circ}\text{C}$	4	A
Repetitive peak off-state voltage	V_{DRM}	$T_j=25^{\circ}\text{C}$	800	V
Repetitive peak reverse voltage		$T_j=25^{\circ}\text{C}$	800	V
Average gate power dissipation	$P_{G(AV)}$	$T_j=125^{\circ}\text{C}$	1	W
Operating junction temperature range	T_j		-40~125	$^{\circ}\text{C}$
Storage junction temperature range	T_{stg}		-40~150	$^{\circ}\text{C}$

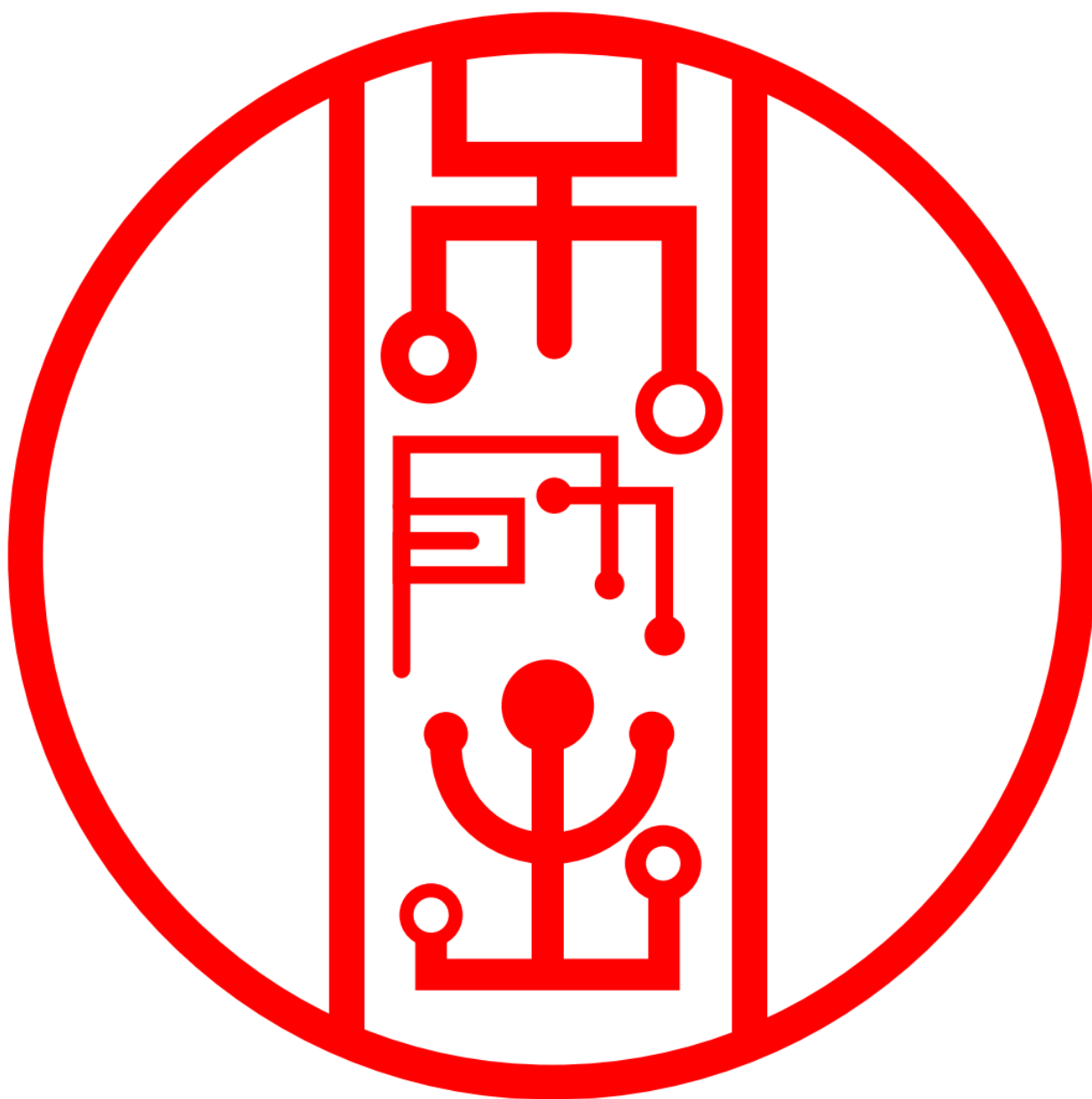


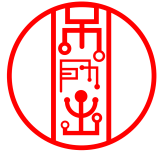
ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Condition	MIN	TYPE	MAX	Unit
I_{GT}	$V_D=12\text{V}, R_L=100\Omega$	-	-	15	mA
V_{GT}		-	-	1.5	V
V_{GD}	$V_D=V_{DRM} T_j=110^{\circ}\text{C}$	0.2	-	-	V
I_H	$I_T=0.5\text{A}$	-	-	30	mA
I_L	$I_G=1.2I_{GT}$	-	-	60	mA
dv/dt	$V_D=2/3 \times V_{DRM} T_j=125^{\circ}\text{C}$ Gate open	500	-	-	V/ μs

STATIC CHARACTERISTICS

Symbol	Test Condition			Value	Unit
V _{TM}	Peak on-state voltage I _{TM} =32A	T _j =25℃	MAX	1.5	V
V _{T0}	Threshold voltage	T _j =125℃	MAX	0.86	mΩ
R _d	Slope resistance	T _j =125℃	MAX	36.6	mΩ
I _{DRM} I _{RRM}	V _D =V _{DRM} = V _{RRM}	T _j =25℃	MAX	5	μA
		T _j =125℃		1	mA
R _{th(j-c)}	junction to case(AC)	BTB		1.75	℃/W

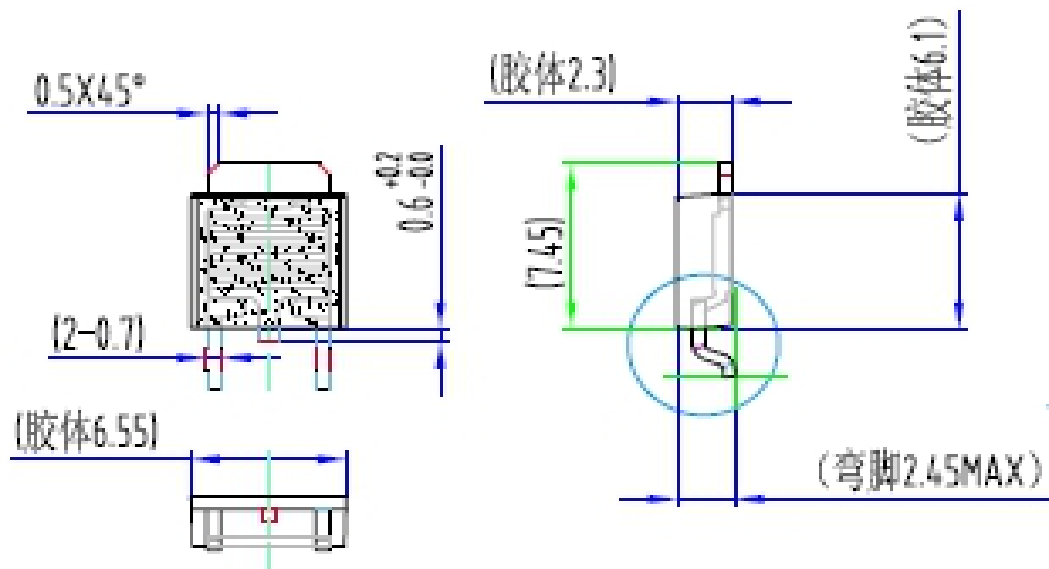


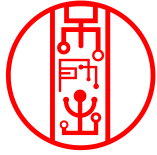


PACKAGE MECHANICAL DATA

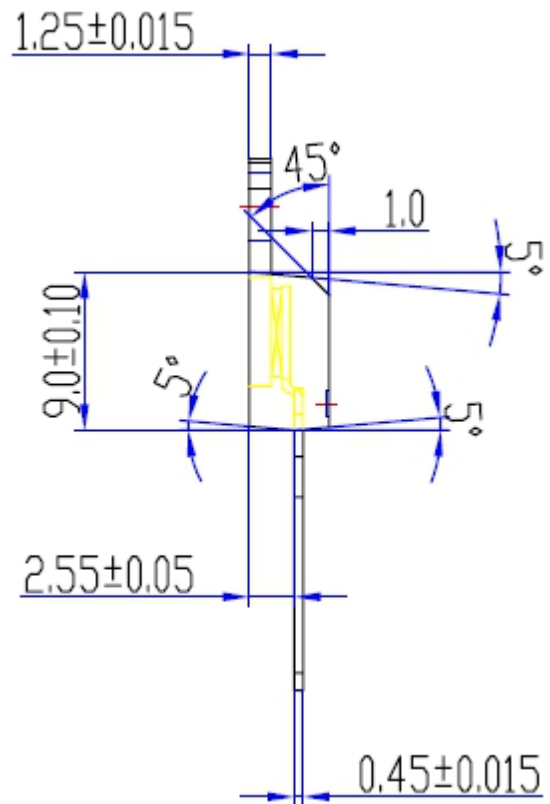
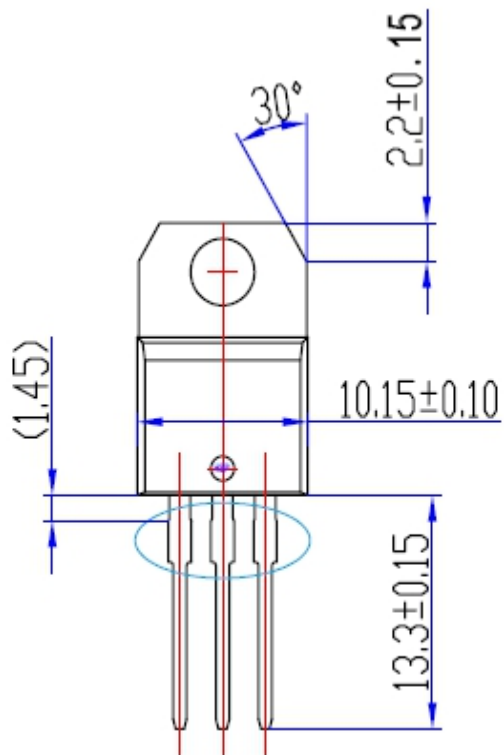
●TO-252

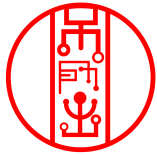
Unit: mm (± 0.1)



**●TO-220**

Unit: mm (± 0.1)



**●TO-251**

Unit: mm (± 0.1)

