

SCR

BT151S

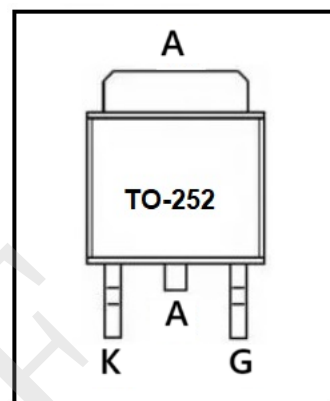
FEATURES

- High thermal cycling performance
- High voltage capability
- Planar passivated for voltage ruggedness and reliability
- high current surge capability

APPLICATIONS

- Ignition circuits
- Motor control
- Protection circuits
- Voltage regulation

SYMBOL



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE		UNIT
Repetitive Peak Off-State Voltages	$V_{\text{DRM}}, V_{\text{RRM}}$	BT151-500R	500	V
		BT151-650R	650	
		BT151-800R	800	
RMS on-State Current	$I_{\text{T(RMS)}}$	12		A
Non-Repetitive Peak On-State Current	I_{TSM}	120		A
Peak gate current	I_{GM}	2.0		A
Peak gate voltage	V_{GM}	5.0		V
Peak reverses gate voltage	V_{RGM}	5		V
Peak Gate Power	$P_{\text{G(AV)}}$	0.5		W
I^2t for fusing	I^2t	72		A^2s
rate of rise of on-state current	di/dt	50		$\text{A}/\mu\text{s}$
Operating junction temperature	T_{J}	$-40 \sim +125$		$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +150$		$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_J=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
Peak Repetitive Forward Blocking Current	I _{DRM}	V _D = V _{DRM}		10	uA
Peak Repetitive Reverse Blocking Current	I _{RRM}	V _D = V _{RRM} ;		10	uA
Gate Trigger Current	I _{GT}	V _D =12V, R _L =100Ω		15	mA
Gate Trigger Voltage	V _{GT}	V _D =12V, R _L =100Ω		1.5	V
Peak Forward On-State Voltage	V _{TM}	I _T = 23A, I _G =50mA		1.7	V
Non-Trigger Gate Voltage	V _{GD}	V _D =V _{DRM} , R _{GK} =1KΩ,R _L =3.3KΩ	0.2		V
Latch Current	I _L	I _G =1.2 I _{GT}		40	mA
Holding Current	I _H	I _T = 500mA		30	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	V _D =67%V _{DRM} , R _{GK} =1kΩ,	200		V/μs