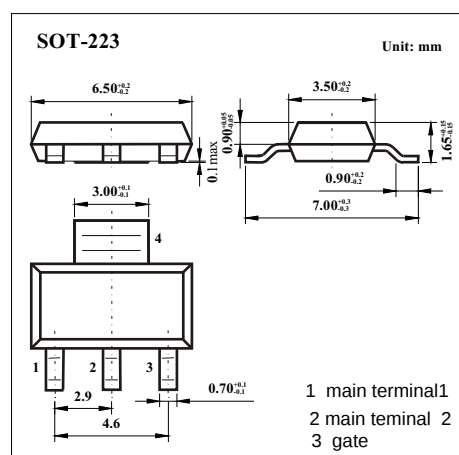
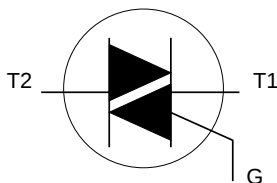


Triacs

BT131-500B

■ Features

- Repetitive peak off-state voltages : $V_{DRM}=500V$
- RMS on-state current : $I_T(RMS)=1A$
- Non-repetitive peak on-state current : $I_{TSM}=16A$



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Testconditons	BT131-500	Unit
Repetitive peak off-state voltages	V_{DRM}		500	V
RMS on-state current	$I_T(RMS)$	full sine wave; $T_{mb} \leq 51^\circ C$	1	A
Non-repetitive peak on-state current	I_{TSM}	full sine wave; $T_j = 25^\circ C$ prior to surge		
		$t = 20\text{ ms}$	16	A
		$t = 16.7\text{ ms}$	17.6	A
I ² t for fusing	I^2t	$t = 10\text{ ms}$	1.28	A ² S
Repetitive rate of rise of on-state current after triggering	dI/dt	$I_{TM} = 1.5\text{ A}; I_G = 0.2\text{ A}; dI_G/dt = 0.2\text{ A}/\mu\text{ s}$		
		T2+ G+	50	A/ $\mu\text{ s}$
		T2+ G-	50	A/ $\mu\text{ s}$
		T2- G-	50	A/ $\mu\text{ s}$
		T2- G+	10	A/ $\mu\text{ s}$
Peak gate current	I_{GM}		2	A
Peak gate voltage	V_{GM}		5	V
Peak gate power	P_{GM}		5	W
Average gate power	$P_{G(AV)}$	over any 20 ms period	0.5	W
Storage temperature	T_{stg}		-40 to 150	$^\circ C$
Operating junction temperature	T_j		125	$^\circ C$
Thermal resistance junction to mounting base	R_{thj-mb}	full cycle	60	K/W
		half cycle	80	K/W
Thermal resistance junction to ambient	R_{thj-a}	in free air	150	K/W

BT131-500B

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
					... E	
Gate trigger current	I _{GT}	V _D = 12 V; I _T = 0.1 A				
				T2+ G+	0.4	3 mA
				T2+ G-	1.3	3 mA
				T2- G-	1.4	3 mA
				T2- G+	4.0	8 mA
Latching current	I _L	V _D = 12 V; I _{GT} = 0.1 A				
				T2+ G+	1.2	5 mA
				T2+ G-	4.0	8 mA
				T2- G-	1.0	5 mA
				T2- G+	2.5	8 mA
Holding current	I _H	V _D = 12 V; I _{GT} = 0.1 A		1.3	5	mA
On-state voltage	V _T	I _T = 2.0 A		1.0	1.5	V
Gate trigger voltage	V _{GT}	V _D = 12 V; I _T = 0.1 A	0.2	0.3		V
		V _D = 400 V; I _T = 0.1 A; T _j = 125°C		0.7	1.5	V
Off-state leakage current	I _D	V _D = V _{DRM(max)} ; T _j = 125°C		0.1	0.5	mA
Critical rate of rise of off-state voltage	dV _D /dt	V _{DM} = 67% V _{DRM(max)} ; T _j = 125 °C ; exponential waveform; RGK=1KΩ	5	20		V/μs
Gate controlled turn-on time	t _{gt}	I _{TM} = 1.5 A; V _D = V _{DRM(max)} ; I _G = 0.1 A; diG/dt = 5 A/μs;		2		μs