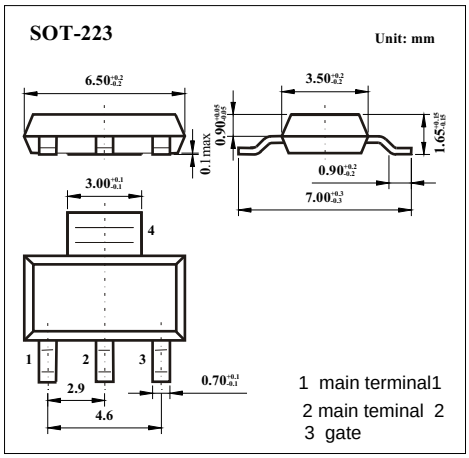
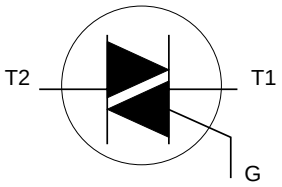
Triacs
BT131-500B

■ 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 Ta = 25℃

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; $T_{mb} \leqslant 51$ ℃	1	A
Non-repetitive peak on-state current	I_{TSM}	full sine wave; Tj = 25℃ prior to surge		
		t = 20 ms	16	A
		t = 16.7 ms	17.6	A
I2t for fusing	I^2t	t = 10 ms	1.28	A^2S
Repetitive rate of rise of on-state current after triggering	Dit / dt	I_{TM} = 1.5 A; I_G = 0.2 A;dI_G/dt = 0.2 A/μs		
		T2+ G+	50	A/μs
		T2+ G-	50	A/μs
		T2- G-	50	A/μs
		T2- G+	10	A/μs
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	℃
Operating junction temperature	T_j		125	℃
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℃

Parameter	Symbol	Testconditons	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℃		0.7	1.5	V
Off-state leakage current	I_D	V_D = $V_{DRM(max)}$;T_j = 125℃		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 ℃; 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; dI_G/dt= 5 A/μs;		2		μs