BTA100 Series

- **Description:**

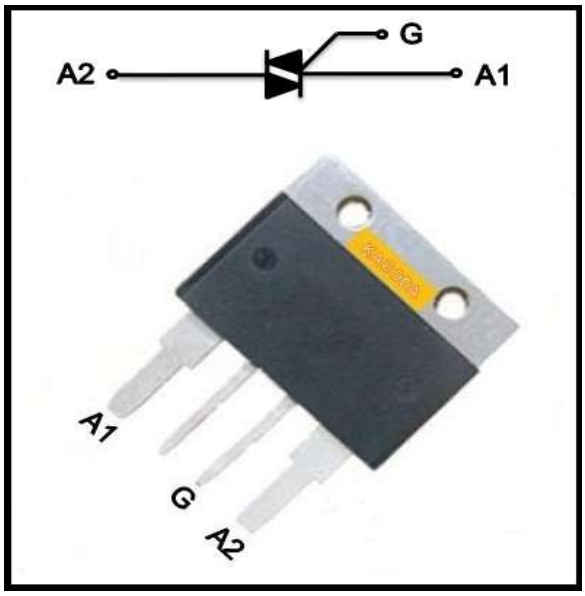
  High current density due to double mesa trchnology;
  BTA100 Series triacs is suitable for general purpose AC switching.

- **Applications:**

  they can be used as an ON/OFF function in applications such as static relays,heating regulation,induction motor stating circuits... or for phase contol operation light dimmers,motorspeed controllers

- **Features:**

  BTA100 series are insulated design
  Blocking voltage to 800/1000/12000/1600V
  On-state RMS current to 100A
  Non-repetitive peak on-state current to 1000A



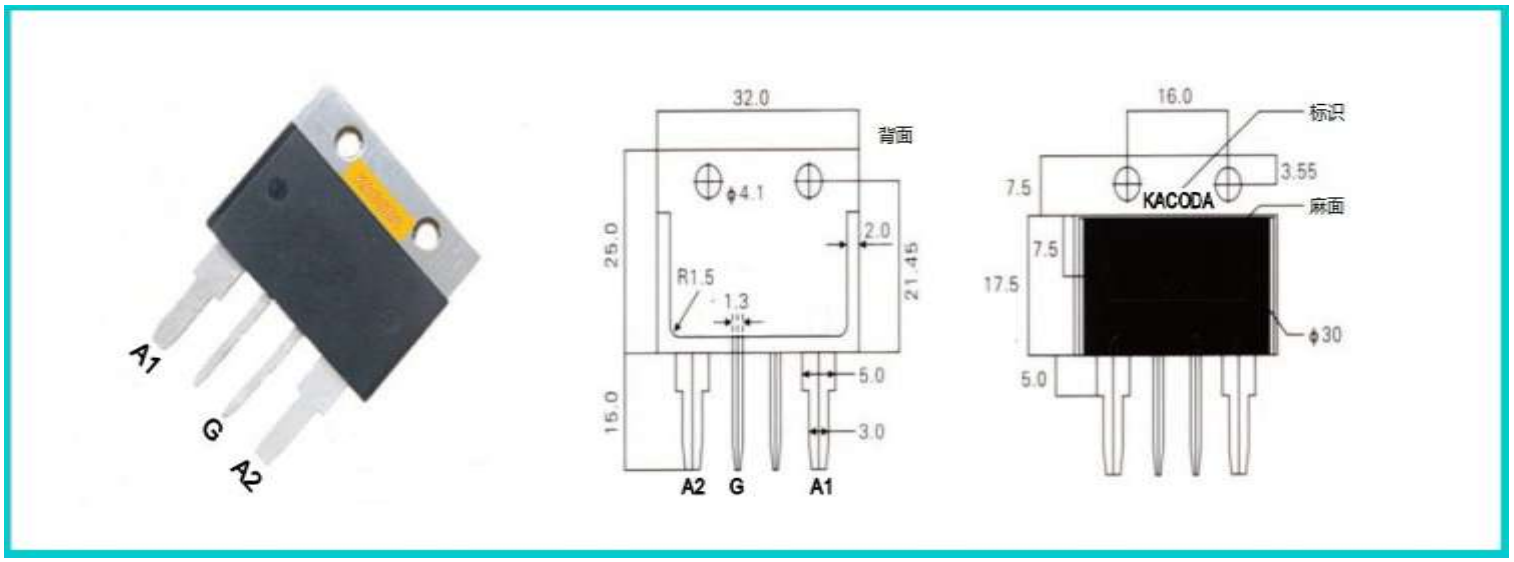
- **Absolute Maximum Ratings**

Symbol	Parameter	Conditions	Min	Max	Unit
V_{DRM}	Repetitive peak off-state voltage	T_J=25℃	800	1600	V
V_{RRM}	Repetitive peak Reverse voltage	T_J=25℃	800	1600	V
$I_{T(RMS)}$	RMSon-statecurrent	F=60Hz,Tc=110℃	-	100	A
I_{TSM}	Non-repetitive peak On-state current	F=50Hz, t=10ms	-	1000	A
		F=60Hz, t=8.3ms	-	1000	A
I^2t	I^2t for fusing	T_P=10ms	-	4000	A^2S
di/dt	Rate of rise of on-state current	I_G=2×I_{GT},t_r≤100ns, T_J=125℃	-	50	A/μs
I_{GM}	Peak gate current	T_P=20μs, T_J=125℃	-	8.0	A
P_{GM}	Peak gate power		-	10	W
$P_{G(AV)}$	Average gate power		-	2.0	W
T_{STG}	Storage temperature		-40	150	℃
T_J	Junction temperature		-40	125	℃

Electrical Characteristics

Symbol	Conditions	Quadrant		Numerical				Unit
				BTA100-800	BTA100-1000	BTA100-1200	BTA100-1600	
V_{TM}	I_T=17A,tp=380μs	T_J=25℃	MAX	1.3	1.3	1.3	1.55	V
I_{DRM} I_{RRM}	V_D=V_{DRM},V_R=V_{RRM}	T_J=25℃	MAX	50				μA
		T_J=125℃	MAX	15				mA
I_{GT}	V_D=12V,R_L=33Ω	I-II-III	MAX	50				mA
		Ⅳ		80				
V_{GT}		I-II-III-Ⅳ	MAX	1.5				V
V_{GD}	V_D=V_{DRM},R_L=3.3KΩ, T_J=125℃	I-II-III-Ⅳ	MIN	0.2				V
I_L	I_T=1.2I_{GT}	I-III-Ⅳ	MAX	120				mA
		II	MAX	200				mA
I_H	I_T=0.5A		MAX	120				mA
dv/dt	V_{DM}=67%V_{DRM},gate open,T_J=125℃		MIN	500				V/μs

Package Outline Dimensions



- **Typical Characteristics**

FIG.1:Maximum power dissipation versus RMS on-state current(full cycle)

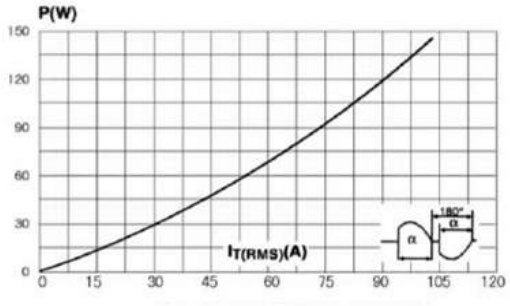


FIG.2:RMS on-state current versus case temperature(full cycle)

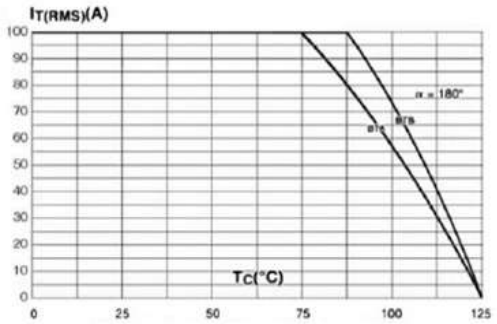


FIG.3:Relative variation of thermal impedance versus pulse duration

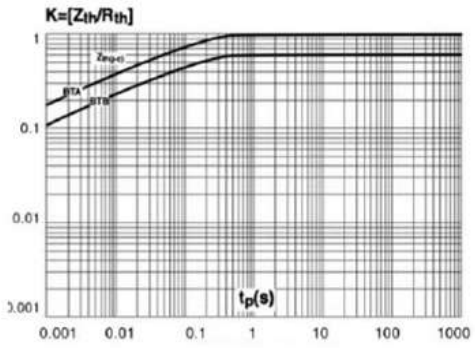


FIG.4:On-state characteristics(maximum values)

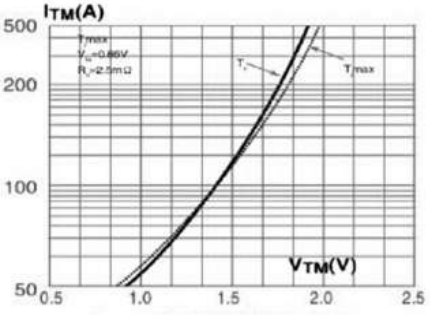


FIG.5:Surge peak on-state current versus number of cycles

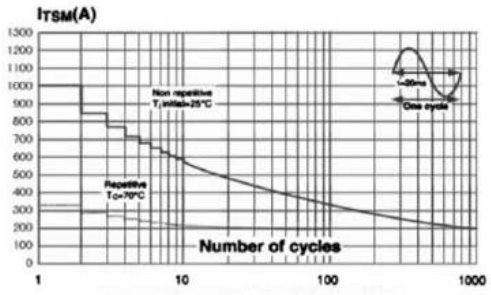


FIG.6:Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp< 10 ms and corresponding value of I^2t

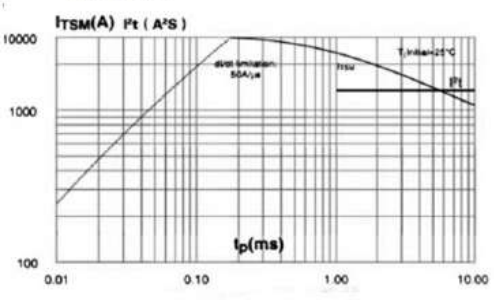


FIG.7:Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values)