

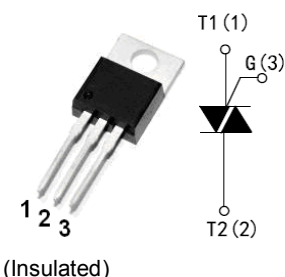
BTA20

20A TRIACS

DRAWING

Description

- Package: TO-220AB
- High current density due to double mesa technology, SIPOS and Glass passivation . BTA20 series triacs is suitable for general purpose AC switching. They can be used as an ON/OFF function in applications such as static relays, heating regulation, induction motor starting circuits or phase control operation light dimmers, motor speed controllers.
- BTA20 series are 3 Quadrants triacs, They are specially recommended for use on inductive loads.



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	
Storage junction temperature range	Tstg	-40 to +150	°C	
Operating junction temperature range	Tj	-40 to +125	°C	
Repetitive Peak OFF-state Voltage	V_{DRM}	600 and 800	V	
Repetitive Peak Reverse Voltage	V_{RRM}	600 and 800	V	
Non repetitive surge peak off-state voltage	V_{DSM}	700 and 900	V	
Non repetitive peak reverse voltage	V_{RSM}	700 and 900	V	
RMS on-state current(full sine wave)	IT(RMS)	TC=90°C	20	A
		TC=70°C		
Non repetitive surge peak on-state current(full cycle, Tj=25°C)	ITSM	f=60Hz, t=16.7ms	210	A
		f=50Hz, t=20ms	200	A
I ² t Value for fusing	I ² t	200	A ² s	
Critical rate of rise of on-state current IG=2*IGT, tr≤100ns, f=120Hz, Tj=125°C	di/dt	100	A/us	
Peak gate current(tp=20us, Tj=125°C)	IGM	4	A	
Peak gate power dissipation(tp=20us, Tj=125°C)	PGM	10	W	
Average gate power dissipation(Tj=125°C)	PG(AV)	1	W	

Electrical Characteristics (T_j=25°C, unless otherwise specified)

Symbol	Test Condition	Quadrant		Limit		Unit
				CW(C)	BW(B)	
I _{GT}	V _D =12V, R _L =33Ω	I - II -III	MAX	35	50	mA
V _{GT}		I - II -III	MAX	1.5		V
V _{GD}	V _D =V _{DRM} R _L =3.3KΩ T _j =125°C	I - II -III	MIN	0.2		V
I _L	I _G =1.2I _{GT}	I -III	MAX	50	70	mA
		II	MAX	60	80	mA
I _H	I _T =100mA		MAX	40	60	mA
Dv/dt	V _D =67%V _{DRM} gate open T _J =125°C		MIN	250	500	V/us
(Dv/dt) _c	(dl/dt) _c =8.8A/ms T _j =125°C		MIN	7	12.5	V/us

Static Characteristics

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =28A, t _p =380us	T _j =25°C	1.55	V
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25°C	5	uA
I _{RDM}		T _j =125°C	2.5	mA

Thermal Resistances

Symbol	Parameter	Value	Unit
R _{th} (J-C)	Junction to case(AC)	2.1	°C/W