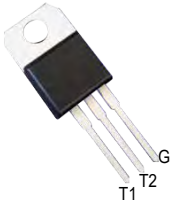
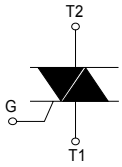
BTA06

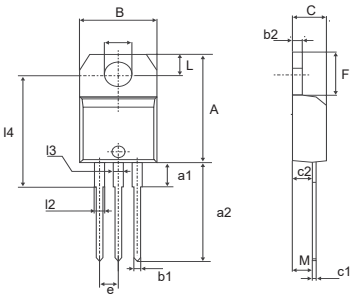
Discrete Triacs(Isolated)





	$V_{DRM/RRM}$ V	$V_{DSM/RSM}$ V
BTA06-200	200	300
BTA06-400	400	500
BTA06-600	600	700
BTA06-800	800	900
BTA06-1000	1000	1100
BTA06-1200	1200	1300

Dimensions TO-220AB



REF.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.20		15.90	0.598		0.625
a1		3.75			0.147	
a2	13.00		14.00	0.511		0.551
B	10.00		10.40	0.393		0.409
b1	0.61		0.88	0.024		0.034
b2	1.23		1.32	0.048		0.051
C	4.40		4.60	0.173		0.181
c1	0.49		0.70	0.019		0.027
c2	2.40		2.72	0.094		0.107
e	2.40		2.70	0.094		0.106
F	6.20		6.60	0.244		0.259
ØI	3.75		3.85	0.147		0.151
I4	15.80	16.40	16.80	0.622	0.646	0.661
L	2.65		2.95	0.104		0.116
I2	1.14		1.70	0.044		0.066
I3	1.14		1.70	0.044		0.066
M		2.60			0.102	

RoHS Compliant

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter			Value	Unit
$I_{T(RMS)}$	RMS on-state current (full sine wave)	TO-220AB	Tc = 100 °C	6	A
I_{TSM}	Non repetitive surge peak on-state current (full cycle, Tj initial = 25°C)	F = 60 Hz	t = 16.7 ms	63	A
		F = 50 Hz	t = 20 ms	60	
I^2t	I^2t value for fusing	tp = 10 ms		21	A^2s
dI/dt	Critical rate of rise of on-state current I_G = 2 x I_{GT} , tr ≤100 ns	F = 120 Hz	T_j = 125°C	50	A/µs
I_{GM}	Peak gate current	tp = 20 µs	T_j = 125°C	4	A
V_{ISO}	Isolation Voltage, 1min			2500	VAC
T_{stg} T_j	Storage junction temperature range Operating junction temperature range			- 40 to + 150 - 40 to + 125	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°C, unless otherwise specified)

■ **SNUBBERLESS and LOGIC LEVEL(3 Quadrants)**

Symbol	Test Conditions	Quadrant		BTA06 CW	BTA06 BW	Unit
$I_{GT(1)}$	V_D=12V R=30Ω	I - II - III	MAX.	35	50	mA
V_{GT}		I - II - III	MAX.	1.3		V
V_{GD}	V_D=V_{DRM} R_L=3.3kΩ T_j=125°C	I - II - III	MIN.	0.2		V
I_H(2)	I_T=100mA		MAX.	35	50	mA
I_L	I_G=1.2 I_{GT}	I - III	MAX.	50	70	mA
		II		60	80	
dV/dt(2)	V_D= 67 % V_{DRM} gate open T_j=125°C		MIN.	400	1000	V/µs
(dI/dt)c(2)	Without snubber Tj=125°C		MIN.	3.5	5.3	A/ms

Sirectifier®

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

BTA06

Discrete Triacs(Isolated)

■ STANDARD (4Quadrants)

Symbol	Test Conditions	Quadrant		Value	Unit
$I_{GT\ (1)}$	V_D=12V R_L= 30Ω	I - II - III IV	MAX.	50 100	mA
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	V_D=V_{DRM} R_L=3.3Ω T_j=125°C	ALL	MIN.	0.2	V
I_H(2)	I_T= 500mA		MAX.	50	mA
I_L	I_G= 1.2I_{GT}	I - III - IV	MAX.	50	mA
		II		100	
dV/dt (2)	V_D=67 % V_{DRM} gate open T_j =125°C		MIN.	400	V/µs
(dV/dt)c (2)	(dI/dt)c =2.7 A/ms T_j =125°C		MIN.	10	V/µs

STATIC CHARACTERISTICS

Symbol	Test Conditions			Value	Unit
$V_{TM(2)}$	I_{TM} = 5.5A tp=380µs	T_j =25°C	MAX.	1.55	V
$V_{to(2)}$	Threshold voltage	T_j =125°C	MAX.	0.85	V
$R_{d(2)}$	Dynamic resistance	T_j =125°C	MAX.	60	mΩ
I_{DRM}	V_{DRM} = V_{RRM}	T_j =25°C	MAX.	5	µA
I_{RRM}		T_j =125°C		1	mA

Note 1: minimum IGT is guaranted at 5% of IGT max.

Note 2: for both polarities of A2 referenced to A1

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case (AC)	1.8	°C/W
$R_{th(j-a)}$	Junction to ambient	60	°C/W

PRODUCT SELECTOR

Part Number	Voltage (xxx)		Sensitivity	Type	Package
	200 V ~~ 1200 V				
BTA06	X	X	50 mA	Standard	TO-220AB

OTHER INFORMATION

Part Number	Marking	Weight	Base quantity	Packing mode
BTA06	BTA06	2 g	250	Bulk

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

BTA06

Discrete Triacs(Isolated)

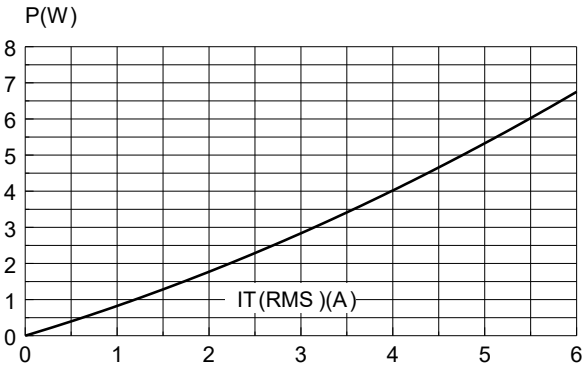


Fig.1:Maximum power dissipation versus RMS on-state current (full cycle).

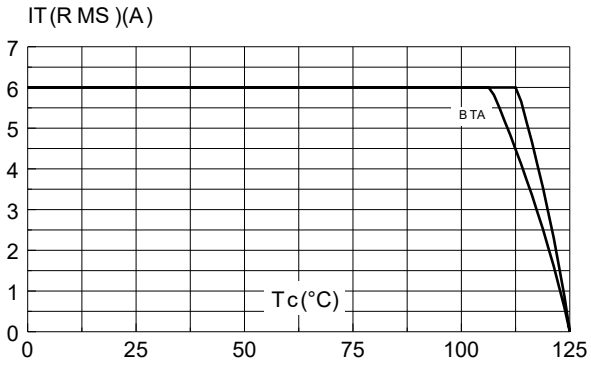


Fig.2:RMS on-state current versus case temperature(full cycle).

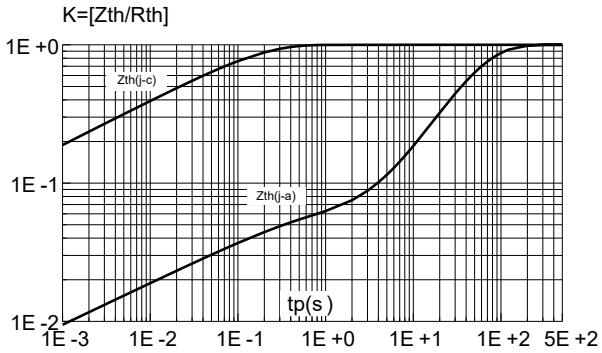


Fig.3:Relative variation of thermal impedance versus pulse duration.

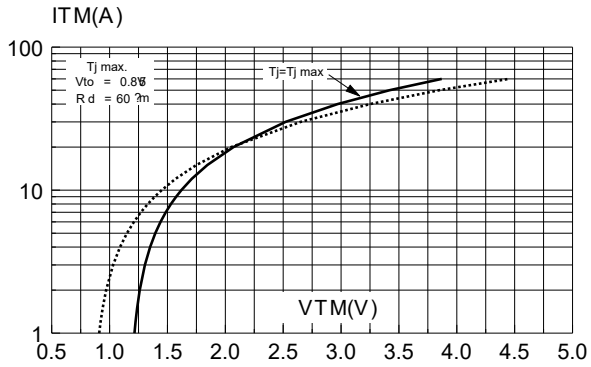


Fig.4:On-state characteris tics(maximum values).

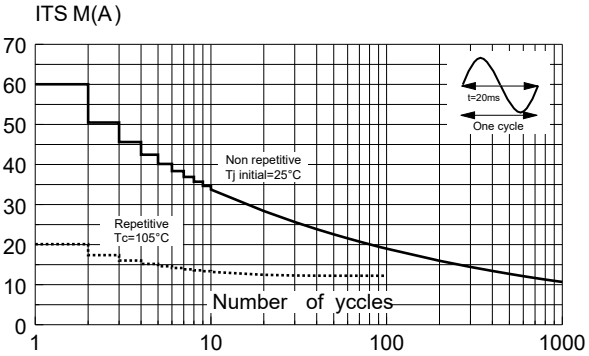


Fig.5:Surge peak on-state current versus number of cycles .

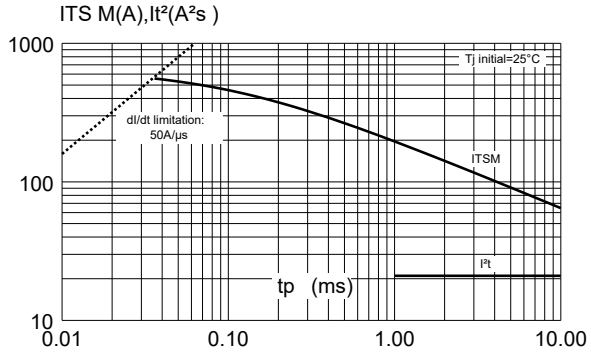


Fig.6:Non-repetitive surge peak on-s tate current for a s inus oidal puls e with width tp < 10ms, and corres ponding value of I²t.

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

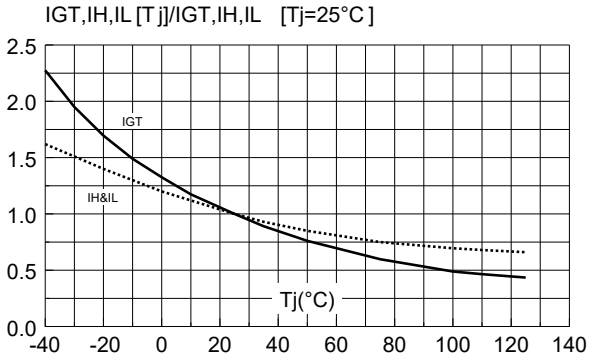


Fig.7:Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

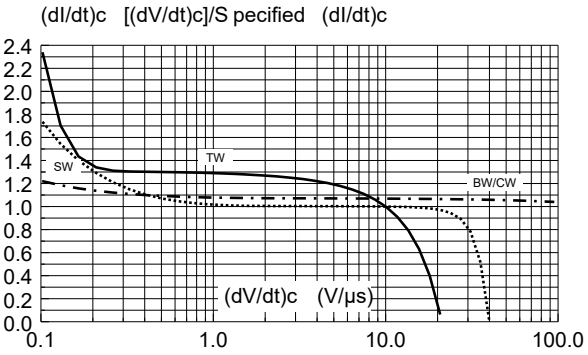


Fig.8-1:Relative variation of critical rate of decrease of main current versus (dV/dt)c (typical values).S nubberles s&Logic Level Types

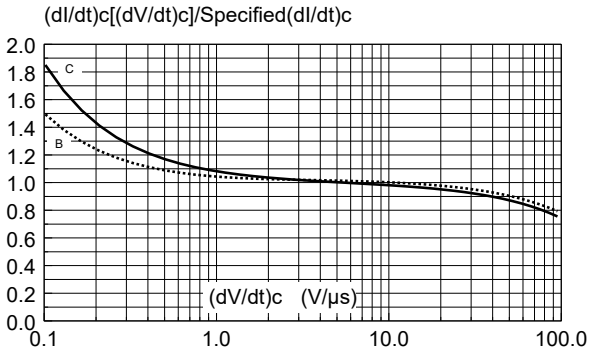


Fig.8-2:Relative variation of critical rate of decrease of main current versus (dV/dt)c (typical values). Standard Types

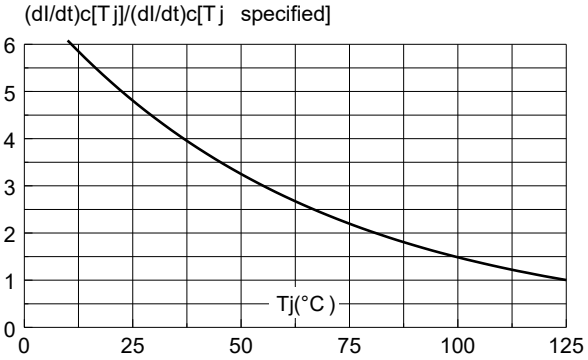


Fig.9:Relative variation of critical rate of decrease of main current vers us junction temperature.

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com