

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth (j-a)	Junction to ambient	60	°C/W
Rth (j-c) DC	Junction to case for DC	4	°C/W
Rth (j-c) AC	Junction to case for 360° conduction angle (F= 50 Hz)	3	°C/W

GATE CHARACTERISTICS (maximum values)

PG (AV) = 1W PGM = 10W (tp = 20 μs) IGM = 4A (tp = 20 μs) VGM = 16V (tp = 20 μs).

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Suffix	Unit
					GP	
IGT	VD=12V (DC) RL=33Ω	Tj=25°C	I-II-III	MAX	50	mA
			IV	MAX	75	
VGT	VD=12V (DC) RL=33Ω	Tj=25°C	I-II-III-IV	MAX	1.5	V
VGD	VD=VDRM RL=3.3kΩ	Tj=110°C	I-II-III-IV	MIN	0.2	V
tgt	VD=VDRM IG = 500mA dIG/dt = 3A/μs	Tj=25°C	I-II-III-IV	TYP	2	μs
IL	IG=1.2 IGT	Tj=25°C	I-III-IV	TYP	20	mA
			II		40	
IH *	IT= 100mA gate open	Tj=25°C		MAX	13	mA
VTM *	ITM= 8.5A tp= 380μs	Tj=25°C		MAX	1.4	V
IDRM IRRM	VDRM Rated VRRM Rated	Tj=25°C		MAX	0.01	mA
		Tj=110°C		MAX	0.5	
dV/dt *	Linear slope up to VD=67%VDRM gate open	Tj=110°C		MIN	30	V/μs
				TYP	100	
(dV/dt)c *	(dI/dt)c= 1.8A/ms	Tj=110°C		MIN	1	V/μs
				TYP	10	

* For either polarity of electrode A2 voltage with reference to electrode A1.

Fig.1 : Maximum RMS power dissipation versus RMS on-state current ($F=50\text{Hz}$).
(curves are cut off by $(di/dt)_c$ limitation)

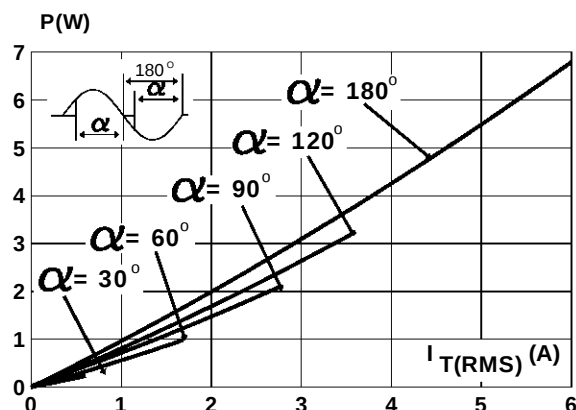


Fig.3 : RMS on-state current versus case temperature.

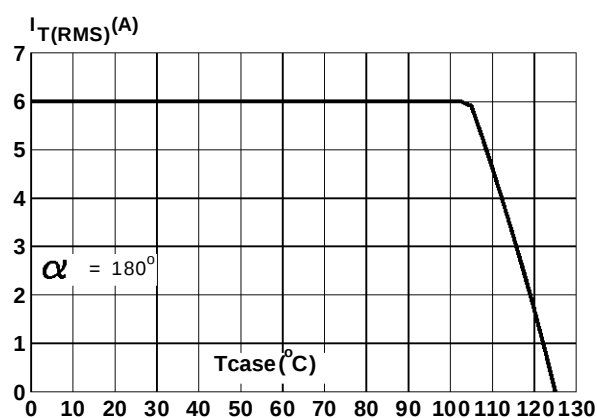


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

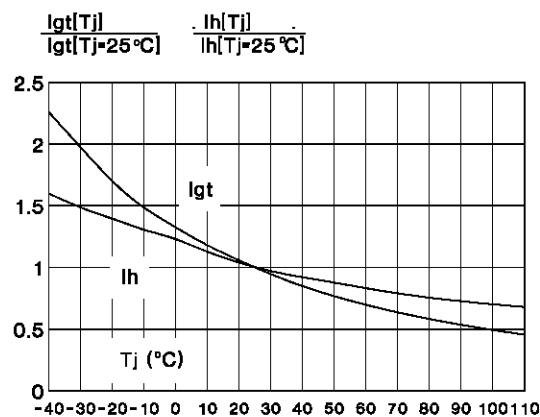


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

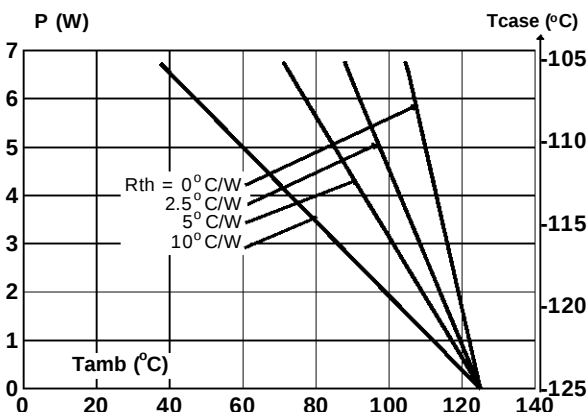


Fig.4 : Relative variation of thermal impedance versus pulse duration.

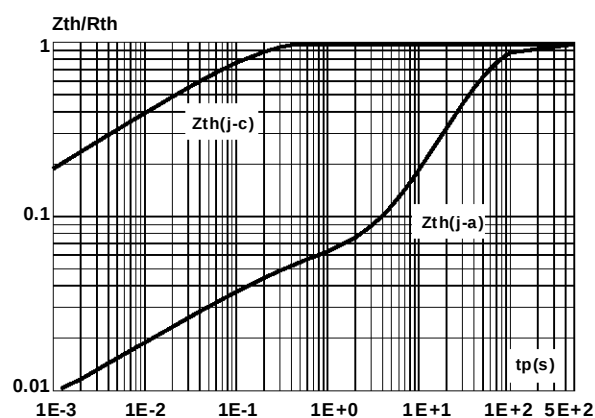
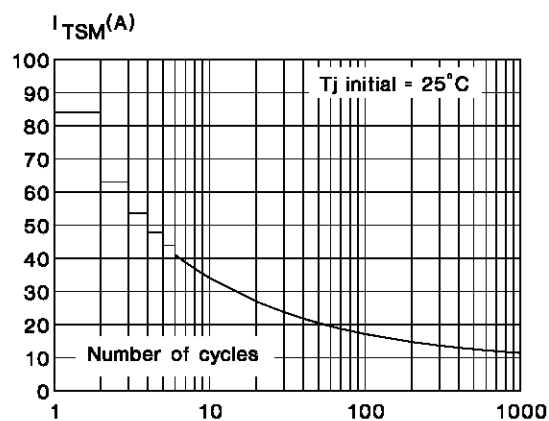


Fig.6 : Non Repetitive surge peak on-state current versus number of cycles.



BTA06 GP

Fig.7 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10\text{ms}$, and corresponding value of I^2t .

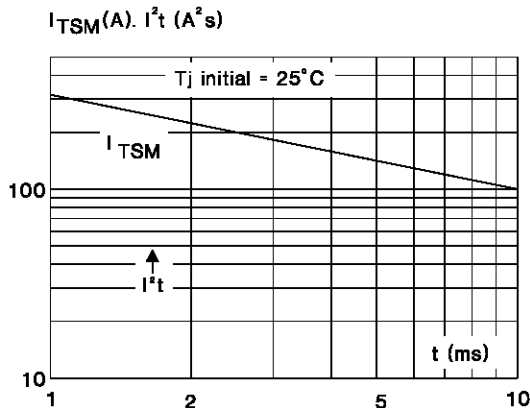
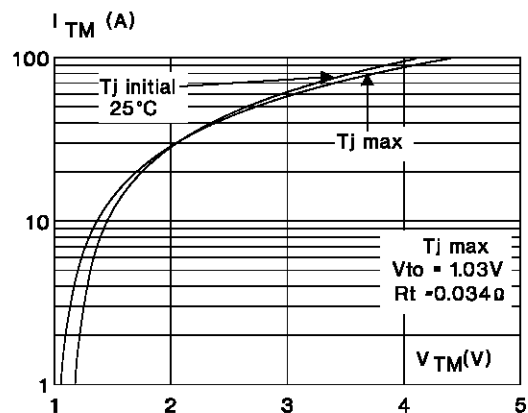
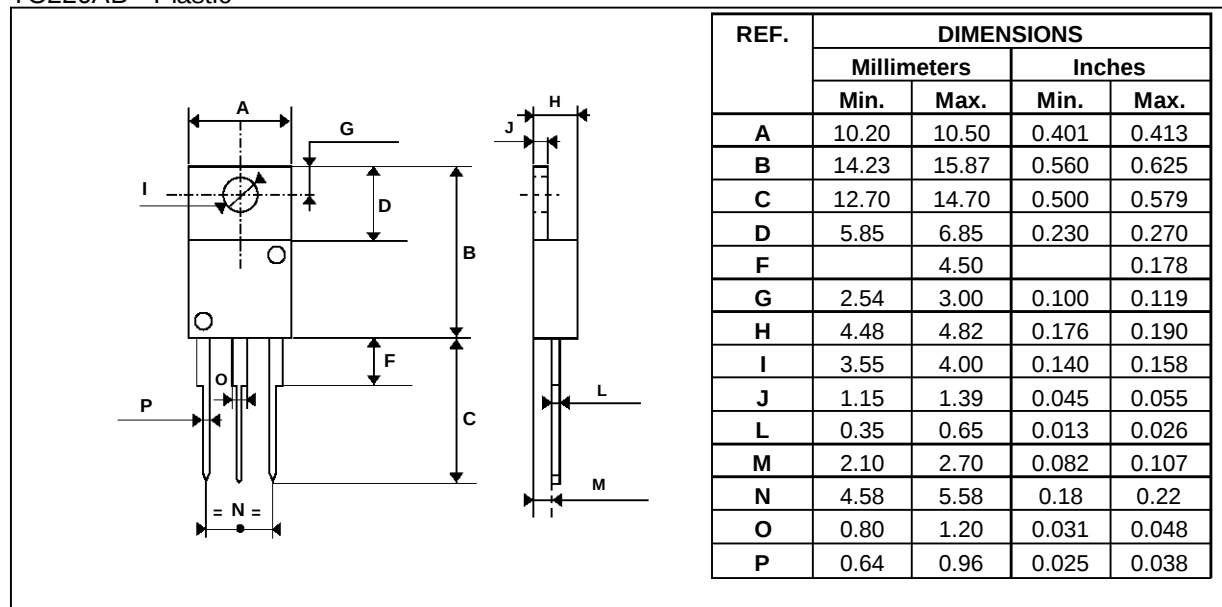


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA

TO220AB Plastic



Cooling method : C
Marking : type number
Weight : 2.3 g

Recommended torque value : 0.8 m.N.
Maximum torque value : 1 m.N.

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