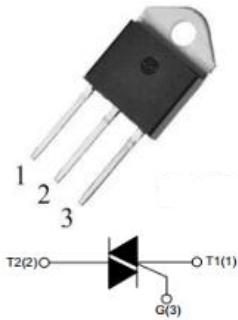


Model : **BTA41**

Outline of **TO-3P**



Shape: **TO-3P**

Product name: **40A three-quadrant bidirectional thyristor**

Polarity: Three pins from left to right 1: T1 2: T2 3: G

Purpose: heating controller; Ac motor speed controller; Solid state relay; High power heater; Water heater; Power compensation

Limit range (TA=25 unless otherwise specified)

Project	Symbol	Rated value	Unit
Off-state repeat peak voltage	VDRM	600/800/1200	V
Reverse repeat peak voltage	VRRM	600/800/1200	V
On-state mean current	IT	40	A
On-state no repeat surge current	ITSM	400	A
Knot temperature	Tj	-40~125	°C
Storage temperature	Tstg	-40~150	°C

Electrical parameter characteristics (TA=25 unless otherwise specified)

Parameter	Symbol	Test condition	Mini	Max	Unit
Off-state repeat peak voltage	VDRM		600/800/1200		V
Reverse repeat peak voltage	VRRM		600/800/1200		V
Repeat peak blocking current	IDRM	VD=VDRM		0.01	mA
Reverse peak blocking current	IRRM	VR=VRRM		0.01	mA
Peak on-state voltage	VTM	IT=60A		1.55	V
Maintain current	I _H	IT=500mA		25	mA
Holding current	I _H / III	IT=1.2 IGT		80	mA
	II			100	mA
Gate trigger current	I _{GT}	Vd=12V		50	mA
Gate trigger voltage	V _{GT}	Vd=12v RL=100Ω		1.3	V
Critical off-state voltage increase rate	dv/dt	VD=0.67VDRM, Tj=125°C	1000		V/μS

Parametric characteristic curve

FIG.1 最大功耗与均方根电流关系曲线图

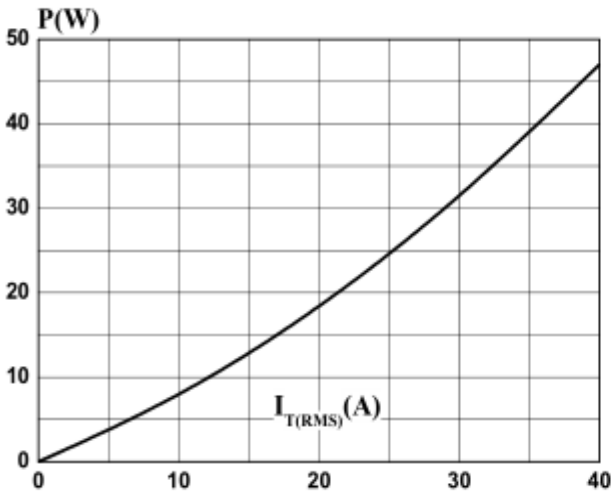


FIG.2:均方根电流与壳温关系曲线图

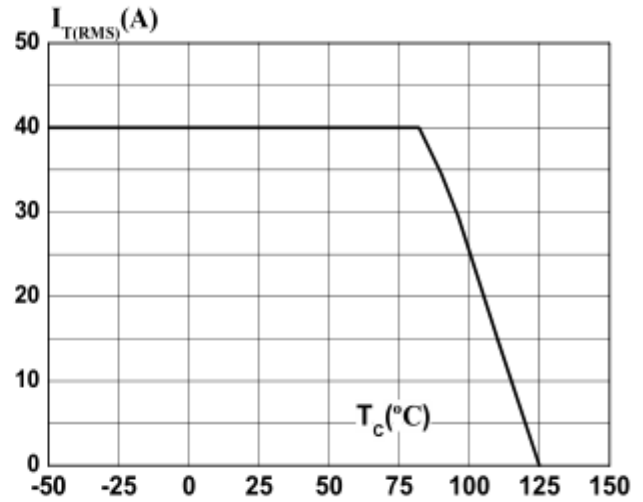


FIG.3: 峰值浪涌电流与周期数量关系图

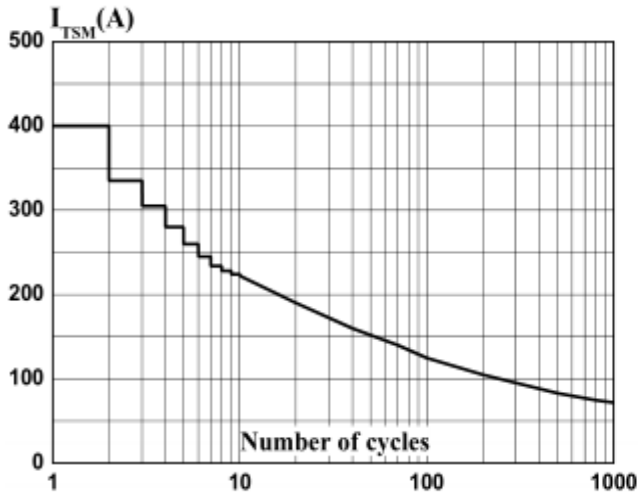


FIG.4: 输出特性图（最大值图）

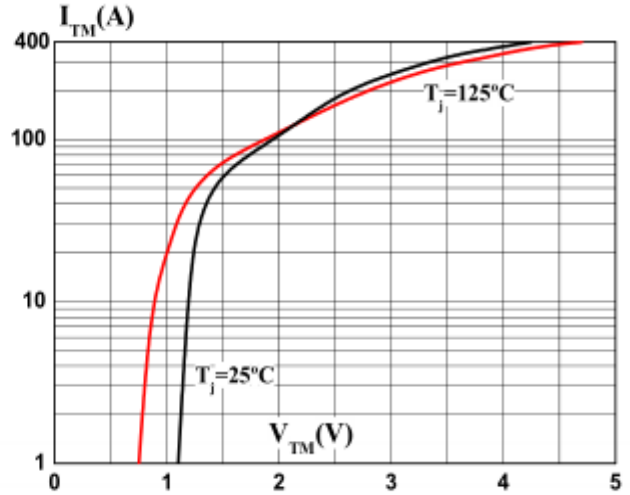


FIG.5: 非重复峰值浪涌电流与正弦波脉宽关系曲线

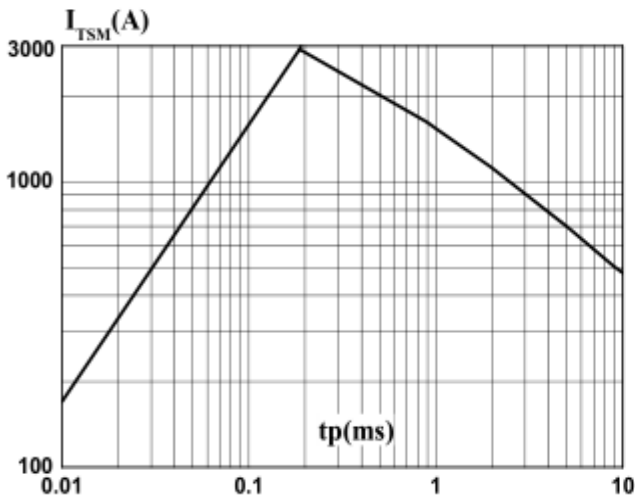


FIG.6: 门极触发电流、维持电流、擎住电流与结温关系曲线图

