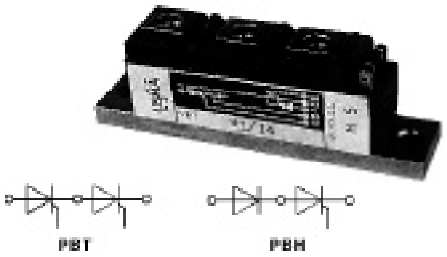
Power Module Assembly

PBT 250
(Thyristor / Thyristor Module)



Technical Data

Typical applications : DC Motor control, Temperature control, Professional light dimming.

Type No.	V_{RRM} (Volts)	V_{RSM} (Volts)
PBT 250/04	400	500
PBT 250/08	800	900
PBT 250/12	1200	1300
PBT 250/16	1600	1700

Features

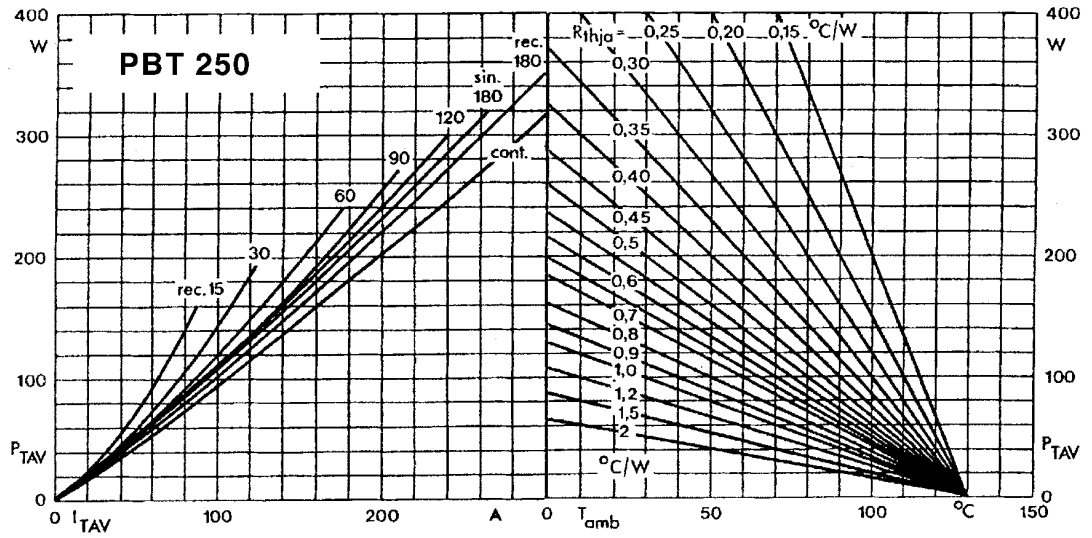
- Heat transfer through ceramic isolated Cu base
- Isolation between contacts & mounting base is 2.5KV(rms)
- Weight 430 gm

dv/dt ≥ 200 V/ s typ. (Higher upto 1000 V/ s available on request)

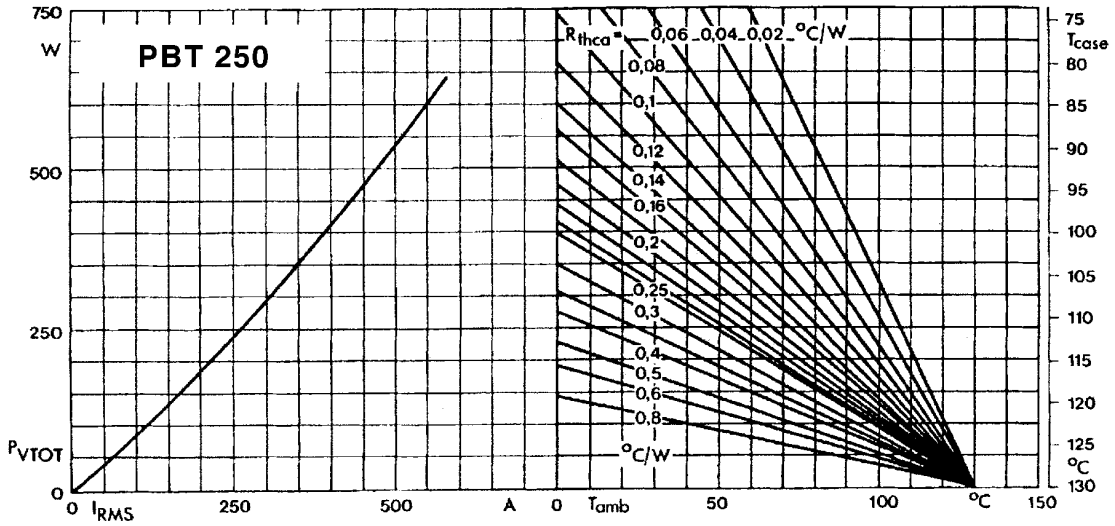
Symbol	Conditions	Units
$I_{T(AV)}$	Sin 180 ;Tcase = 85 °C	250 A
I_{TSM}	Tvj = 25 °C; 10 ms:	9000 A
	Tvj = 125 °C; 10 ms:	8000 A
I^2T	Tvj = 25 °C; 8.3...10 ms	405000 A^2s
	Tvj = 125 °C; 8.3...10 ms	320000 A^2s
di/dt_{cr}	Tvj = 125 °C	100 A/µs
tq	Tvj = 125 °C	50...150 µs
I_H	Tvj = 25 °C typ/max.	150/500 mA
I_L	Tvj = 25 °C; R_G =33Ω ; typ/max.	0.3/2 A
V_T	Tvj = 25 °C ; I_T = 750 A	1.50 V max
V_O	Tvj = 125 °C	.925 V
R_0	Tvj = 125 °C	0.45 mΩ
I_{DRM}/I_{RRM}	Tvj = 125 °C	50 mA
V_{GT}	Tvj = 25 °C	3 V
I_{GT}	Tvj = 25 °C	200 mA
V_{GD}	Tvj = 125 °C	0.25 V
I_{GD}	Tvj = 125 °C	10 mA
$R_{th(j-c)}$	cont.	0.14/0.70 °C/W
	Sin. 180 per thyristor/ per module	0.150/0.075 °C/W
	rec. 120	0.165/0.083 °C/W
$R_{th(c-h)}$		0.040/0.020 °C/W
T_{vj}		-40.....+ 130 °C
T_{stg}		-40.....+ 130 °C
V_{ISOL}	A.C. 50 Hz; r.m.s.; 1s/1min	3 KV/2.5 KV

* 1600 VOLTS Available on request

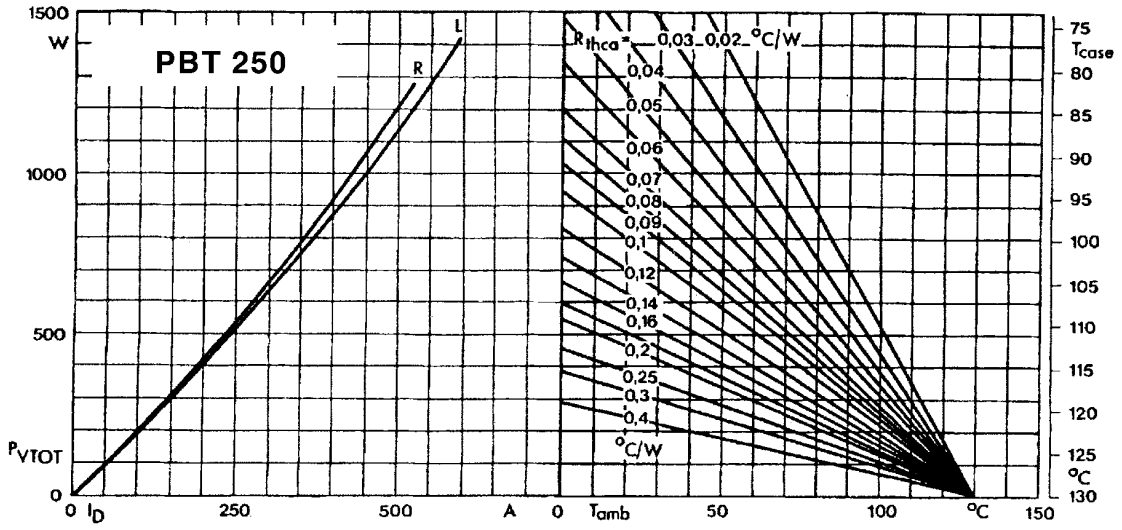
ISO 14001 CERTIFIED
AN ISO 9002 COMPANY



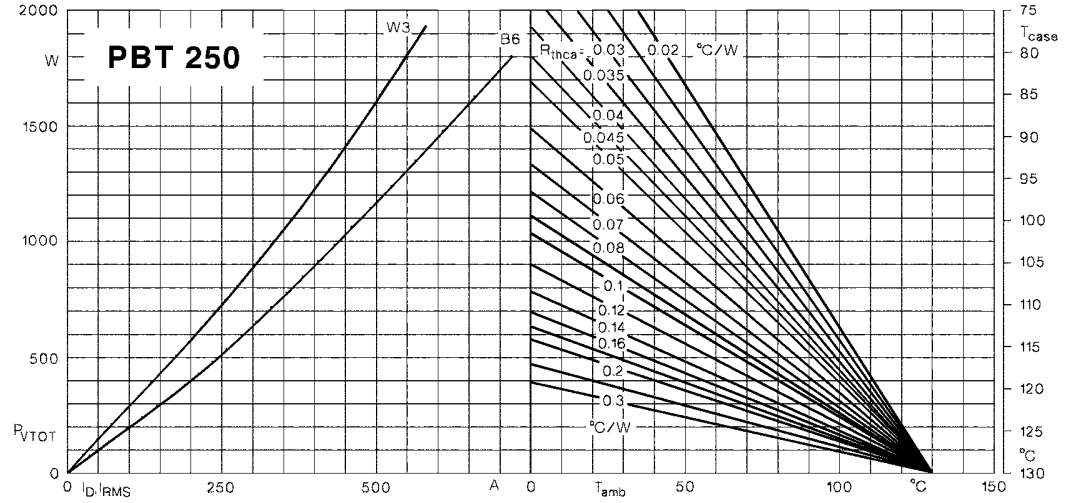
Power dissipation per thyristor vs. on-state current and ambient temperature



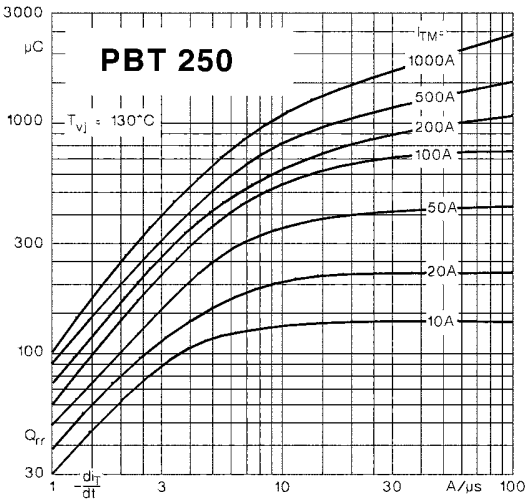
Power dissipation per module vs. rms current and case temperature



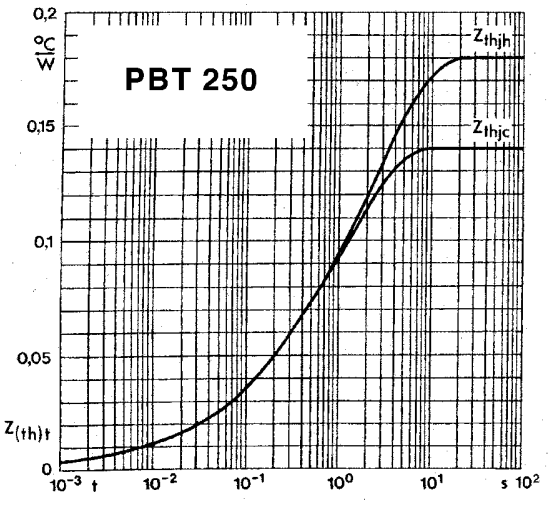
Power dissipation of two modules vs. direct current and case temperature



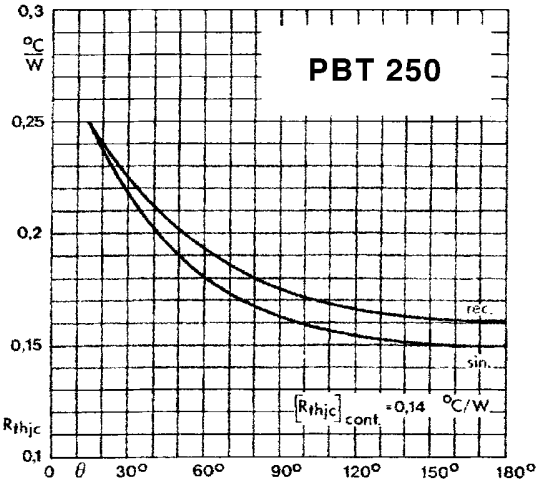
Power dissipation of three modules vs. direct and rms current and case temperature



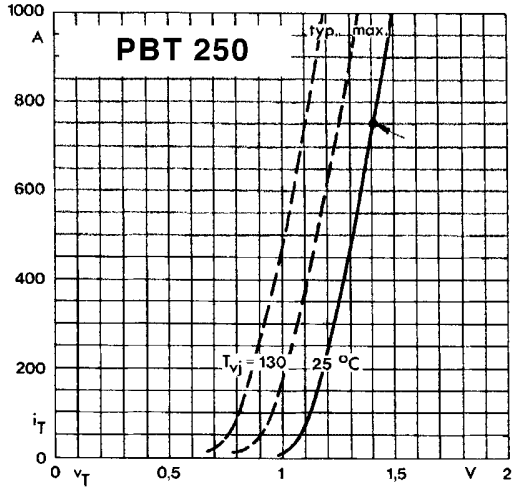
Recovered charge vs. current decrease



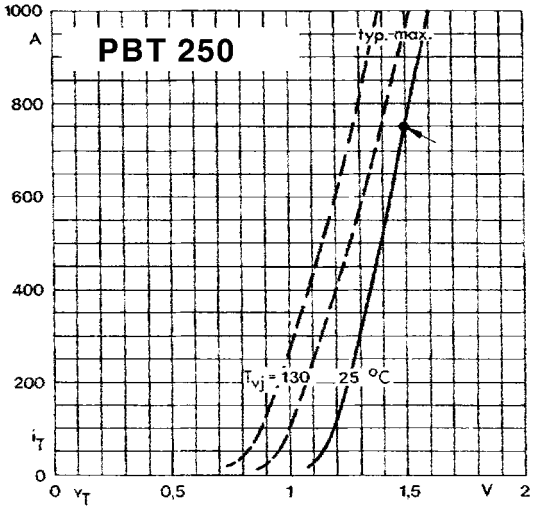
Transient thermal impedance vs. time



Thermal resistance vs. conduction angle

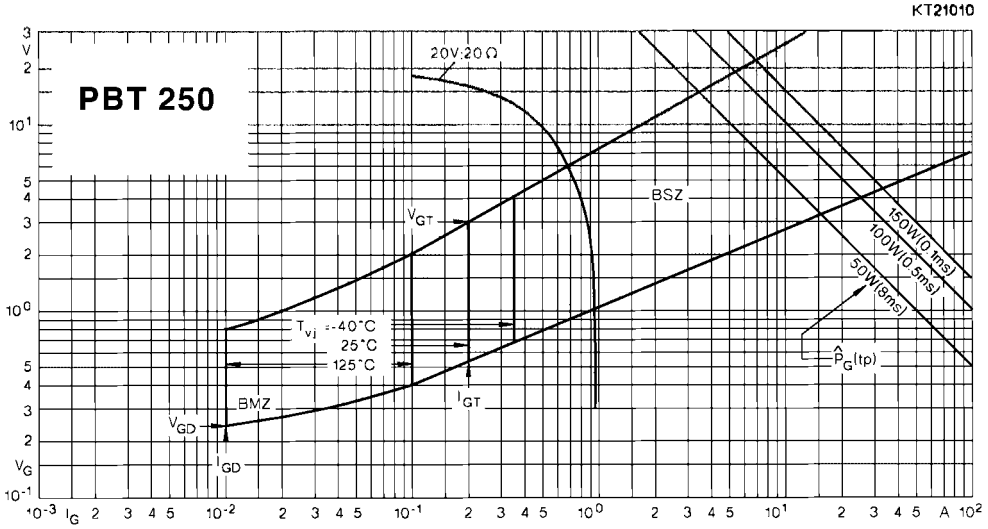


On-state characteristics



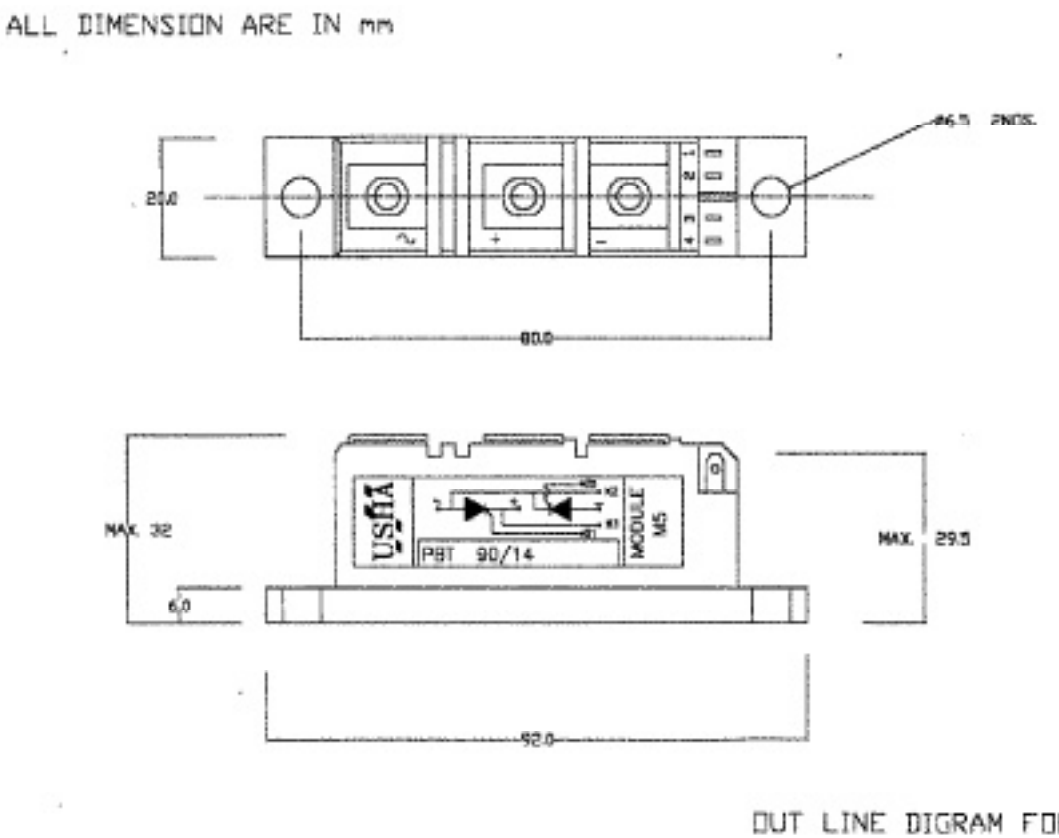
On-state characteristics

$$ NOTE : If this test is repeated by the user either as a goods inwards check or as a test of the final equipment, in accordance with IEC Publication 146 (1973),clause 492.1, only a voltage slowly increasing up to 3000V a.c. should be used.



Gate trigger characteristics

MECHANICAL DETAILS



ALL DIMENSIONS IN MM
MOUNTING TORQUE CASE TO HEAT SINK = 5 N.M.
MOUNTING TORQUE BUSBARS TO TERMINALS = 3N.M.

MOUNTING INSTRUCTIONS

- GREASE THE BASE PLATE WITH HEAT SINK COMPOUND BEFORE USE.
- MOUNTING TORQUE NOT TO EXCEED 4Nm FOR BOTH THE BOLTS.
- USE ONLY M5 SCREWS.