

Product Summary

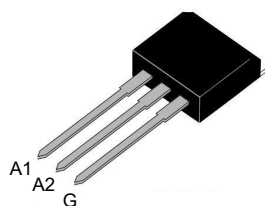
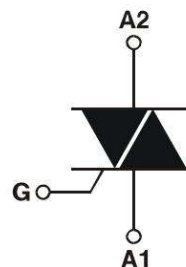
Symbol	Value	Unit
$I_{T(RMS)}$	25	A
$V_{DRM} V_{RRM}$	600 / 800	V
V_{TM}	1.55	V

Feature

With high ability to withstand the shock loading of large current, With high commutation performances, 3 quadrants products especially recommended for use on inductive load.

Application

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on.

Package**TO-262****Circuit diagram**

Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage	V_{DRM}	600 / 800	V
Repetitive peak reverse voltage	V_{RRM}	600 / 800	V
RMS on-state current	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	200	A
I^2t value for fusing (tp=10ms)	I^2t	340	A ² s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di_T/dt	I - II - III 100	A/ μ s
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Junction Temperature	T_J	-40 ~ +125	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

Electrical characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition		Value		Unit
				CW	BW	
Gate trigger current	I _{GT}	V _D =12V R _L = 33Ω T _j =25℃	I - II -III	≤35	≤50	mA
Gate trigger voltage	V _{GT}		I - II -III	≤1.3		V
Gate non-trigger voltage	V _{GD}	V _D =V _{DRM} T _j =125℃		≥0.2		V
latching current	I _L	I _G =1.2I _{GT}	I -III	≤80	≤100	mA
			II	≤80	≤100	
Holding current	I _H	I _T =100mA		≤50	≤75	mA
Critical-rate of rise of commutation voltage	dV _D /dt	V _D =2/3V _{DRM} Gate Open T _j =125℃		≥500	≥1000	V/μs

STATIC CHARACTERISTICS

Forward "on" voltage	V_{TM}	$I_{TM} = 35A$ $tp = 380\mu s$	≤ 1.55	V
Repetitive Peak Off-State Current	I_{DRM}	$V_D = V_{DRM}$ $V_R = V_{RRM}$	$T_J = 25^\circ C$ ≤ 10	μA
Repetitive Peak Reverse Current	I_{RRM}		$T_J = 125^\circ C$ ≤ 3	mA

THERMAL RESISTANCES

Thermal resistance	Rth(j-c)	Junction to case(AC)	1.1	°C/W
	Rth(j-a)	Junction to ambient	45	°C/W

Typical Characteristics

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

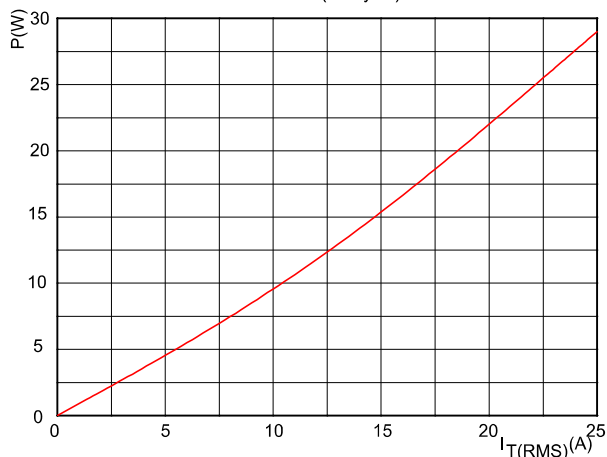


FIG.2: RMS on-state current versus case temperature (full cycle)

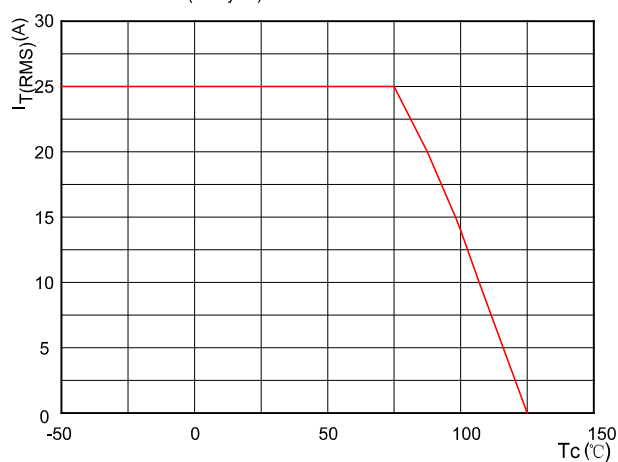


FIG.3: Surge peak on-state current versus number of cycles

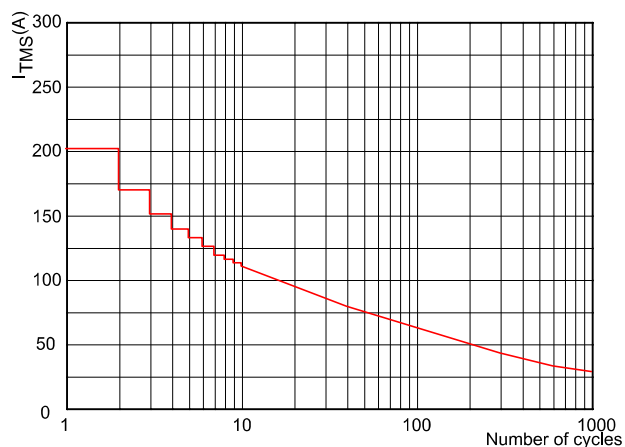


FIG.4: On-state characteristics (maximum values)

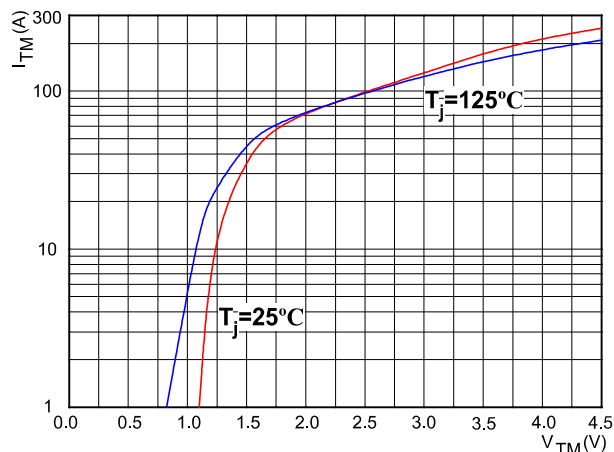


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$

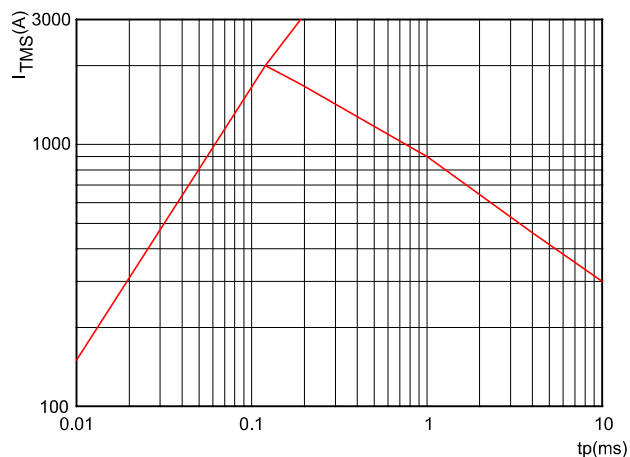
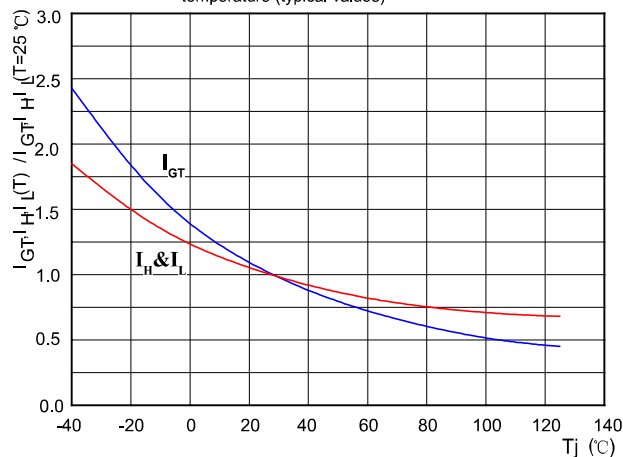


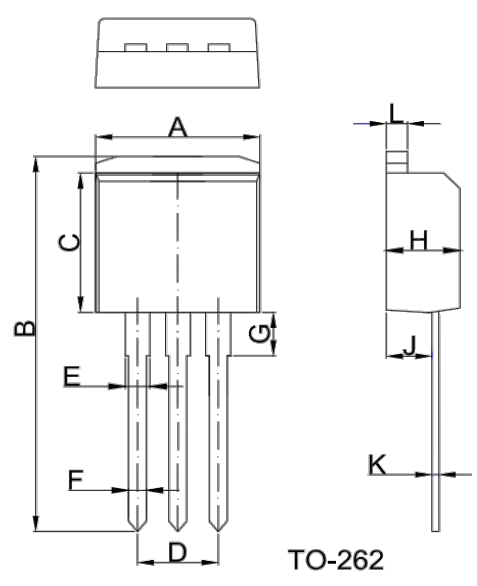
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



Ordering Information

BTB	X	25	—	600	B	W
Triacs					W: 3Q	
X: TO-262					B: $I_{GT1-3} \leq 50\text{mA}$	
					C: $I_{GT1-3} \leq 35\text{mA}$	
$I_{T(RMS)}: 25\text{A}$					600: $V_{DRM} / V_{RRM} \geq 600\text{V}$	
					800: $V_{DRM} / V_{RRM} \geq 800\text{V}$	

TO-262 Package Information

	Dimensions						
	Ref.	Millimeters			Inches		
		Min.	Typ.	Max.	Min.	Typ.	Max.
	A	9.95		10.20	0.392		0.402
	B	23.25		23.45	0.915		0.923
	C	8.90		9.10	0.35		0.358
	D	2.50		2.60	0.098		0.102
	E	1.20		1.35	0.047		0.053
	F	0.80		0.85	0.031		0.033
	G	3.30		3.60	0.130		0.142
	H	4.45		4.55	0.175		0.179
	J	2.50		2.70	0.098		0.106
	K	0.38		0.42	0.015		0.017
	L	1.25		1.29	0.049		0.051