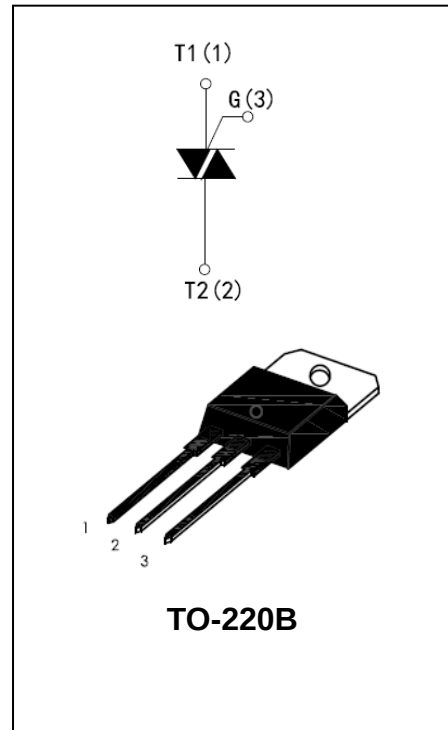




High current density due to double mesa technology; SIPOS and Glass Passivation. IPT2006-xx series are suitable for general purpose AC Switching. They can be used as an ON/OFF function In application such as static relays, heating regulation, Induction motor starting circuits... or for phase Control operation light dimmers, motor speed Controllers. IPT2006-xxB series is 3 Quadrants triacs, This is specially recommended for use on inductive Loads..



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	20	A
V_{DRM} / V_{RRM}	600	V
V_{TM}	≤ 1.65	V

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage Junction Temperature Range	T_{stg}	-40 to +150	$^{\circ}C$
Operating Junction Temperature Range	T_j	-40 to +125	$^{\circ}C$
Repetitive Peak Off-state Voltage $T_j = 25^{\circ}C$	V_{DRM}	600	V
Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Non Repetitive Peak Off-state Voltage $T_j = 25^{\circ}C$	V_{DSM}	700	V
Non Repetitive Peak Reverse Voltage	V_{RSM}	700	V
RMS on-state current $T_c = 70^{\circ}C$ (360° conduction angle)	$I_{T(RMS)}$	20	A
Non repetitive surge peak on-state Current $t = 8.3ms$ (full cycle, $T_j = 25^{\circ}C$) $t = 10ms$	I_{TSM}	210 200	A
I^2t Value for fusing $t_p = 10ms$	I^2t	200	A^2s
Critical Rate of rise of on-state current Repetitive F = 50Hz Gate supply : $I_G = 500mA$ $dI_G/dt = 1A/us$ Non repetitive	di / dt	20 100	A/us
Peak gate current $t_p = 20us, T_j = 125^{\circ}C$	I_{GM}	8	A
Average gate power dissipation $T_j = 125^{\circ}C$	$P_{G(AV)}$	1	W

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

Symbol	Test Condition	Quadrant		IPT2006-xxB			Unit
				BE	CE	DE	
IGT	VD = 12V RL = 33Ω Tj = 25 °C	I – II – III	MAX	50	35	50	mA
VGT		I – II – III	MAX	1.5			V
VGD	VD=VDRM, RL=3.3KΩ, Tj = 125 °C	I – II – III	MIN	0.2			V
IL	IG = 1.2 IGT, Tj = 125 °C	I – III	MAX	50	50	70	mA
		II		100	60	80	
IH	IT = 500mA Gate open		MAX	50	50	75	mA
dV/dt	VD = 67% VDRM gate open Tj = 125 °C		MIN	400	250	500	V/us
(dI/dt)c	(dV/dt) c=0.1V/us Tj = 125 °C		MIN	-	-	-	A/ms
	(dV/dt) c=10V/us Tj = 125 °C			-	-	-	
	Without snubber Tj = 125 °C			-	18	11	

STATIC CHARACTERISTICS

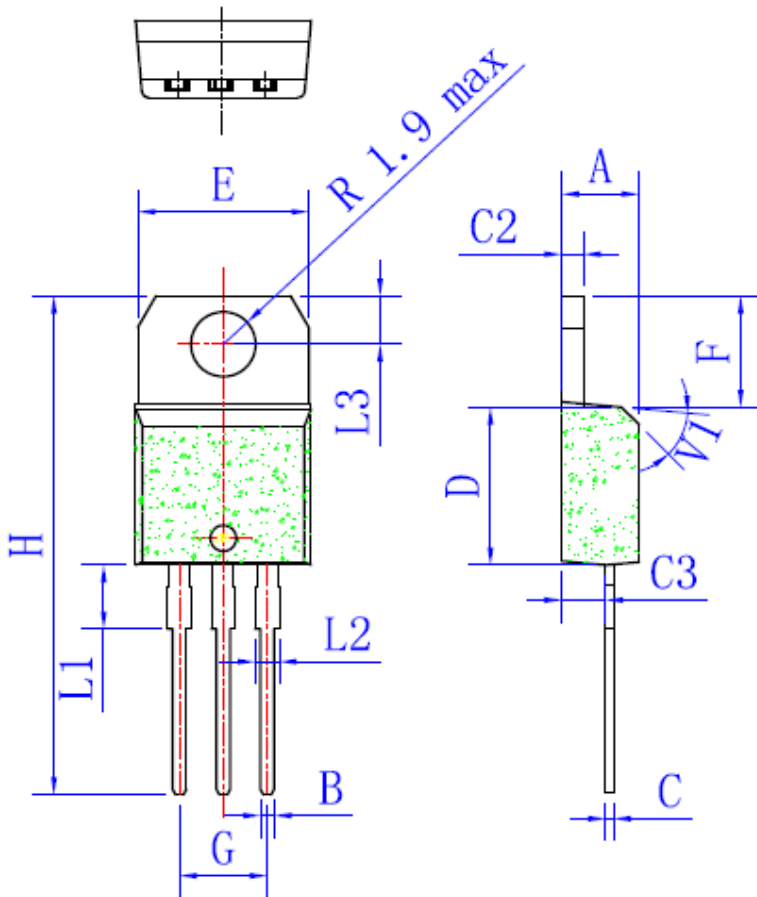
Symbol	Test Conditions		Value (MAX)	Unit
V _{TM}	I _{TM} = 28A, t _p = 380uS	T _j = 25 °C	1.65	V
I _{DRM}	V _D = V _{DRM}	T _j = 25 °C	20	uA
I _{RRM}	V _R = V _{RRM}	T _j = 125 °C	3	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th} (j – c)	Junction to case (AC)	1.3	°C/W

PACKAGE MECHANICAL DATA

TO-220B



	Millimeters		
	Min	Typ	Max
A	4.4		4.6
B	0.61		0.88
C	0.46		0.70
C2	1.23		1.32
C3	2.4		2.72
D	8.6		9.7
E	9.8		10.4
F	6.2		6.6
G	4.8		5.4
H	28		29.8
L1		3.75	
L2	1.14		1.7
L3	2.65		2.95
V		40°	

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

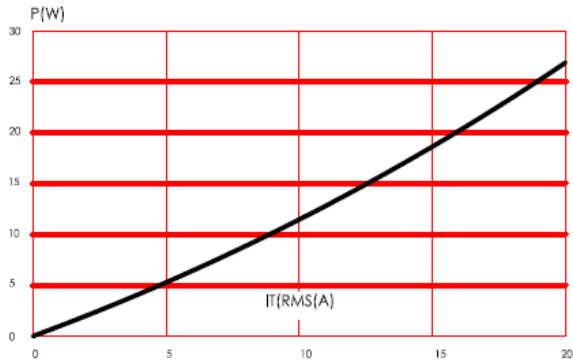


FIG.2: RMS on-state current versus case temperature(full cycle)

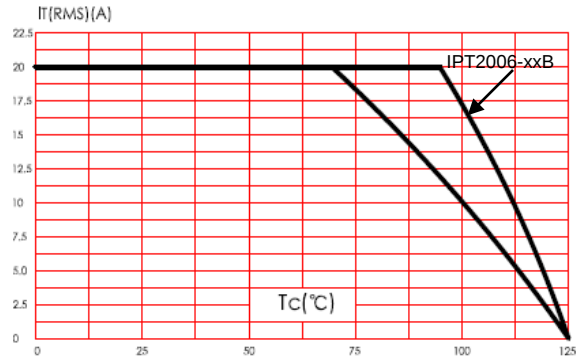


FIG.3: On-state characteristics (maximum values)

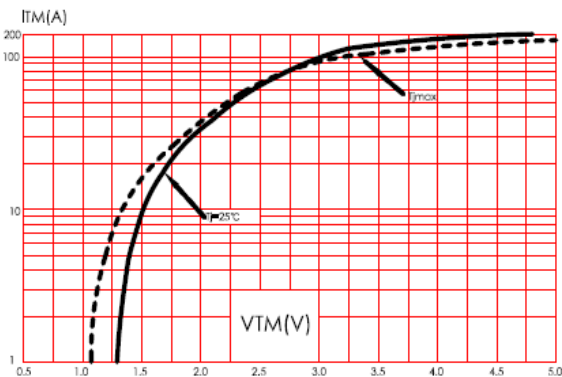


FIG.4: Surge peak on-state current versus number of cycles.

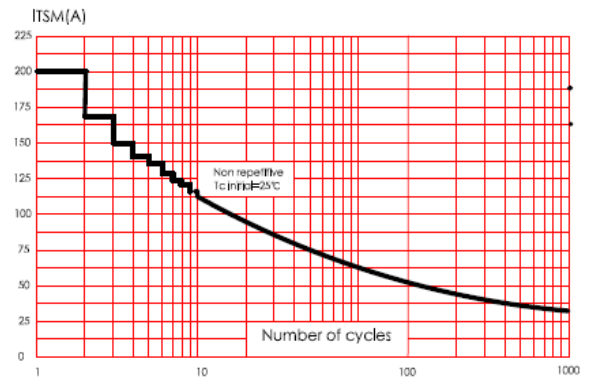


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t

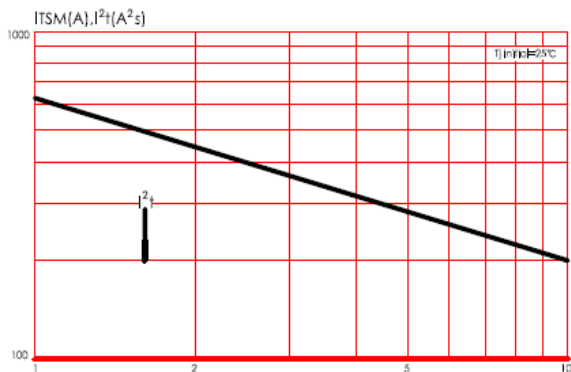


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).

