



**High current density due to double mesa technology;
SIPOS and Glass Passivation. IPT0406-xx series are
suitable for general purpose AC Switching.**

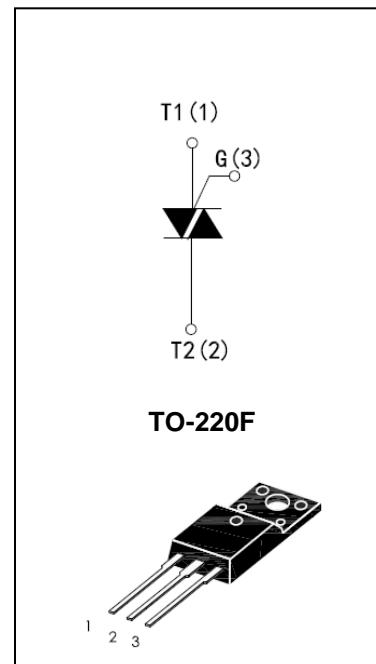
**They can be used as an ON/OFF function In application
such as static relays, heating regulation, Induction
motor starting circuits... or for phase Control operation
light dimmers, motor speed Controllers.**

**IPT0406-xx series is 3 Quadrants triacs, This is specially
recommended for use on inductive Loads..**

**The TO-220F isolated mounting base, they provides
1500V RMS isolation voltage.**

MAIN FEATURES

Symbol	Value	Unit
IT(RMS)	4	A
VDRM / VRRM	600	V
IGT	≤ 50	mA



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage Junction Temperature Range	Tstg	-40 to +150	°C
Operating Junction Temperature Range	Tj	-40 to +125	°C
Repetitive Peak Off-state Voltage Tj = 25 °C	VDRM	600	V
Repetitive Peak Reverse Voltage	VRRM	600	V
Non Repetitive Peak Off-state Voltage Tj = 25 °C	VDSM	700	V
Non Repetitive Peak Reverse Voltage	VRSM	700	V
RMS on-state current Tc = 105 °C (Full sine wave)	IT(RMS)	4	A
Non repetitive surge peak on-state Current f = 60Hz t = 16.7ms (full cycle, Tj = 25 °C)	ITSM	33 30	A
I ² t Value for fusing tp = 10ms	I ² t	4.5	A ² s
Peak gate current tp = 20us, Tj = 125 °C	IGM	1	A
Peake gate power dissipation Tj = 125 °C	PGM	1.5	W
Average gate power dissipation Tj = 125 °C	PG(AV)	0.1	W

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Rating			Unit
			MIN	TYP	MAX	
I _{GT}	$V_D = 12V$ $R_L = 30\Omega$	T2+G+/T2+G-/T2-G-		18 - 25	50	mA
V _{GT}		T2+G+/T2+G-/T2-G-			1.5	V
V _{GD}	$V_D = V_{DRM}$, $R_L = 3.3K\Omega$, $T_j = 125^\circ\text{C}$		0.2			V
I _L	$I_G = 1.2 I_{GT}$	T2+ G+			60	mA
		T2+ G-			70	
		T2- G-			60	
I _H	$I_T = 100\text{mA}$	T2+G+/T2+G-/T2-G-			50	mA
dV/dt	$V_D = 67\% V_{DRM}$ gate open $T_j = 125^\circ\text{C}$		500			V/us

STATIC CHARACTERISTICS

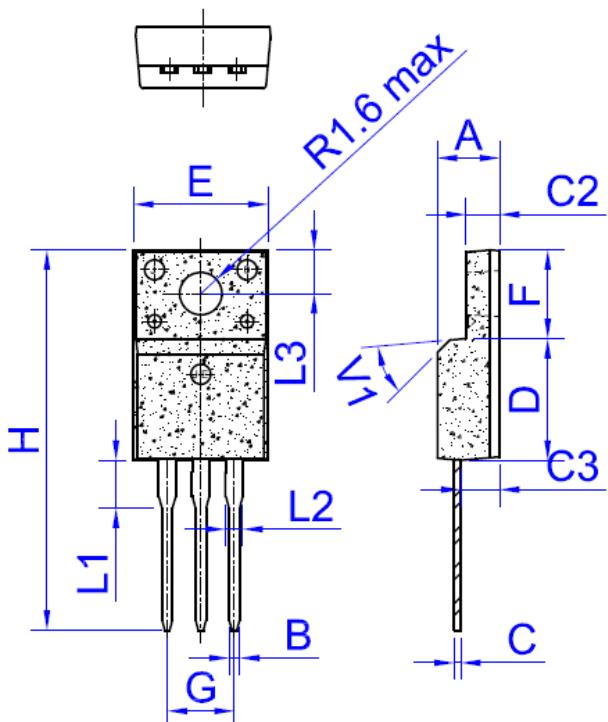
Symbol	Test Conditions		Value (MAX)	Unit
I _{DRM}	$V_D = V_{DRM}$	$T_j = 25^\circ\text{C}$	10	uA
I _{RRM}	$V_R = V_{RRM}$	$T_j = 125^\circ\text{C}$	1	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th} (j - c)	Junction to case (AC)	3.5	°C/W

PACKAGE MECHANICAL DATA

TO-220F



Ref	Dimensions					
	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	4.4		4.8	0.173		0.189
B	0.74	0.8	0.83	0.029	0.031	0.033
C	0.5		0.75	0.020		0.030
C2	2.4		2.7	0.094		0.106
C3	2.6		3	0.102		0.118
D	8.8		9.3	0.346		0.367
E	9.7		10.3	0.382		0.406
F	6.4		6.8	0.252		0.268
G	5		5.2	0.197		0.205
H	28.0		29.8	11.0		11.7
L1		3.63			0.143	
L2	1.14		1.7	0.044		0.067
L3		3.3			0.130	
V1		40°			40°	

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

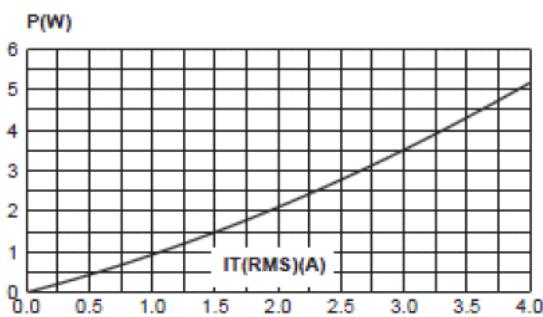


FIG.3: On-state characteristics (maximum values)

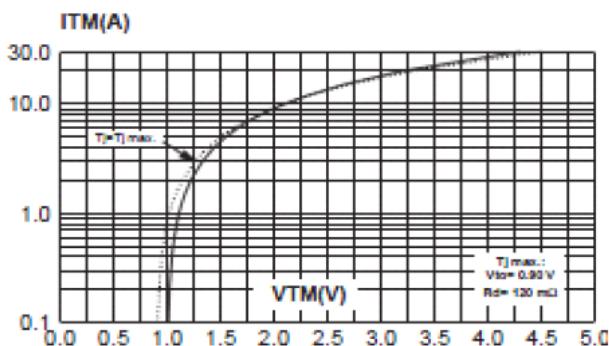


FIG.5: Surge peak on-state current versus number of cycles.

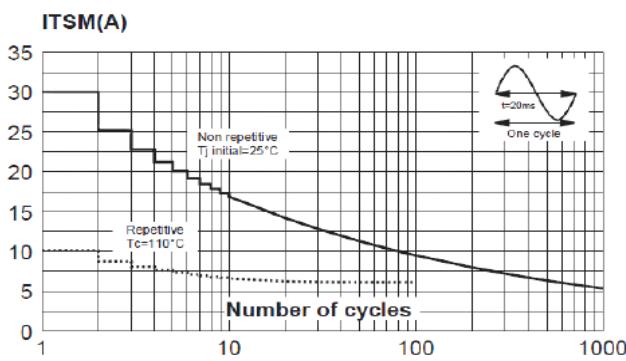


Fig. 2: RMS on-state current versus case temperature(full cycle)

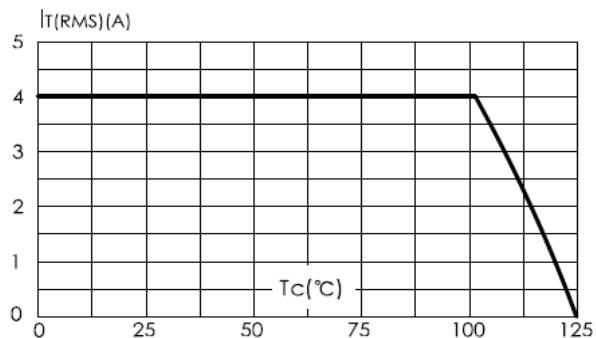


Fig. 4: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

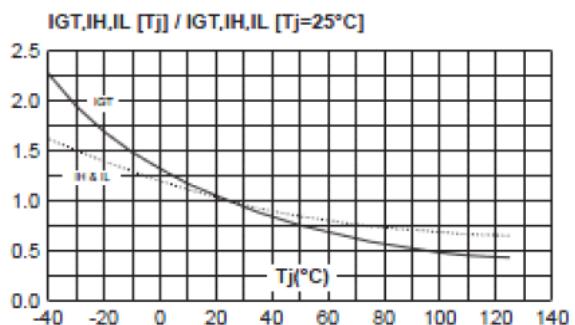


Fig. 6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t .

