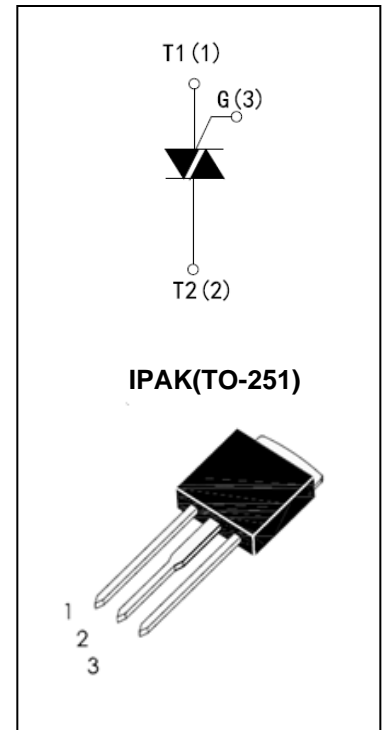




High current density due to double mesa technology; SIPOS and Glass Passivation. IPT0806-xx series are suitable for general purpose AC Switching. They can be used as an ON/OFF function In application such as static relays, heating regulation, Induction motor starting circuits... or for phase Control operation light dimmers, motor speed Controllers. IPT0806-xx series is 3 Quadrants triacs, This is specially recommended for use on inductive Loads..



MAIN FEATURES

Symbol	Value	Unit
IT(RMS)	8	A
VDRM / VRRM	600	V
VTM	≤ 1.55	V

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 Repetitive Peak Reverse Voltage	VDRM VRRM	600 600	V
Non Repetitive Peak Off-state Voltage Non Repetitive Peak Reverse Voltage	VDSM VRSM	700 700	V
RMS on-state current (Full sine wave)	IT(RMS)	8	A
Non repetitive surge peak on-state Current (full cycle, Tj = 25 °C)	ITSM	80 84	A
I²t Value for fusing	I²t	36	A²s
Critical Rate of rise of on-state current IG = 2xIGT, tr ≤ 100ns, f = 120Hz, Tj = 125 °C	dl / dt	50	A/us
Peak gate current	IGM	4	A
Average gate power dissipation	PG(AV)	1	W

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

Symbol	Test Condition	Quadrant		IPT0806-xxl			Unit
				SE	CE	BE	
I _{GT}	V _D = 12V R _L = 33Ω	I – II – III	MAX	10	35	50	mA
V _{GT}		I – II – III	MAX	1.3			V
V _{GD}	V _D =V _{DRM} , R _L =3.3KΩ, T _j = 125 °C	I – II – III	MIN	0.2			V
I _L	I _G = 1.2 I _{GT}	I – III	MAX	25	50	70	mA
		II		30	60	80	
I _H	I _T = 500mA		MAX	15	35	50	mA
dV/dt	V _D = 67% V _{DRM} gate open T _j = 125 °C		MIN	40	500	1000	V/us
(dI/dt) _c	(dV/dt) c=0.1V/us T _j = 125 °C		MIN	5.4	-	-	A/ms
	(dV/dt) c=10V/us T _j = 125 °C			2.8	-	-	
	Without snubber T _j = 125 °C			-	4.5	7.0	

STATIC CHARACTERISTICS

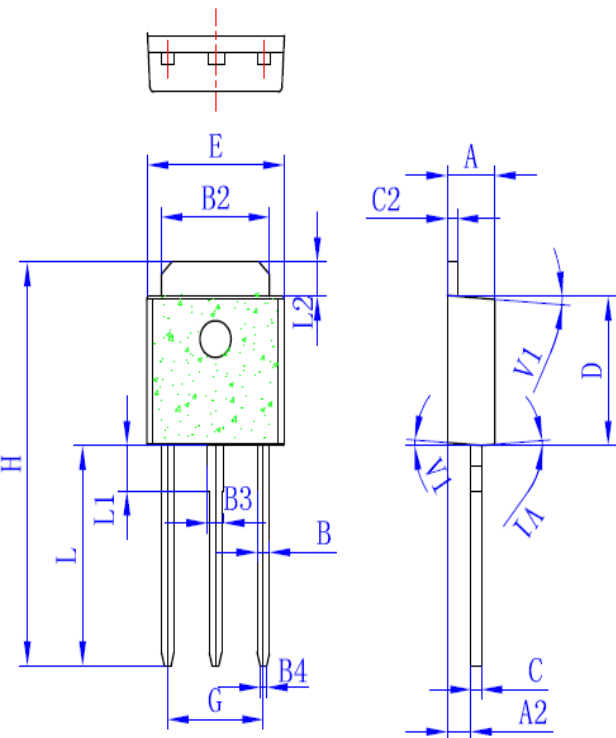
Symbol	Test Conditions		Value(MAX)	Unit
V _{TM}	I _{TM} = 17A, t _p = 380uS	T _j = 125 °C	1.55	V
I _{DRM}	V _D = V _{DRM}	T _j = 125 °C	5	uA
I _{RRM}	V _R = V _{RRM}	T _j = 125 °C	1	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j – c)}	Junction to case (AC)	1.6	°C/W

PACKAGE MECHANICAL DATA

TO-251(IPAK)



Ref	Dimensions					
	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	2.2		2.4	0.086		0.095
A2	0.9		1.1	0.035		0.043
B	0.55		0.65	0.021		0.026
B2	5.1		5.4	0.200		0.212
B3	0.76		0.85	0.030		0.033
B4		0.32			0.013	
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.7	0.252		0.264
G	4.4		4.7	0.173		0.185
H	16		16.7	0.630		0.658
L	8.9		9.4	0.35		0.37
L1	1.8		1.9	0.071		0.075
L2	1.37		1.5	0.054		0.059
V1		4°			4°	

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

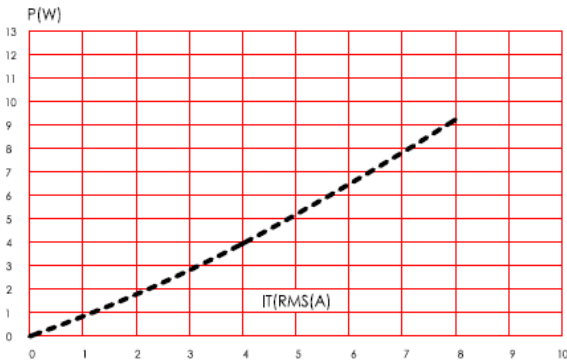


FIG.2: RMS on-state current versus case temperature(full cycle)

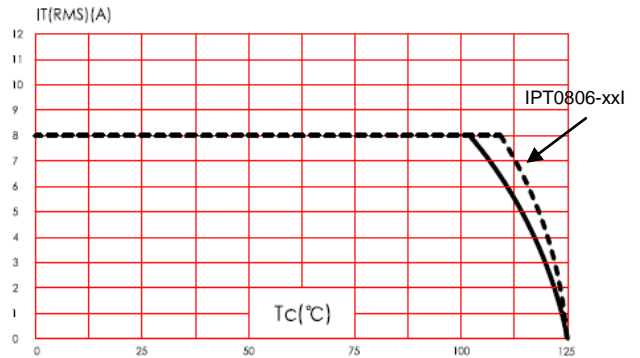


FIG.3: On-state characteristics (maximum values)

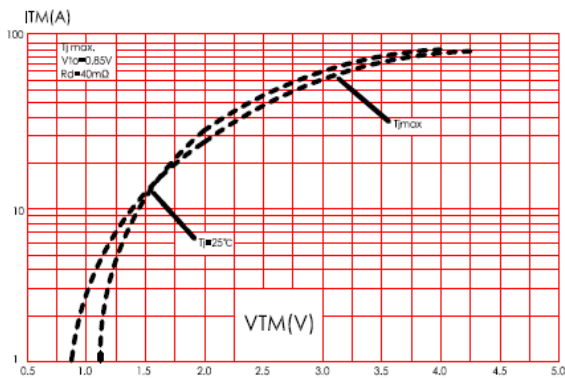


FIG.4: Surge peak on-state current versus number of cycles.

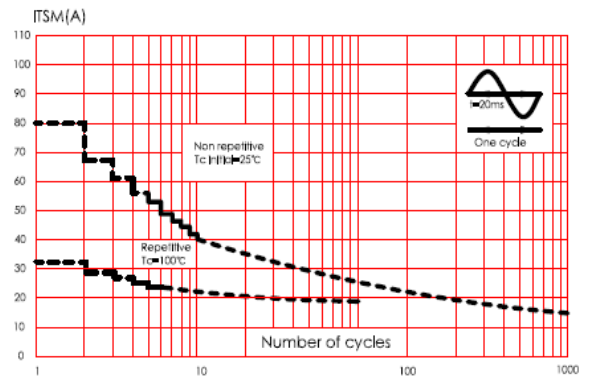


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t

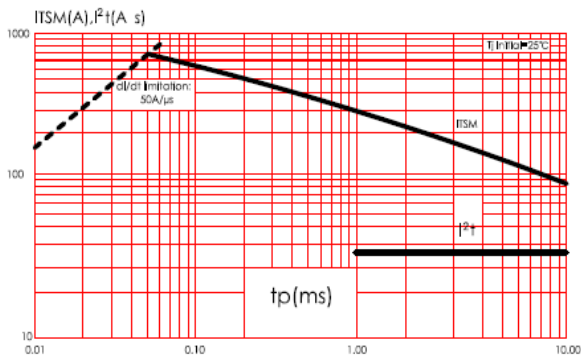


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

