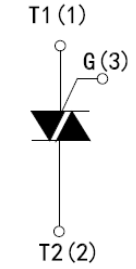
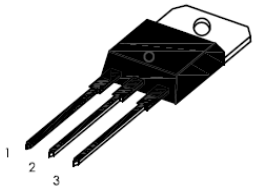
High current density due to double mesa technology; SIPOS and Glass Passivation. IPT08Q08-xx series are suitable for general purpose AC Switching.
They can be used as an ON/OFF function In application such as static relays, heating regulation, Induction motor stating circuits… or for phase Control operation light dimmers, motor speed Controllers.
The IPT08Q08-xxA series are 2500V RMS insulating voltage.



(TO-220A)



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
V_{DRM} / V_{RRM}	800	V
V_{TM}	≤ 1.55	V

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage Junction Temperature Range Operating Junction Temperature Range	Tstg Tj	-40 to +150 -40 to +125	℃
Repetitive Peak Off-state Voltage Tj = 25℃ Repetitive Peak Reverse Voltage	V_{DRM} V_{RRM}	800 800	V
Non Repetitive Peak Off-state Voltage Tj = 25℃ Non Repetitive Peak Reverse Voltage	V_{DSM} V_{RSM}	900 900	V
RMS on–state current Tc =95℃ (Full sine wave)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on–state Current f = 60Hz t = 16.7ms (full cycle, Tj = 25℃) f = 50 Hz t = 20ms	I_{TSM}	80 84	A
I^2t Value for fusing tp = 10ms	I^2t	36	A^2s
Critical Rate of rise of on-state current I_G = 2xI_{GT}, tr ≤ 100ns, f = 120Hz, Tj = 125 ℃	dI / dt	50	A/us
Peak gate current tp = 20us, Tj = 125 ℃	I_{GM}	4	A
Average gate power dissipation Tj = 125 ℃	$P_{G(AV)}$	1	W

4F, Cheong won B/D, 269 Hyoje-dong, Jongno-gu, Seoul, 110-480 Korea
TEL : +82-70 - 7574 - 2839, Fax : +82-2-6280-6382, sales@ipsemiconductor.com

ELECTRICAL CHARACTERISTICS(Tj = 25 ℃ unless otherwise specified)

Symbol	Test Condition	Quadrant		IPT08Q08-xxA		Unit
				CE	BE	
I_{GT}	V_D = 12V R_L = 30Ω	I – II – III IV	MAX	25 50	50 100	mA
V_{GT}		ALL	MAX	1.3		V
V_{GD}	V_D=V_{DRM}, R_L=3.3KΩ, Tj = 125 ℃	ALL	MIN	0.2		V
I_L	I_G = 1.2 I_{GT}	I – III – IV	MAX	40	50	mA
		II		80	100	
I_H	I_T = 100mA		MAX	25	50	mA
dV/dt	V_D = 67% V_{DRM} gate open Tj = 125 ℃		MIN	200	400	V/us

STATIC CHARACTERISTICS

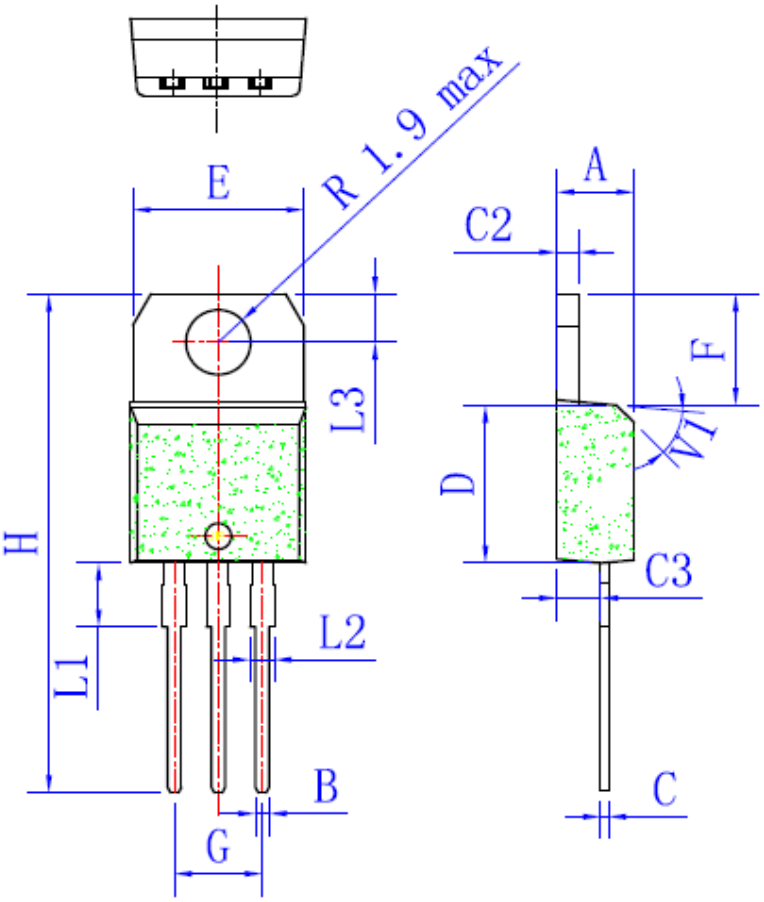
Symbol	Test Conditions		Value(MAX)	Unit
V_{TM}	I_{TM} = 17A, t p = 380uS	Tj = 125 ℃	1.55	V
I_{DRM}	V_D = V_{DRM}	Tj = 125 ℃	5	uA
I_{RRM}	V_R = V_{RRM}	Tj = 125 ℃	1	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R_{th} (j – c)	Junction to case (AC)	2.5	℃/W

PACKAGE MECHANICAL DATA

TO-220A



	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)

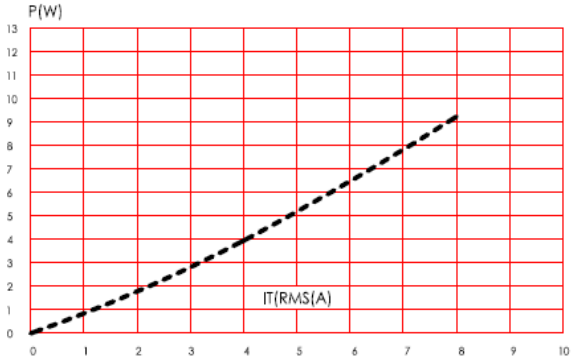


FIG.2: RMS on-state current versus case temperature(full cycle)

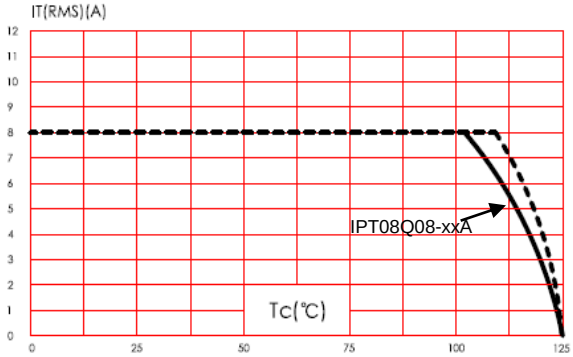


FIG.3: On-state characteristics (maximum values)

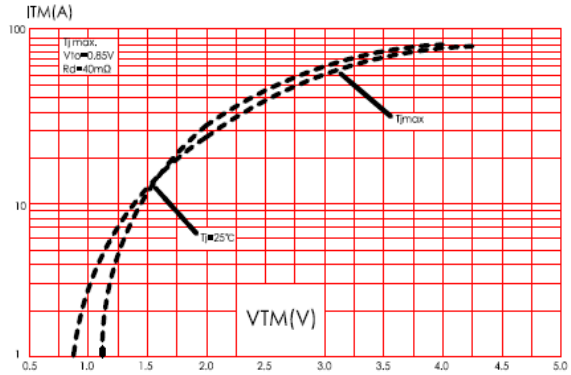


FIG.4: Surge peak on-state current versus number of cycles.

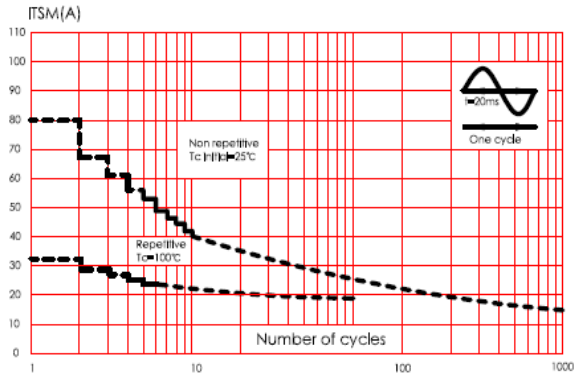


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<10ms, and corresponding value of I^2t

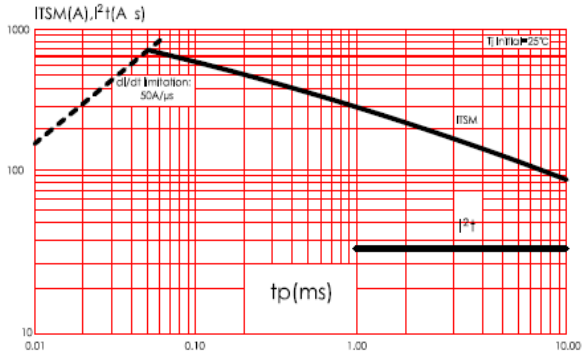


FIG.6: Relative variation of gate trigger current,holding current and latching current versus junction temperature(typical values).

