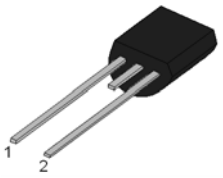
PxxxxEB Series TSS

Rev.1.0

DESCRIPTION:

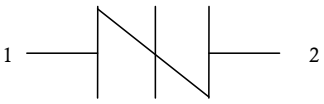
PxxxxEB series thyristors are a type of semiconduct component. They are designed in applications: modems, telephones, line cards, answering machines, FAX machines, SLICs, T1/E1, xDSL, PBXs and more.



TO-92-2L

FEATURES:

- Excellent capability of absorbing transient surge.
- Quick response to surge voltage (ns Level).
- Eliminates overvoltage caused by fast rising transients.
- Moisture sensitivity level: Level 1.
- Non degenerative.
- Package way:1000pcs/bag.



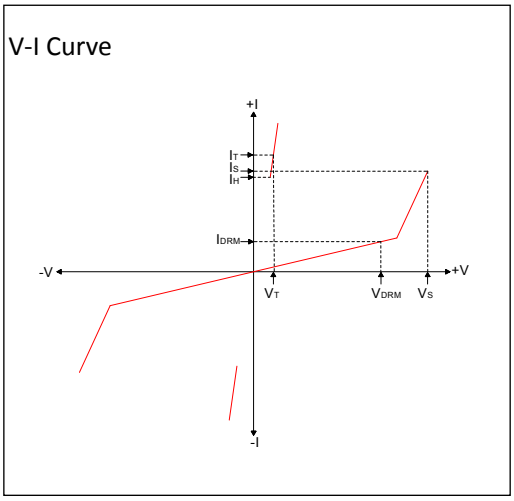
Symbol

ABSOLUTE MAXIMUM RATINGS (T_A=25ºC, unless otherwise noted)

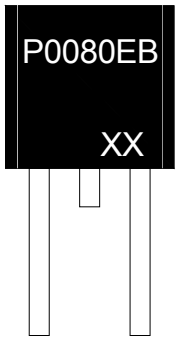
Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	℃
Operating junction temperature range	T_J	-40 to +125	℃
Peak pulse current@10/1000μs	I_{PP}	80	A
Surge on-state current non-repetitive one cycle peak value (50Hz)	I_{TSM}	30	A
Critical rate-of-rise of on-state current	di_T/dt	500	A/μs

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Symbol	Parameter
V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current
V_S	Switching voltage
I_S	Switching current
V_T	On-state voltage
I_T	On-state current
I_H	Holding current
C_O	Off-state capacitance



MARKING



P0080EB:Device Marking Code
XX: The production cycle

ELECTRICAL CHARACTERISTICS (T_A=25℃, continued)

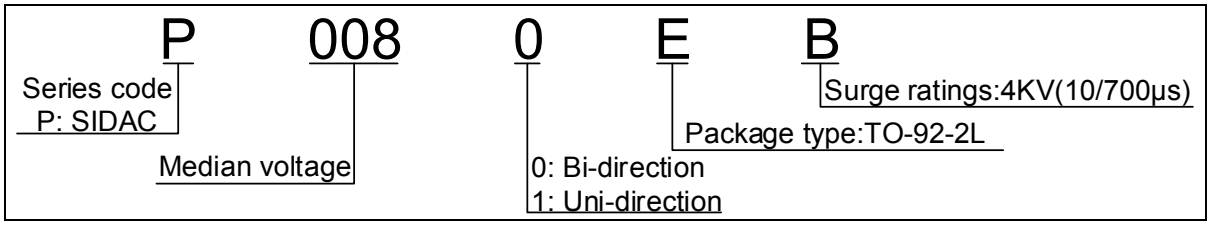
Part Number	I_{DRM}@V_{DRM}		V_S①@I_S		V_T@I_T		I_H	C_O②	Marking
	μA	V	V	mA	V	A	mA	pF	
	max	min	max	max	max	max	min	max	
P0080EB	1	6	15	800	4	2.2	50	100	P0080EB
P0300EB	1	25	40	800	4	2.2	50	80	P0300EB
P0640EB	1	58	77	800	4	2.2	120	80	P0640EB
P0720EB	1	65	87	800	4	2.2	120	75	P0720EB
P2300EB	1	190	260	800	4	2.2	120	50	P2300EB
P2600EB	1	220	300	800	4	2.2	120	45	P2600EB
P3100EB	1	275	350	800	4	2.2	120	45	P3100EB
P3500EB	1	320	400	800	4	2.2	120	40	P3500EB

① Vs is measured at 100KV/s
② Off-state capacitance is measured in V_{DC}=2V,V_{RMS}=1V, f=1MHz

SURGE RATINGS(Temperature range: -40 ~+85℃)

Series	I_{PP}(A) min			
	2/10μs	8/20μs-1.2/50μs	5/310μs-10/700μs	10/1000μs
B	250	250	100	80

ORDERING INFORMATION



SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L)to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG.1: tr × td pulse waveform

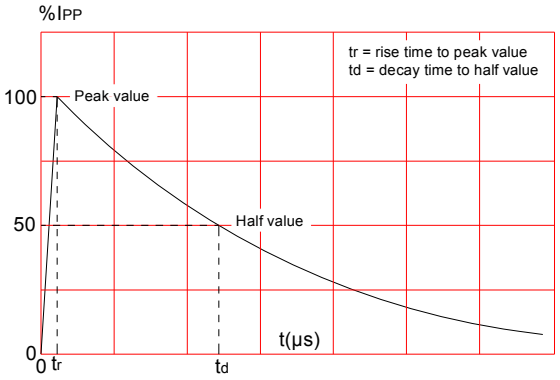


FIG.2: Reflow condition

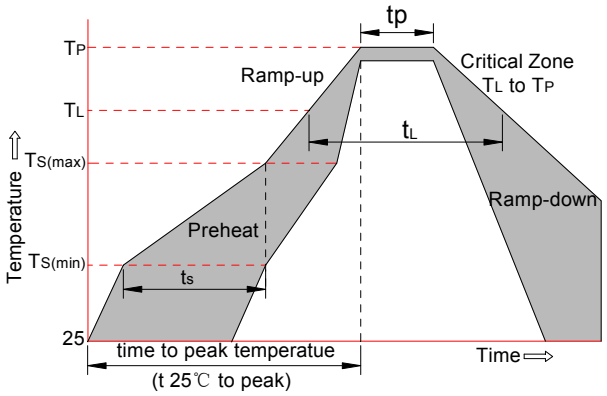


FIG.3: Normalized Vs change vs. junction temperature

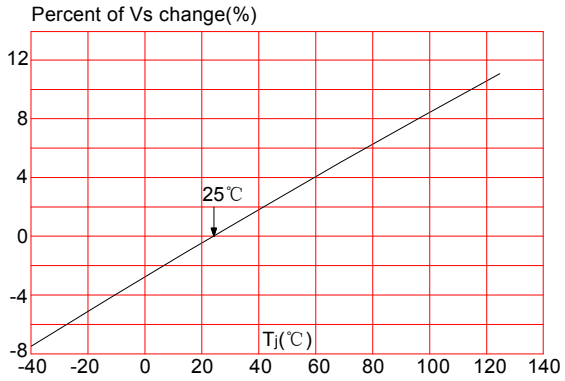
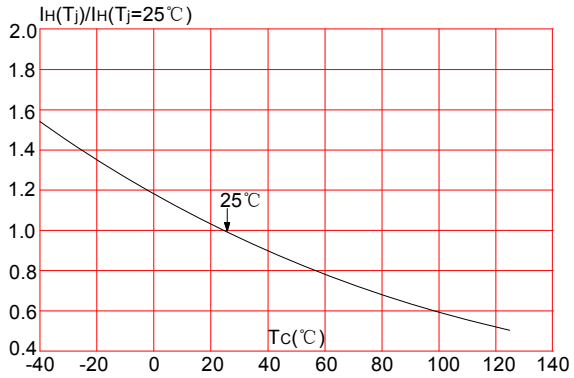
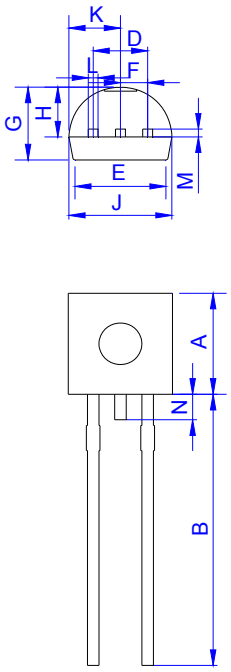


FIG.4: Normalized DC holding current vs. case temperature



PACKAGE MECHANICAL DATA



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Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.32	5.33	0.170	0.210
B	12.70	15.00	0.500	0.591
D	2.41	2.67	0.095	0.105
E	-	4.3	-	0.169
F	1.16	1.37	0.046	0.054
G	3.18	4.19	0.125	0.165
H	2.04	2.66	0.080	0.105
J	4.45	5.20	0.175	0.205
K	2.04	2.66	0.080	0.105
L	0.41	0.53	0.016	0.021
M	0.36	0.50	0.014	0.020
N	-	1.52	-	0.060