

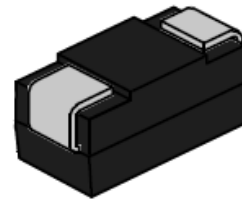


## CP0080SBC TSS

Rev.1.1

## DESCRIPTION:

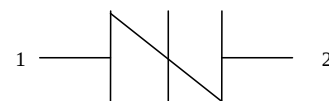
The thyristors of CP0080SBC are a type of semiconductor component. They are designed to protect baseband equipment such as phones, modems, line cards, answering machines, FAX machines, CPE and DSL form damaging overvoltage transients.



SMB

## 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.
- ✧ UL 497B item recognized. (File No.: E480698).
- ✧ IEC61000-4-2 (ESD)  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact).
- ✧ Low capacitance.
- ✧ Non degenerative.



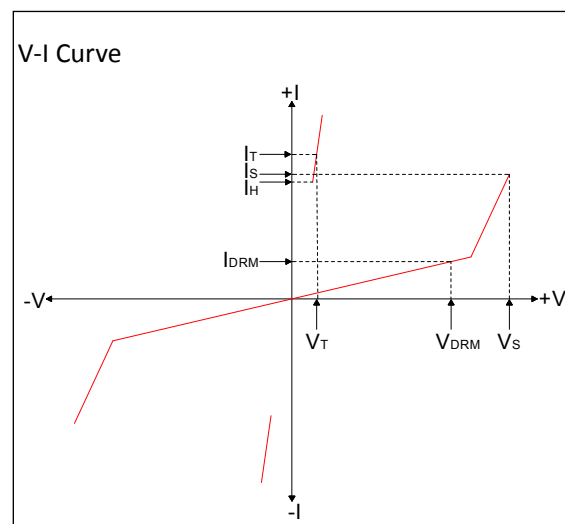
Symbol

ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , RH=45%-75%, unless otherwise noted)

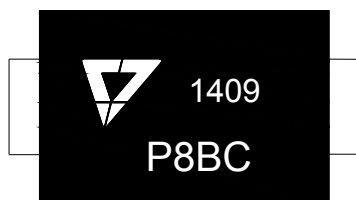
| Parameter                                           | Symbol           | Value       | Unit             |
|-----------------------------------------------------|------------------|-------------|------------------|
| Storage temperature range                           | $T_{\text{STG}}$ | -60 to +150 | $^\circ\text{C}$ |
| Operating junction temperature range                | $T_J$            | -40 to +125 | $^\circ\text{C}$ |
| Repetitive peak pulse current@10/1000 $\mu\text{s}$ | $I_{\text{PP}}$  | 80          | A                |

ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ )

| Symbol           | Parameter              |
|------------------|------------------------|
| $V_{\text{DRM}}$ | Peak off-state voltage |
| $I_{\text{DRM}}$ | 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



P8BC: Device Marking Code  
1409: In ninth week, 2014

ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, continued)

| Part Number | I <sub>DRM</sub> @V <sub>DRM</sub> |   | V <sub>S</sub> <sup>①</sup> @I <sub>S</sub> |     | V <sub>T</sub> @I <sub>T</sub> |     | I <sub>H</sub> | Co <sup>②</sup> | Marking |
|-------------|------------------------------------|---|---------------------------------------------|-----|--------------------------------|-----|----------------|-----------------|---------|
|             | μA                                 | V | V                                           | mA  | V                              | A   | mA             | pF              |         |
|             | max                                |   | max                                         | max | max                            | max | min            | max             |         |
| CP0080SBC   | 1                                  | 6 | 15                                          | 800 | 4                              | 2.2 | 50             | 30              | P8BC    |

① V<sub>S</sub> is measured at 100kV/s

② Off-state capacitance is measured in V<sub>DC</sub>=2V, V<sub>RMS</sub>=1V, f=1MHz

## SURGE RATINGS

| Series | I <sub>PP</sub> (A) min |                     |                     |                      |
|--------|-------------------------|---------------------|---------------------|----------------------|
|        | 2/10 <sup>①</sup>       | 8/20 <sup>①</sup>   | 5/310 <sup>①</sup>  | 10/1000 <sup>①</sup> |
|        | 2/10 <sup>②</sup>       | 1.2/50 <sup>②</sup> | 10/700 <sup>②</sup> | 10/1000 <sup>②</sup> |
| B      | 250                     | 250                 | 100                 | 80                   |

Note:

① Current waveform in μs

② Voltage waveform in μs

## ORDERING INFORMATION

|                         |                |                 |   |              |                             |
|-------------------------|----------------|-----------------|---|--------------|-----------------------------|
| CP                      | 008            | 0               | S | B            | C                           |
| Low cap series SIDACtor |                |                 |   |              | Capacitance level           |
|                         | Median voltage |                 |   |              | Surge ratings:4kV(10/700μs) |
|                         |                | 0: Bi-direction |   | Package type |                             |

## SOLDERING PARAMETERS

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

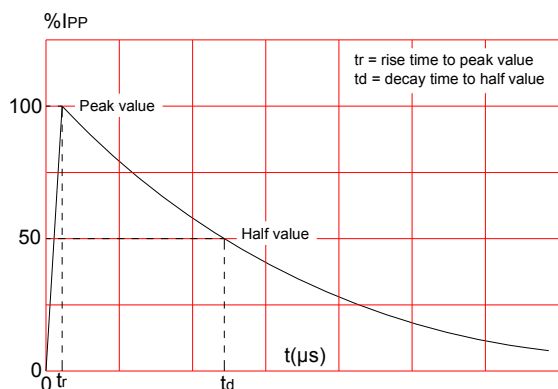
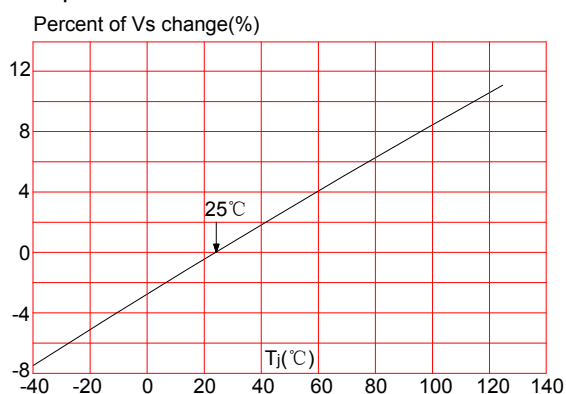
FIG.1:  $t_r \times t_d$  pulse waveformFIG.3: Normalized  $V_s$  change vs. junction temperature

FIG.2: Reflow condition

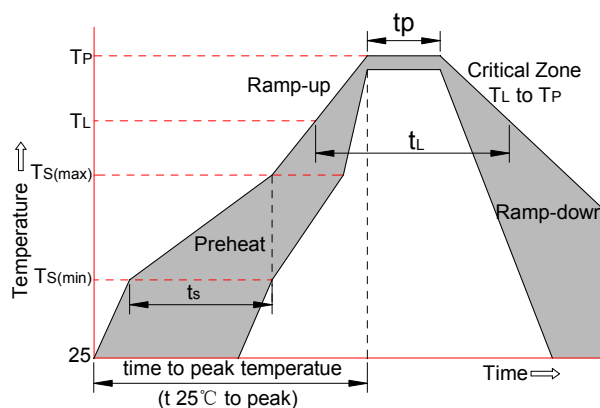
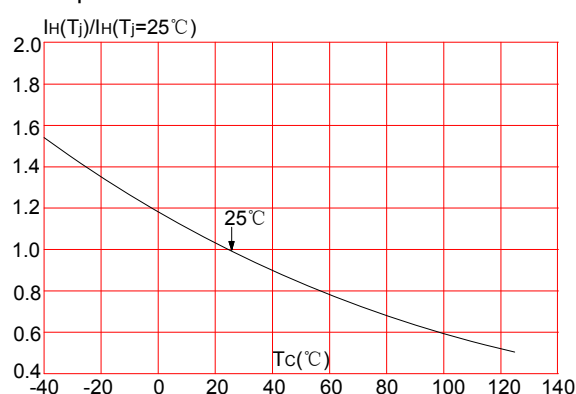
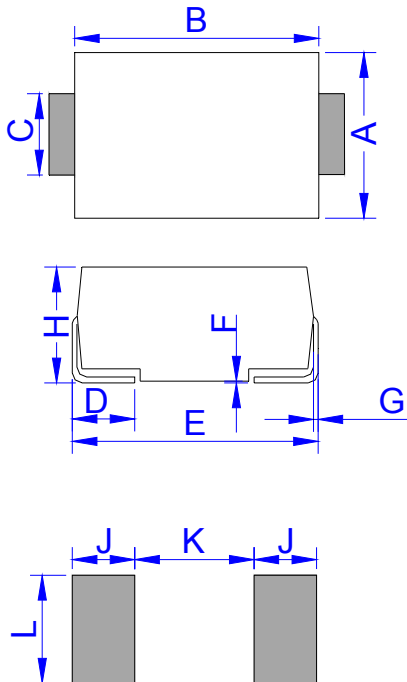


FIG.4: Normalized DC holding current vs. case temperature



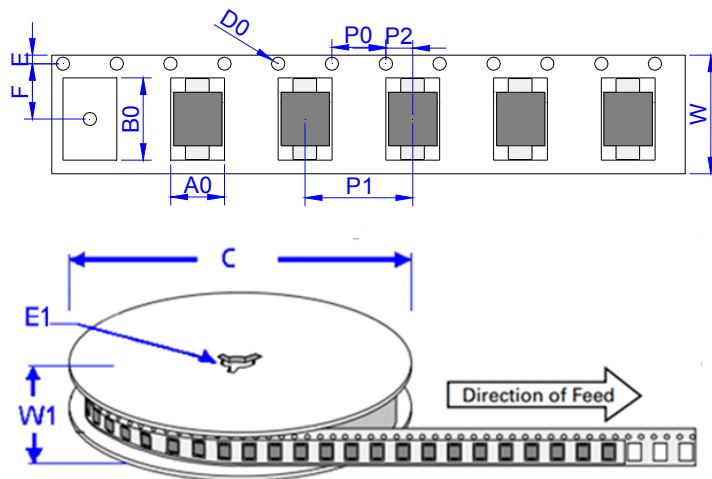
## PACKAGE MECHANICAL DATA



DO-214AA (SMB)

| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 3.30        | 3.94  | 0.130  | 0.155 |
| B    | 4.30        | 4.80  | 0.169  | 0.189 |
| C    | 1.90        | 2.20  | 0.075  | 0.087 |
| D    | 0.95        | 1.52  | 0.037  | 0.060 |
| E    | 5.20        | 5.60  | 0.205  | 0.220 |
| F    | 0.051       | 0.203 | 0.002  | 0.008 |
| G    | 0.15        | 0.31  | 0.006  | 0.012 |
| H    | 2.10        | 2.40  | 0.083  | 0.094 |
| J    | 2.20        |       | 0.087  |       |
| K    |             | 2.60  |        | 0.102 |
| L    | 2.30        |       | 0.091  |       |

## TAPE AND REEL SPECIFICATION-SMB



| Ref. | Dimensions  |                |
|------|-------------|----------------|
|      | Millimeters | Inches         |
| A0   | 3.76 ± 0.3  | 0.148 ± 0.012  |
| B0   | 5.69 ± 0.3  | 0.224 ± 0.012  |
| C    | 330.0       | 13.0           |
| D0   | 1.55 ± 0.1  | 0.061 ± 0.004  |
| E    | 1.75 ± 0.2  | 0.069 ± 0.008  |
| E1   | 13.3 ± 0.3  | 0.524 ± 0.012  |
| F    | 5.5 ± 0.2   | 0.217 ± 0.008  |
| P0   | 4.00 ± 0.2  | 0.157 ± 0.008  |
| P1   | 8.00 ± 0.2  | 0.3145 ± 0.008 |
| P2   | 2.00 ± 0.2  | 0.079 ± 0.008  |
| W    | 12.0 ± 0.2  | 0.472 ± 0.008  |
| W1   | 15.7 ± 2.0  | 0.618 ± 0.079  |

| PART No.  | UNIT WEIGHT<br>(g/PCS) typ. | REEL<br>(PCS) | PER CARTON<br>(PCS) | DESCRIPTION       |
|-----------|-----------------------------|---------------|---------------------|-------------------|
| CP0080SBC | 0.098                       | 3,000         | 48,000              | 13 inch reel pack |

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document is the 1.1st version which is made in 7-Aug.-2021. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright©2021 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JJW\(捷捷微\)](#)