

Rev.A Nov.-2017

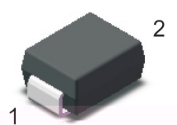
50V~1000V 1.0A SMB

Surface Mount Ultrafast Recovery Rectifier, Reverse Voltage: 50 to 1000V, Forward Current: 1.0A, SMB package.

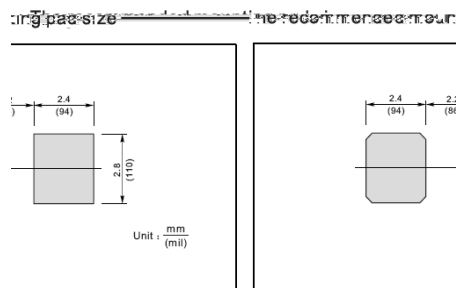
2011/65/EU RoHS

Glass Passivated Chip Junction High efficiency Lead free in comply with EU RoHS 2011/65/EU directives For surface mounted applications. Halogen free product.

General purpose.



| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



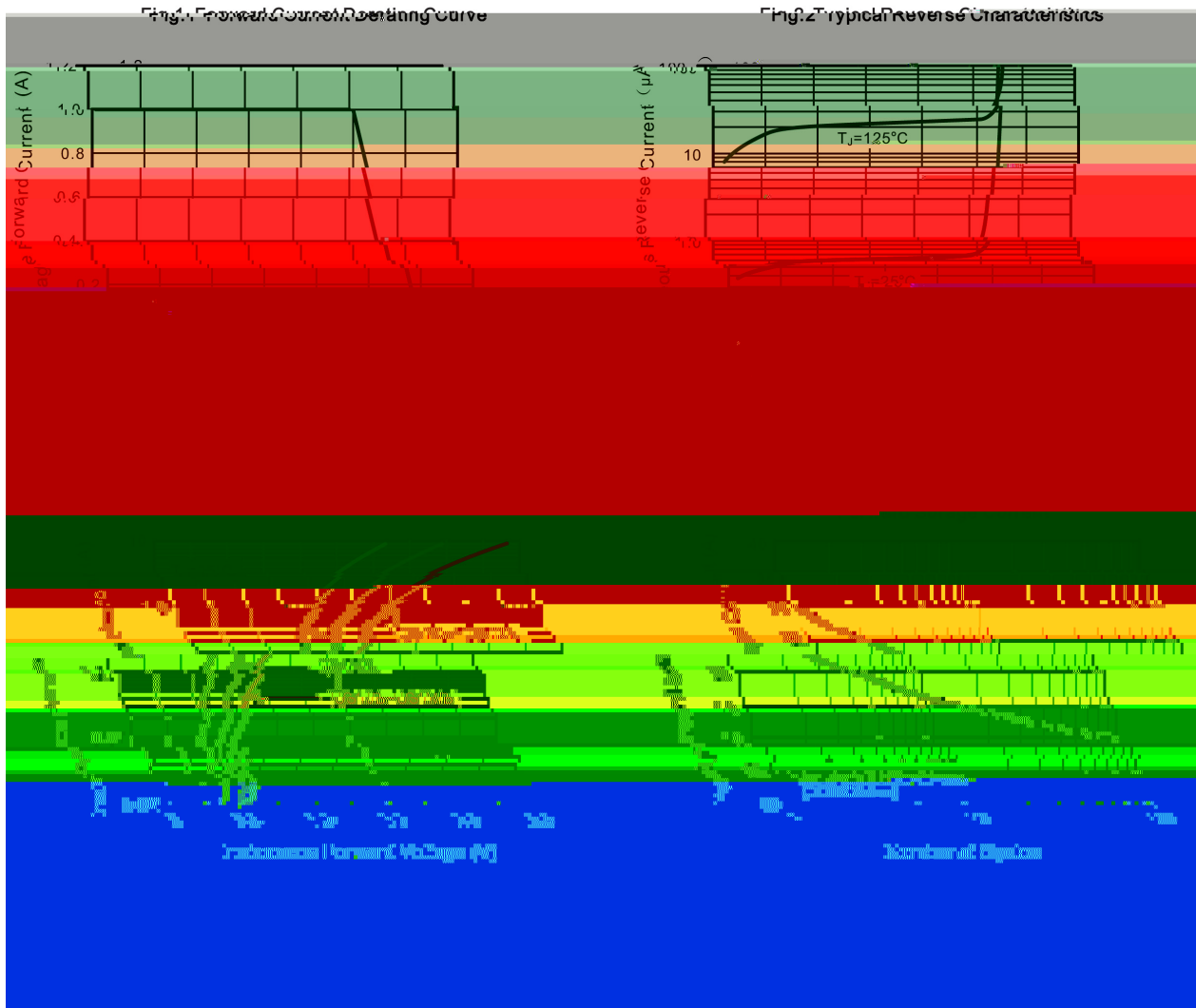
See Marking Instructions.

| Parameter                                                                          | Symbol          | Rating   |       |       |       |       |       |       | Unit |
|------------------------------------------------------------------------------------|-----------------|----------|-------|-------|-------|-------|-------|-------|------|
|                                                                                    |                 | US1AB    | US1BB | US1DB | US1GB | US1JB | US1KB | US1MB |      |
| Maximum Repetitive Peak Reverse Voltage                                            | $V_{RRM}$       | 50       | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum RMS voltage                                                                | $V_{RMS}$       | 35       | 70    | 140   | 280   | 420   | 560   | 700   | V    |
| Maximum DC Blocking Voltage                                                        | $V_{DC}$        | 50       | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum Average Forward Rectified Current at $T_c = 125$                           | $I_{F\ AV}$     | 1.0      |       |       |       |       |       |       | A    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$       | 30       |       |       |       |       |       |       | A    |
| Typical Thermal Resistance <sup>(1)</sup>                                          | $R_{\theta JA}$ | 75       |       |       |       |       |       |       | /W   |
| Operating and Storage Temperature Range                                            | $T_j, T_{stg}$  | -55~+150 |       |       |       |       |       |       |      |

Note:

(1) P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areass .

| Parameter                                                 | Symbol          | Test condition                                                         | Rating |       |       |       |       |       |       | Unit |
|-----------------------------------------------------------|-----------------|------------------------------------------------------------------------|--------|-------|-------|-------|-------|-------|-------|------|
|                                                           |                 |                                                                        | US1AB  | US1BB | US1DB | US1GB | US1JB | US1KB | US1MB |      |
| Maximum Instantaneous Forward Voltage                     | V <sub>F</sub>  | I <sub>F</sub> =1.0A                                                   | 1.0    |       |       | 1.3   | 1.65  |       |       | V    |
| Maximum DC Reverse Current at Maximum DC Blocking Voltage | I <sub>R</sub>  | T <sub>a</sub> =25                                                     | 5.0    |       |       |       |       |       |       | uA   |
|                                                           |                 | T <sub>a</sub> =125                                                    | 100    |       |       |       |       |       |       |      |
| Maximum Reverse Recovery Time                             | T <sub>rr</sub> | I <sub>F</sub> =0.5A<br>I <sub>R</sub> =1.0A<br>I <sub>rr</sub> =0.25A | 50     |       |       |       | 75    |       |       | ns   |

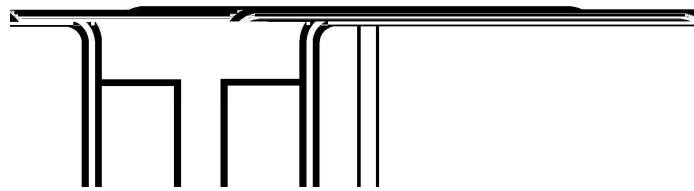


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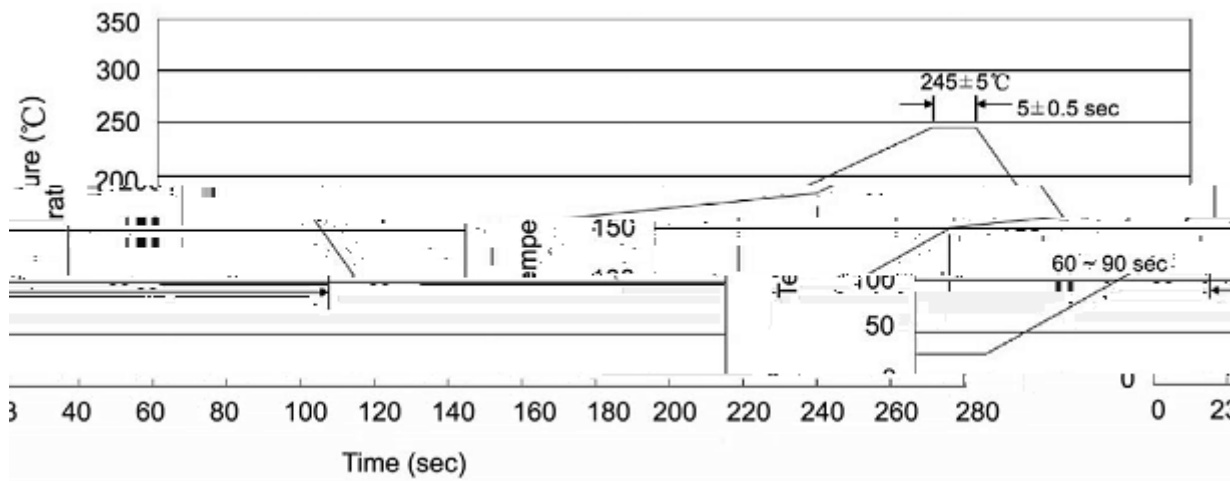
## Marking

| Type number | Marking code |
|-------------|--------------|
| US1AB       | US1A         |
| US1BB       | US1B         |
| US1DB       | US1D         |
| US1GB       | US1G         |
| US1JB       | US1J         |
| US1KB       | US1K         |
| US1MB       | US1M         |



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### Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |       |     |           |        |                                         |
|---|-------|-----|-----------|--------|-----------------------------------------|
| 1 | 25    | 150 | 60        | 90sec; | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5 |     | 5±0.5sec; |        | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |       | 2   | 10        | /sec.  | 3. Cooling Speed: 2~10 /sec.            |

|       |           |             |               |
|-------|-----------|-------------|---------------|
| 260±5 | 10±1 sec. | Temp.:260±5 | Time:10±1 sec |
|-------|-----------|-------------|---------------|

/ REEL

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SMB                  | 3000               | 5                       | 15000                  | 5                            | 75000                  | 7 ×11                                   | 185X180X105 | 390X385X205 |