



Table 1 / Absolute Maximum Ratings(Ta=25 °C ; )

| @ f<br>Parameter                                             |         | ... Z<br>Symbol                   | f ><br>Rating | % y<br>Unit |
|--------------------------------------------------------------|---------|-----------------------------------|---------------|-------------|
| Peak Pulse Power Dissipation on TA=25°C (Note 1,2,4, Fig1)   |         | P <sub>PPM</sub>                  | 400           | W           |
| Peak Forward Surge Current (Note 3, Fig 4)                   |         | I <sub>FSM</sub><br>(UNI)         | 60            | A           |
| Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)    |         | I <sub>PPM</sub>                  | see Table 1   | A           |
| ESD Voltage per IEC6100-4-2                                  | Contact | V <sub>ESD1</sub>                 | f 30          | KV          |
|                                                              | Air     | V <sub>ESD2</sub>                 | f 30          | KV          |
| Typical Thermal Resistance Junction to Ambient(Note 2)       |         | R <sub>JA</sub>                   | 100           | /W          |
| Operating Junction Temperature and Storage Temperature Range |         | T <sub>j</sub> , T <sub>stg</sub> | -65 ~ +150    |             |

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub> = 25°C per Fig. 2.
2. Mounted on 5mm<sup>2</sup> copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000 S.

| Type         |               | Reverse<br>Stand-off<br>Voltage | Breakdown<br>Voltage             |      | Test<br>Current | Reverse<br>Leakage                   | Max.<br>Clamp<br>Voltage         | Peak<br>Pulse<br>Current | Package                 |     |
|--------------|---------------|---------------------------------|----------------------------------|------|-----------------|--------------------------------------|----------------------------------|--------------------------|-------------------------|-----|
|              |               |                                 | V <sub>BR</sub> @ I <sub>T</sub> |      | I <sub>T</sub>  | I <sub>R</sub> @<br>V <sub>RRM</sub> | V <sub>C</sub> @ I <sub>PP</sub> | I <sub>PP</sub>          | SMA                     |     |
|              |               | V <sub>RRM</sub>                | Min                              | Max  |                 |                                      |                                  |                          | Device Marking<br>Ccode |     |
| UNI          | BI            | V                               | V                                | V    | mA              | uA                                   | V                                | A                        | UNI                     | BI  |
| BR SMAJ5.0AQ | BR SMAJ5.0CAQ | 5                               | 6.4                              | 7    | 10              | 800                                  | 9.2                              | 43.5                     | AEQ                     | WEQ |
| BR SMAJ6.0AQ | BR SMAJ6.0CAQ | 6                               | 6.67                             | 7.37 | 10              | 800                                  | 10.3                             | 38.8                     | AGQ                     | WGQ |
| BR SMAJ6.5AQ | BR SMAJ6.5CAQ | 6.5                             | 7.22                             | 7.98 | 10              | 500                                  | 11.2                             | 35.7                     | AKQ                     | WKQ |
| BR SMAJ7.0AQ | BR SMAJ7.0CAQ | 7                               | 7.78                             | 8.6  | 10              | 200                                  | 12.0                             | 33.3                     | AMQ                     | WMQ |
| BR SMAJ7.5AQ | BR SMAJ7.5CAQ | 7.5                             | 8.33                             | 9.21 | 1               | 100                                  | 12.9                             | 31.0                     | APQ                     | WPQ |
| BR SMAJ8.0AQ | BR SMAJ8.0CAQ | 8                               | 8.89                             | 9.83 | 1               | 50                                   | 13.6                             | 29.4                     | ARQ                     | WRQ |
| BR SMAJ8.5AQ | BR SMAJ8.5CAQ | 8.5                             | 9.44                             | 10.4 | 1               | 20                                   | 14.4                             | 27.8                     | ATQ                     | WTQ |

04ì × ? d / Electrical Characteristics(Ta=25 ; )

| Type       |             | Reverse Stand-off Voltage | Breakdown Voltage                |      | Test Current   | Reverse Leakage                   | Max. Clamp Voltage               | Peak Pulse Current | Package        |       |
|------------|-------------|---------------------------|----------------------------------|------|----------------|-----------------------------------|----------------------------------|--------------------|----------------|-------|
|            |             | V <sub>RRM</sub>          | V <sub>BR</sub> @ I <sub>T</sub> |      | I <sub>T</sub> | I <sub>R</sub> @ V <sub>RRM</sub> | V <sub>C</sub> @ I <sub>PP</sub> | I <sub>PP</sub>    | SMA            |       |
|            |             |                           | Min                              | Max  |                |                                   |                                  |                    | Device Marking | Ccode |
| UNI        | BI          | V                         | V                                | V    | mA             | uA                                | V                                | A                  | UNI            | BI    |
| BRMAJ45AQ  | BRMAJ45CAQ  | 45                        | 50                               | 55.3 | 1              | 1                                 | 72.7                             | 5.5                | CVQ            | YVQ   |
| BRMAJ48AQ  | BRMAJ48CAQ  | 48                        | 53.3                             | 58.9 | 1              | 1                                 | 77.4                             | 5.2                | CXQ            | YXQ   |
| BRMAJ51AQ  | BRMAJ51CAQ  | 51                        | 56.7                             | 62.7 | 1              | 1                                 | 82.4                             | 4.9                | CZQ            | YZQ   |
| BRMAJ54AQ  | BRMAJ54CAQ  | 54                        | 60                               | 66.3 | 1              | 1                                 | 87.1                             | 4.6                | REQ            | ZEQ   |
| BRMAJ58AQ  | BRMAJ58CAQ  | 58                        | 64.4                             | 71.2 | 1              | 1                                 | 93.6                             | 4.3                | RGQ            | ZGQ   |
| BRMAJ60AQ  | BRMAJ60CAQ  | 60                        | 66.7                             | 73.7 | 1              | 1                                 | 96.8                             | 4.1                | RKQ            | ZKQ   |
| BRMAJ64AQ  | BRMAJ64CAQ  | 64                        | 71.1                             | 78.6 | 1              | 1                                 | 103.0                            | 3.9                | RMQ            | ZMQ   |
| BRMAJ70AQ  | BRMAJ70CAQ  | 70                        | 77.8                             | 86   | 1              | 1                                 | 113.0                            | 3.5                | RPQ            | ZPQ   |
| BRMAJ75AQ  | BRMAJ75CAQ  | 75                        | 83.3                             | 92.1 | 1              | 1                                 | 121.0                            | 3.3                | RRQ            | ZRQ   |
| BRMAJ78AQ  | BRMAJ78CAQ  | 78                        | 86.7                             | 95.8 | 1              | 1                                 | 126.0                            | 3.2                | RTQ            | ZTQ   |
| BRMAJ85AQ  | BRMAJ85CAQ  | 85                        | 94.4                             | 104  | 1              | 1                                 | 137.0                            | 2.9                | RVQ            | ZVQ   |
| BRMAJ90AQ  | BRMAJ90CAQ  | 90                        | 100                              | 111  | 1              | 1                                 | 146.0                            | 2.7                | RXQ            | ZXQ   |
| BRMAJ100AQ | BRMAJ100CAQ | 100                       | 111                              | 123  | 1              | 1                                 | 162.0                            | 2.5                | RZQ            | ZZQ   |
| BRMAJ110AQ | BRMAJ110CAQ | 110                       | 122                              | 135  | 1              | 1                                 | 177.0                            | 2.3                | SEQ            | VEQ   |
| BRMAJ120AQ | BRMAJ120CAQ | 120                       | 133                              | 147  | 1              | 1                                 | 193.0                            | 2.1                | SGQ            | VGQ   |
| BRMAJ130AQ | BRMAJ130CAQ | 130                       | 144                              | 159  | 1              | 1                                 | 209.0                            | 1.9                | SKQ            | VKQ   |
| BRMAJ150AQ | BRMAJ150CAQ | 150                       | 167                              | 185  | 1              | 1                                 | 243.0                            | 1.6                | SMQ            | VMQ   |
| BRMAJ160AQ | BRMAJ160CAQ | 160                       | 178                              | 197  | 1              | 1                                 | 259.0                            | 1.5                | SPQ            | VPQ   |
| BRMAJ170AQ | BRMAJ170CAQ | 170                       | 189                              | 209  | 1              | 1                                 | 275.0                            | 1.5                | SRQ            | VRQ   |
| BRMAJ180AQ | BRMAJ180CAQ | 180                       | 201                              | 222  | 1              | 1                                 | 292.0                            | 1.4                | STQ            | VTQ   |
| BRMAJ200AQ | BRMAJ200CAQ | 200                       | 224                              | 247  | 1              | 1                                 | 324.0                            | 1.2                | SVQ            | VVQ   |
| BRMAJ220AQ | BRMAJ220CAQ | 220                       | 246                              | 272  | 1              | 1                                 | 356.0                            | 1.1                | SXQ            | VXQ   |
| BRMAJ250AQ | BRMAJ250CAQ | 250                       | 279                              | 309  | 1              | 1                                 | 405.0                            | 1.0                | SZQ            | VZQ   |
| BRMAJ300AQ | BRMAJ300CAQ | 300                       | 335                              | 371  | 1              | 1                                 | 486.0                            | 0.8                | TEQ            | UEQ   |
| BRMAJ350AQ | BRMAJ300CAQ | 350                       | 391                              | 432  | 1              | 1                                 | 567.0                            | 0.7                | TGQ            | UGQ   |
| BRMAJ400AQ | BRMAJ350CAQ | 400                       | 447                              | 494  | 1              | 1                                 | 648.0                            | 0.6                | TKQ            | UKQ   |
| BRMAJ440AQ | BRMAJ400CAQ | 440                       | 492                              | 543  | 1              | 1                                 | 713.0                            | 0.6                | TMQ            | UMQ   |

Ō ? d • Ž ¢ / Electrical Characteristic Curve



, M y f / Marking Instructions

AEQ  
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Note:  
AE y Product Type Code  
Q: Automobile halogen-free product Code  
\*\*\*\* y Lot No. Code, code change with Lot No

, M y f / Marking Instructions

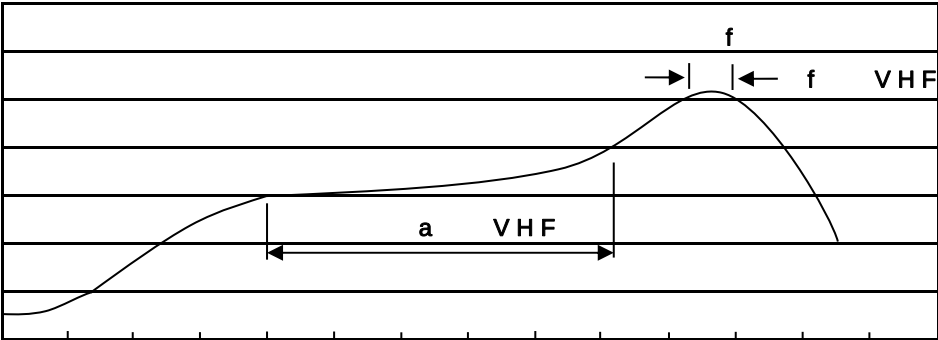
WEQ  
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Note:  
WE y Product Type Code  
Q: Automobile halogen-free product Code  
\*\*\*\* y Lot No. Code, code change with Lot No

šWD t...•Ž¢ (x/ ) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

7HPSHUDWXUH



7LPH VHF

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Note:

- 10• Ä ½ “† 150 ½200 - k Ž • 60 ½120sec;
- 20• Q > “† 255 r5 - k Ž • 4 Ò 5 r0.5sec;
- 30•D N ò i Ò 0 ,† 2 ½10 - /sec.
- 1.Preheating:150~200 - , Time:60~120sec.
- 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“† y 260 r5 - Ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

| Package Type<br>7>û ~ E | Units ;>û H      |                          |                       |                                |                        | Dimension ;>û p . (unit Åmm³) |            |             |
|-------------------------|------------------|--------------------------|-----------------------|--------------------------------|------------------------|-------------------------------|------------|-------------|
|                         | Units/Reel<br>/- | Reels/Inner Box<br>-- /- | Units/Inner Box<br>/- | Inner Boxes/Outer Box<br>- /1ç | Units/Outer Box<br>/1ç | Reel                          | Inner Box  | Outer Boxç  |
| SMA                     | 5,000            | 2                        | 10,000                | 7                              | 70,000                 | 13 s ×12                      | 336×336×40 | 380×335×366 |

„Ð y f / Notices