Spec. No. : Preliminary Data Issued Date : 2000.01.15 Revised Date : 2001.05.01

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# HSMA5817<sub>thru</sub> HSMA5819

1.0 AMP. SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

#### **Features**

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

#### **Mechanical Data**

Cases: SMA Molded Plastic

Epoxy: UL 94V-0 rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed

Polarity: Color band denotes cathode end

High temperature soldering guaranteed: 250°C/10 seconds/.375"(9.5mm) lead lengths at 5 lbs.,

(2.3kg) tension, Weight: 0.33gram

## **Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

|  |                        | <u> </u>   |                         |       |
|--|------------------------|------------|-------------------------|-------|
| Type Number  | HSMA5817               | HSMA5818   | HSMA5819                | Units |
| Maximum Recurrent Peak Reverse Voltage   | 20                     | 30         | 40                      | V     |
| Maximum RMS Voltage  | 14                     | 21         | 28                      | V     |
| Maximum DC Blocking voltage  | 20                     | 30         | V                       |       |
| Maximum Average Forward Rectified Current See Fig.1  | 1.0                    |            |                         |       |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load(JEDEC method) | 40                     |            |                         |       |
| Maximum Instantaneous Forward Voltage @1.0A  | 0.45                   | 0.55       | 0.60                    | V     |
| Maximum D.C. Reverse Current (Note 1) at   | 0                      | mA         |                         |       |
| Rated DC Blocking Voltage  | 10(@T <sub>A</sub> =10 | 0°C) 5.0(0 | @T <sub>A</sub> =100°C) | mA    |
| Typical Thermal Resistance (Note 2) RθJA   | 88                     |            |                         | °C/W  |
| Operating Junction Temperature Range T <sub>J</sub>  | -65 to +1              | 25 -6      | 5 to +150               | °C    |
| Storage Temperature Range Tstg   | -65 to +150            |            |                         | °C    |

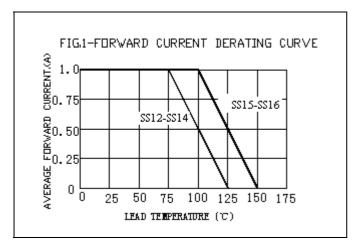
Notes: 1.Pulse Test with PW=300 usec, 1% Duty Cycle

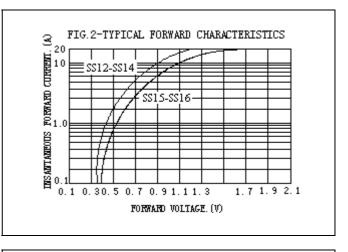
2. Measured on P.C. Board with 0.2x0.2"(5.0x5.0mm) Copper Pad Areas.

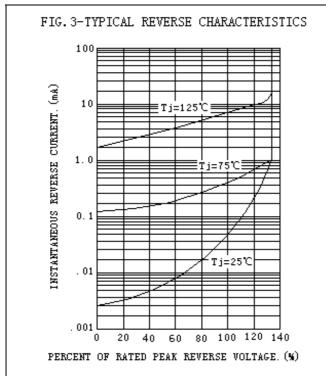
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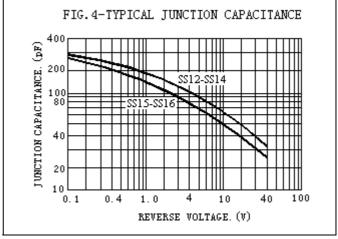
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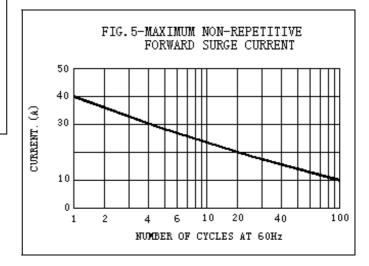
### **Characteristics Curve**







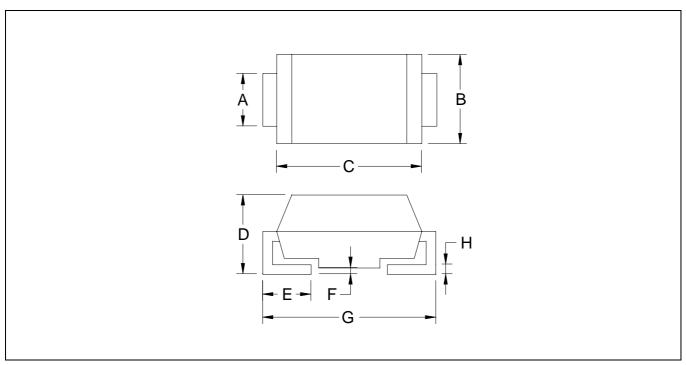




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## SMA/DO-214AC Dimension



\*:Typical

| _ |     | ··/p·· |        |             |      |       |        | 71     |             |      |
|---|-----|--------|--------|-------------|------|-------|--------|--------|-------------|------|
|   | DIM | Inches |        | Millimeters |      | DIM   | Inches |        | Millimeters |      |
|   |     | Min.   | Max.   | Min.        | Max. | DIIVI | Min.   | Max.   | Min.        | Max. |
| Ī | Α   | 0.5000 | 0.0642 | 1.27        | 1.63 | Е     | 0.0299 | 0.0598 | 0.76        | 1.52 |
| Ī | В   | 0.0901 | 0.1150 | 2.29        | 2.92 | F     | 0.0039 | 0.0079 | 0.10        | 0.20 |
| Ī | С   | 0.1575 | 0.1811 | 4.00        | 4.60 | G     | 0.1890 | 0.2201 | 4.80        | 5.59 |
|   | D   | 0.0783 | 0.1028 | 1.99        | 2.61 | Н     | 0.0059 | 0.0122 | 0.15        | 0.31 |

Notes: 1.Dimension and tolerance based on our Spec. dated Mar. 6,2000.

- ${\bf 2. Controlling\ dimension: millimeters.}$
- 3. Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
- 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

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