

#### **HS3A thru HS3M**

High Efficient Surface Mount Rectifiers Reverse Voltage 50~1000V Forward Current 3A

#### **Features**

- · Glass passivated chip junction
- For surface mounted applications
- · High forward surge capability
- · Low forward voltage drop
- Ideal for automated placement
- · Add suffix "E" for Halogen Free
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals



DO-214AB(SMC)

#### **Mechanical Data**

- Case:DO-214AB (SMC)
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Solder plated, solderable per J-STD-002, and JESD 22-B102
- · Polarity: laser band denotes cathode end

Maximum Ratings (TA = 25 °C unless otherwise noted)									
Parameter	Symbol	HS3A	нѕзв	HS3D	HS3G	HS3J	нѕзк	нѕзм	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	IF(AV) <sup>1)</sup>	3.0						Α	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	125						Α	
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150						°C	

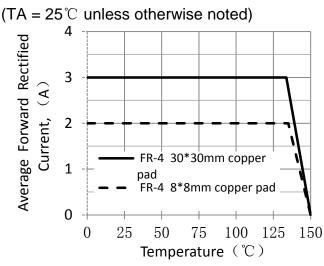
#### Electrical Characteristics (TA = 25 °C unless otherwise noted) **Test Conditions** HS3A HS3B HS3D HS3G HS3J HS3K HS3M Unit **Parameter** Symbol 1.7 IF=3A,Ta=25℃ 1.0 1.3 Maximum instantaneous $V_{\mathsf{F}}$ Volts forward voltage 1.15 IF=3A,Ta=125℃ Ta=25℃ Maximum DC reverse 5.0 current at rated DC $I_R$ μΑ Ta=125℃ 50 blocking voltage $I_F = 0.5A, I_R = 1.0A,$ Maximum reverse 50.0 75.0 $t_{rr}$ ns recovery time $I_{RR} = 0.25A$ Typical junction 4.0 V, 1 MHz С 27.3 pF capacitance Juntion to Lead1) $R_{\theta JL}$ 3.7 Juntion to Ambient<sup>2)</sup> 56.0 $R_{\theta JA}$ Typical thermal °C/W resistance Juntion to Case<sup>2)</sup> 21.0 $R_{\theta JC}$ Juntion to Lead<sup>2)</sup> $R_{\theta JL}$

Note:1), The thermal resistance from junction to lead, mounted on FR-4 P.C.B with 30x30mm copper pads

<sup>2),</sup> The thermal resistance from junction to ambient, case or lead, mounted on FR-4 P.C.B with 8x8mm copper pads

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### **Ratings and Characteristics Curves**



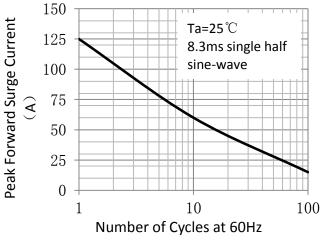
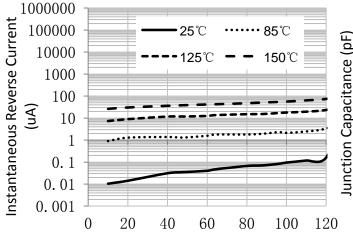
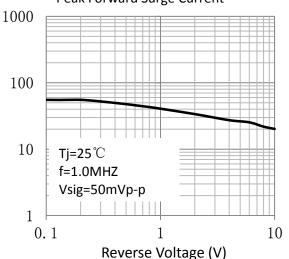


Figure 1.Forward Current Derating Curve
Peak Forward Surge Current
Figure 2.Maximum Non-Repetitive
Peak Forward Surge Current





Percent of Rated Peak Reverse Voltage (%)



Figure 3. Typical Reverse Characteristics

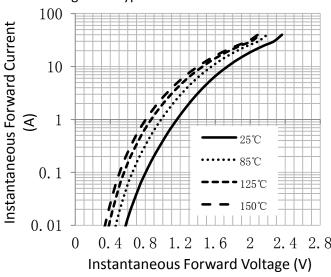


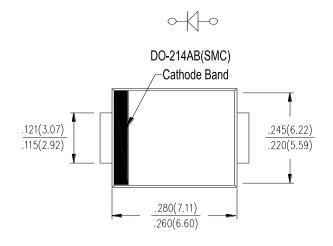
Figure 5. Typical Instantaneous Forward Characteristics



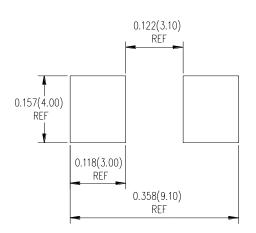
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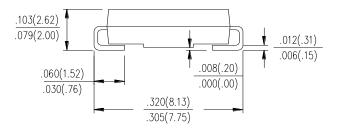
## **Package Outline Dimensions**

in inches (millimeters)





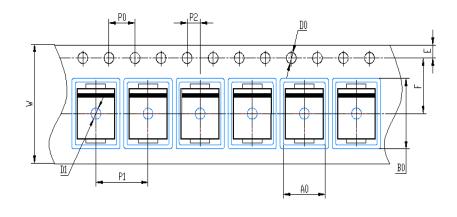




# **Packing Information**

3000 pcs/Reel, 14 Reels/Box; 16mm Tape, 13" Reel

**Tape & Reel Specification** 



Symbols	SMC(mm)			
W	16±0.2			
Е	1.75±0.1			
F	7.5±0.05			
D0	1.5±0.1			
D1	1.50 +0.1/-0			
P0	4.0±0.1			
P1	8.0±0.1			
P2	2.0±0.05			
A0	6.22±0.1			
B0	8.31±0.1			



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