

HS2AA thru HS2MA

SURFACE MOUNT GLASS HIGH EFFICIENCY RECTIFIERS

REVERSE VOLTAGE - **50** to **1000** Volts FORWARD CURRENT - **2.0** Amperes

FEATURES

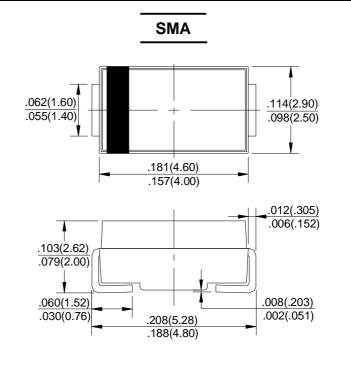
- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

MECHANICAL DATA

●Case: Molded Plastic

Polarity: Indicated by cathode bandWeight: 0.002 ounces,0.064 grams

•Mounting position: Any



Dimensions in inches and (millimeters)

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%

| CHARACTERISTICS | SYMBOL | HS2AA | HS2BA | HS2DA | HS2GA | HS2JA | HS2KA | HS2MA | UNIT |
|---|--------|-------------|-------|-------|-------|-------|-------|-------|--------------|
| Maximum Recurrent 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 @Ta =55 °C | l(AV) | 2.0 | | | | | | | А |
| Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | IFSM | 60 | | | | | | | А |
| Peak Forward Voltage at 2.0A DC(Note1) | VF | 1.0 1.3 | | | | | 1.7 | | |
| Maximum DC Reverse Current @TJ=25°C at Rated DC Blocking Voltage @TJ=100°C | lR | 5.0 100 | | | | | | uA | |
| Maximum Reverse Recovery Time(Note 1) | Trr | 50 75 | | | | | nS | | |
| Typical Junction Capacitance (Note1) | CJ | 50 30 | | | | | | pF | |
| Typical Thermal Resistance (Note2) | Reja | 25 | | | | | | | °C/W |
| Operating Temperature Range | TJ | -50 to +150 | | | | | | | $^{\circ}$ |
| Storage Temperature Range | Tstg | -50 to +150 | | | | | | | $^{\circ}$ C |
| | | | | | | | | | |

NOTES: 1.Measured with IF=0.5A, IR=1A, IRR=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3. Thermal resistance junction to ambient



FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT FIG. 1 – FORWARD CURRENT DERATING CURVE 3.0 60 PEAK FORWARD SURGE CURRENT, AVERAGE FORWARD CURRENT AMPERES 2.5 50 SINGLE PHASE HALF WAVE 60Hz 2.0 AMPERES 40 RESISTIVE OR INDUCTIVE LOAD 1.5 30 1.0 20 PULSE WIDTH 8.3ms SINGLE HALF-SINE-WAVE 0.5 10 (JEDEC METHOD) 0 0 25 50 75 100 125 150 175 2 10 20 50 100 5 AMBIENT TEMPERATURE (℃) NUMBER OF CYCLES AT 60Hz FIG.3 - TYPICAL JUNCTION CAPACITANCE FIG.4-TYPICAL FORWARD CHARACTERISTICS 100 10 INSTANTANEOUS FORWARD CURRENT, (A) HS2AA -HS2DA 1.0 CAPACITANCE, (pF) HS2GA HS2JA - HS2MA 10 0.1 HS2JA -HS2MA $T_J = 25^{\circ}C$ TJ = 25°C f = 1 MHzPULSE WIDTH 300us 0.01 1 1.4 1.6 1.8 0.2 0.4 0.6 0.8 1.0 1.2 0 100 1 10 4 INSTANTANEOUS FORWARD VOLTAGE, VOLTS REVERSE VOLTAGE, VOLTS