



HS2A thru HS2M

High Efficient Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.5 Amperes

Features

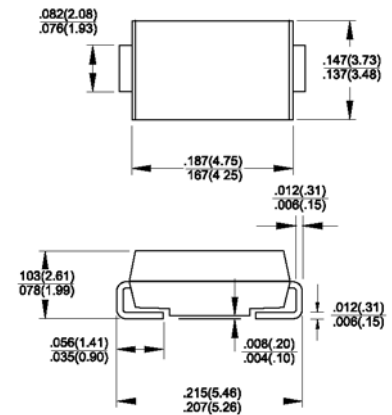
- ◆ Glass passivated junction chip.
- ◆ For surface mounted application
- ◆ Low forward voltage drop
- ◆ Low profile package
- ◆ Built-in stain relief, ideal for automatic placement
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering:
250°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory
Classification 94V-O

Mechanical Data

- ◆ Cases: Molded plastic
- ◆ Terminals: Solder plated
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.003 ounce, 0.093 gram



DO-214AA (SMB)



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Parameter | Symbols | HS2A | HS2B | HS2D | HS2F | HS2G | HS2J | HS2K | HS2M | Units | |
|---|-----------|-------------|------|------|------|------|------|------|------|-------|--------------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | Volts | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum average forward rectified current See Fig.2 | I_{AV} | 1.5 | | | | | | | | Amps | |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 50.0 | | | | | | | | Amps | |
| Maximum instantaneous forward voltage @ 1.5A | V_F | 1.0 | | | 1.3 | | 1.7 | | | Volts | |
| Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 5.0 | | | | 100 | | | | | μA μA |
| Maximum reverse recovery time (Note 1) | t_{rr} | 50 | | | | 75 | | | | nS | |
| Typical junction capacitance (Note 2) | C_j | 50 | | | | 30 | | | | pF | |
| Operating junction temperature range | T_J | -55 to +150 | | | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | | | $^\circ\text{C}$ |

- Notes:**
1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

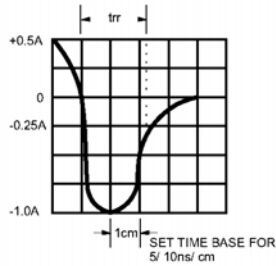
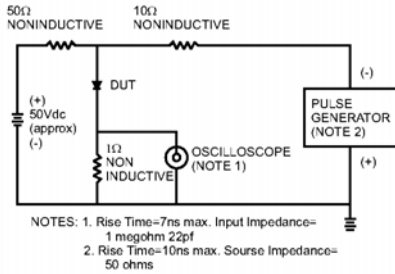


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

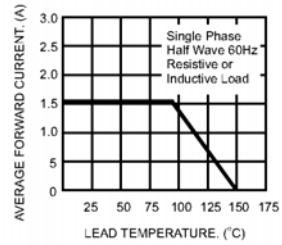


FIG.3- TYPICAL REVERSE CHARACTERISTICS

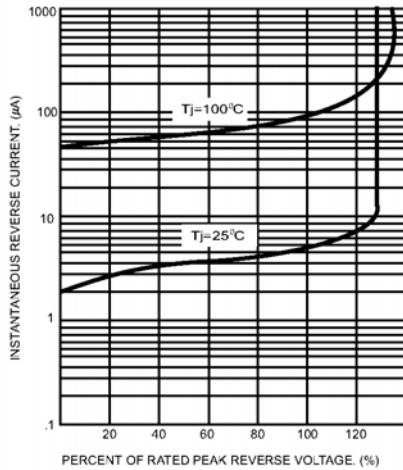


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

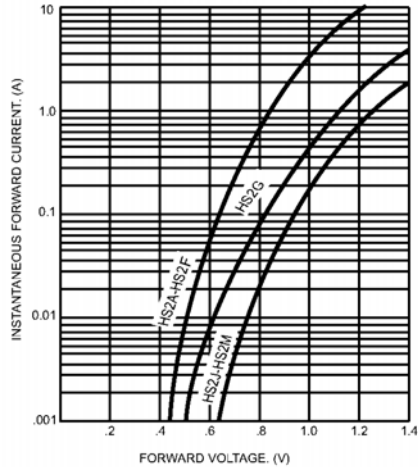


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

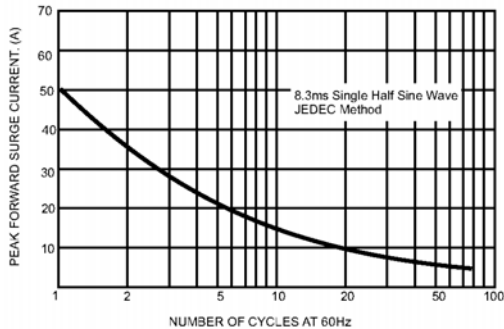


FIG.6- TYPICAL JUNCTION CAPACITANCE

