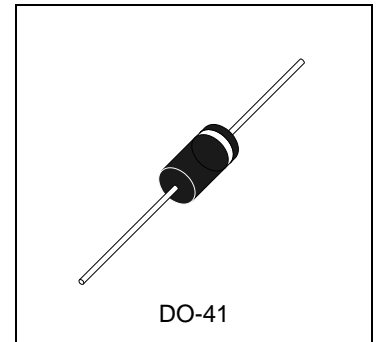




# HSR220 thru HSR2100

Schottky Barrier Rectifiers  
(Reverse Voltage 20 to 100V, Forward Current 2A)



## Features

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

## Mechanical Data

- Cases: DO-41 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/10seconds/.375"(9.5mm) lead lengths at 5lbs.,(2.3kg) tension
- Weight: 0.35gram

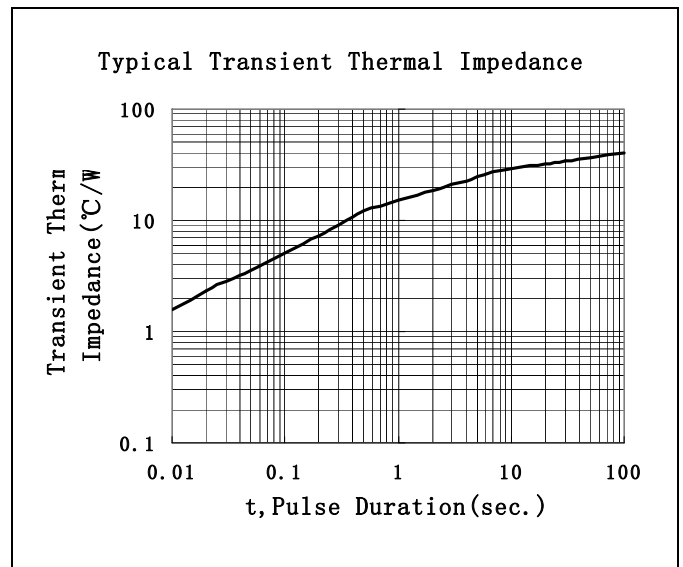
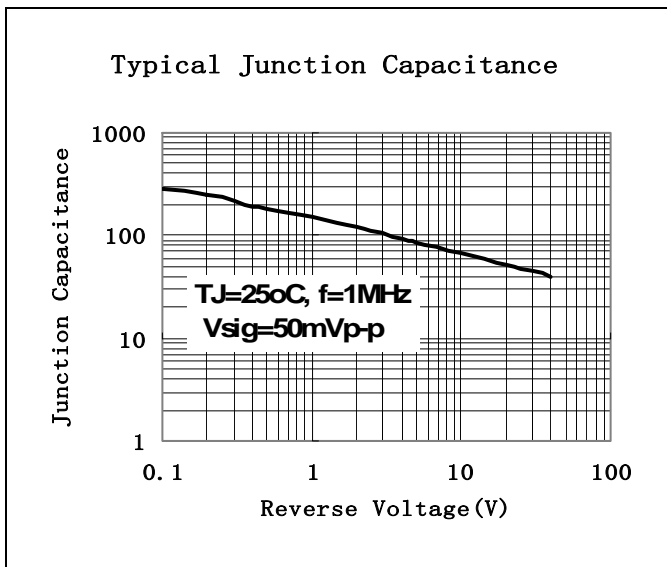
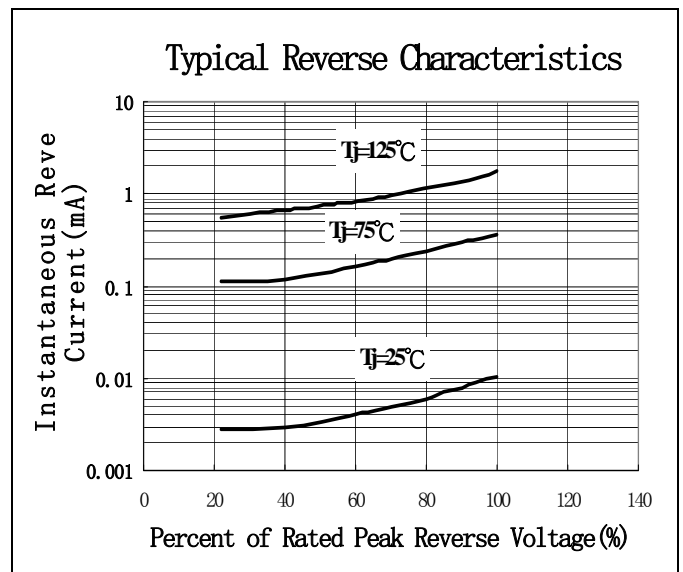
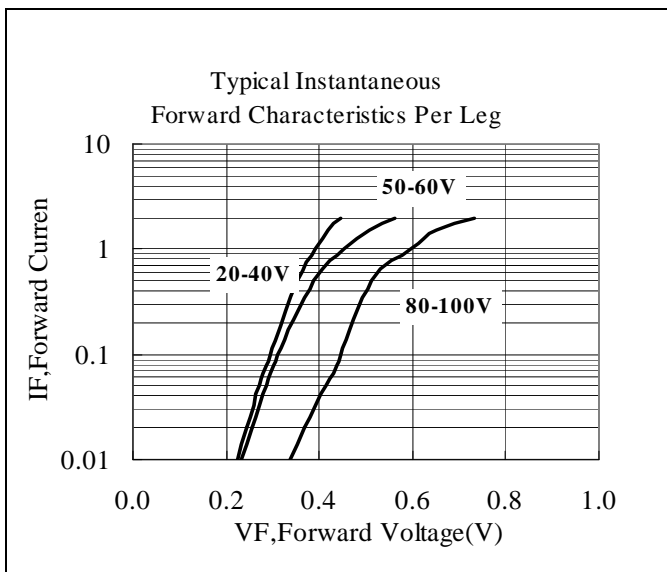
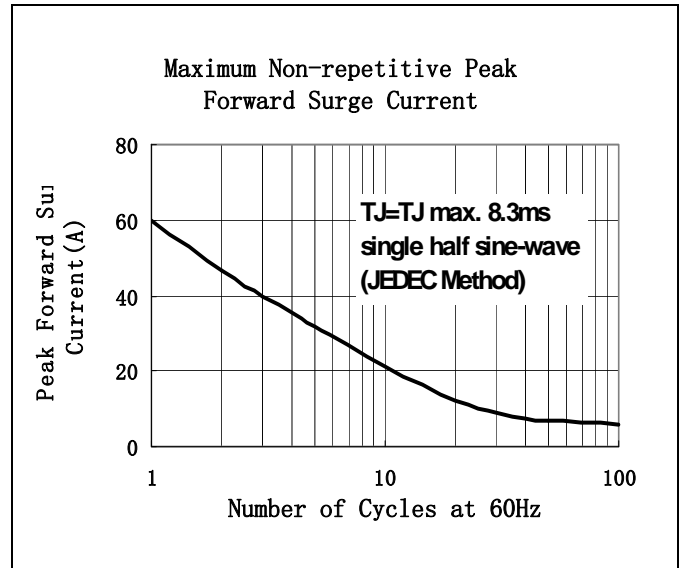
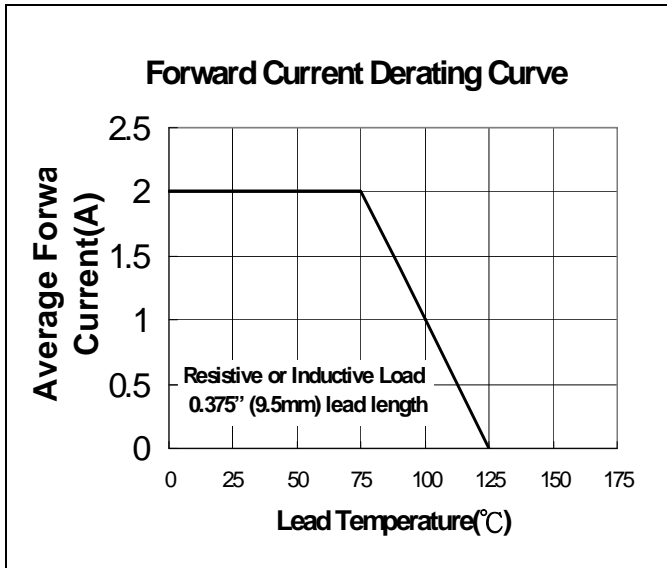
## Maximum Ratings & Electrical Characteristics

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

| Ratings  | Symbol          | HSR 220     | HSR 230 | HSR 240 | HSR 250 | HSR 260 | HSR 280 | HSR 2100 | Unit                 |
|--|-----------------|-------------|---------|---------|---------|---------|---------|----------|----------------------|
| Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 20          | 30      | 40      | 50      | 60      | 80      | 100      | V                    |
| Surge Peak Reverse Voltage   | $V_{RSM}$       | 14          | 21      | 28      | 35      | 42      | 57      | 71       | V                    |
| DC Blocking Voltage  | $V_{DC}$        | 20          | 30      | 40      | 50      | 60      | 80      | 100      | V                    |
| Average Forward Rectified Current ( $T_A=75^\circ\text{C}$ )               | $I_{FAV}$       | 2           |         |         |         |         |         |          | A                    |
| Peak Forward Surge Current, 50Hz Half Sine-wave ( $T_A=25^\circ\text{C}$ ) | $I_{FSM}$       | 50          |         |         |         |         |         |          | A                    |
| Repetitive Peak Forward C ( $f>15\text{Hz}$ )                              | $I_{FRM}$       | 12          |         |         |         |         |         |          | A                    |
| Instantaneous Forward Voltage  | $V_F$           | 0.48        | 0.52    | 0.65    |         |         | 0.8     | V        |                      |
| Leakage Current ( $T_J=25^\circ\text{C}$ , $V_R=V_{RRM}$ )                 | $I_R$           | 0.1         |         |         |         |         |         |          | mA                   |
| Leakage Current ( $T_J=100^\circ\text{C}$ , $V_R=V_{RRM}$ )                |                 | 10          |         |         |         |         |         |          | mA                   |
| Typical Junction Capacitance   | $C_J$           | 170         |         |         |         |         |         |          | pF                   |
| Rating for Fusing, $t<10\text{ms}$ ( $T_A=25^\circ\text{C}$ )              | $i^2t$          | 12.5        |         |         |         |         |         |          | $\text{A}^2\text{s}$ |
| Thermal Resistance Junction to Ambient Air                                 | $R_{\theta JA}$ | 30          |         |         |         |         |         |          | $^\circ\text{C/W}$   |
| Thermal Resistance Junction to Lead  | $R_{\theta JL}$ | 15          |         |         |         |         |         |          | $^\circ\text{C/W}$   |
| Operating Junction Temperature Range                                       | $T_J$           | -65 to +125 |         |         |         |         |         |          | $^\circ\text{C}$     |
| Storage Temperature Range  | $T_{STG}$       | -65 to +150 |         |         |         |         |         |          | $^\circ\text{C}$     |
| ESD Protection Voltage   | $V_{ESD}$       | 12          |         |         |         |         |         |          | KV                   |



### Characteristics Curve





### DO-41 Dimension

2-Lead DO-41 Molded Plastic Package  
HSMC Package Code: L

**Marking:**

Pb Free Mark  
Pb-Free: \* ● (None)  
Normal: None

Control Code

Date Code

HSR 2

Product Series  
20,30,40,50,60,80,100

Marking around the surface of cylinder

Note:  
Green label is used for pb-free packing

| DIM | Min.  | Max. |
|-----|-------|------|
| A   | 0.71  | 0.86 |
| B   | 25.40 | -    |
| C   | 4.10  | 5.20 |
| D   | 25.40 | -    |
| E   | 2.00  | 2.70 |

Unit: mm

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