

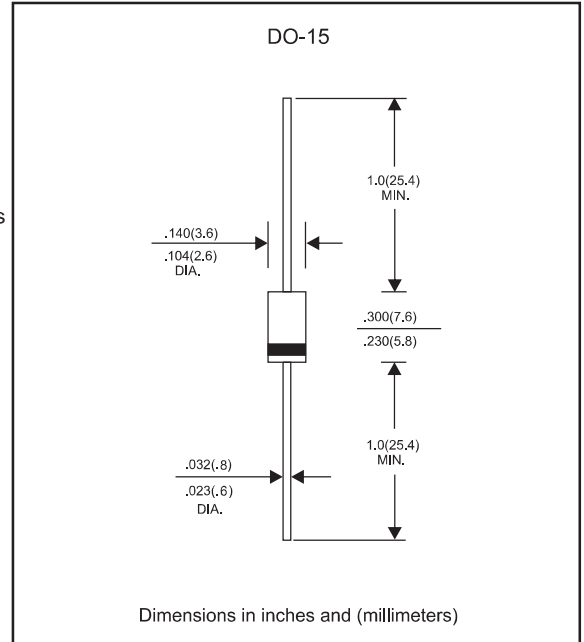
### Features

- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts, ex. SR220-H.

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-15
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                  | CONDITIONS  | Symbol          | MIN. | TYP. | MAX. | UNIT                      |
|----------------------------|---|-----------------|------|------|------|---------------------------|
| Forward rectified current  | See Fig.1   | $I_o$           |      |      | 2.0  | A                         |
| Forward surge current      | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | $I_{FSM}$       |      |      | 50   | A                         |
| Reverse current            | $T_J = 25^\circ\text{C}$  | $I_R$           |      |      | 0.5  | mA                        |
|                            |   |                 |      |      | 0.1  |                           |
| Reverse current            | $T_J = 100^\circ\text{C}$   | $I_R$           |      |      | 10   | mA                        |
|                            |   |                 |      |      | 5    |                           |
| Thermal resistance         | Junction to ambient Note 1  | $R_{\theta JA}$ |      | 35   |      | $^\circ\text{C}/\text{W}$ |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage                              | $C_j$           |      | 170  |      | pF                        |
| Storage temperature        |   | $T_{STG}$       | -65  |      | +175 | $^\circ\text{C}$          |

Note 1: Thermal resistance from junction to lead, and/or to ambient P. C. B. mounted with 0.375" (9.5mm) lead length with 1.5 X1.5"(38X38mm)copper pads

| SYMBOLS | $V_{RRM}^{*1}$<br>(V) | $V_{RMS}^{*2}$<br>(V) | $V_R^{*3}$<br>(V) | $V_F^{*4}$<br>(V) | Operating temperature<br>$T_J$ , ( $^\circ\text{C}$ ) |
|---------|-----------------------|-----------------------|-------------------|-------------------|---|
| SR220   | 20                    | 14                    | 20                | 0.55              | -55 to +125   |
| SR230   | 30                    | 21                    | 30                |                   |   |
| SR240   | 40                    | 28                    | 40                |                   |   |
| SR250   | 50                    | 35                    | 50                | 0.70              | -55 to +150   |
| SR260   | 60                    | 42                    | 60                |                   |   |
| SR280   | 80                    | 56                    | 80                | 0.85              |   |
| SR2100  | 100                   | 70                    | 100               |                   |   |
| SR2150  | 150                   | 105                   | 150               |                   |   |
| SR2200  | 200                   | 140                   | 200               | 0.95              |   |

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=2.0\text{A}$

## Rating and characteristic curves (SR220 THRU SR2200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

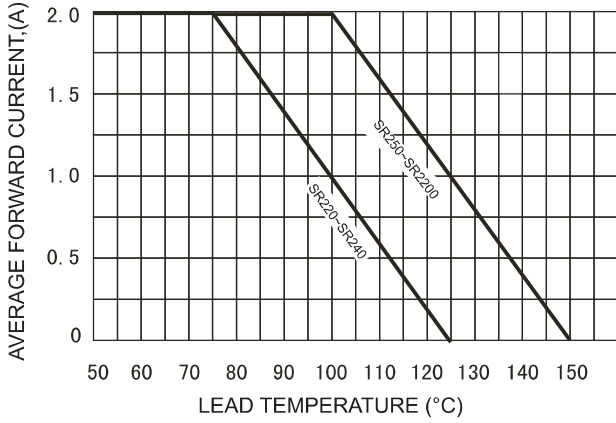


FIG.2-TYPICAL FORWARD CHARACTERISTICS

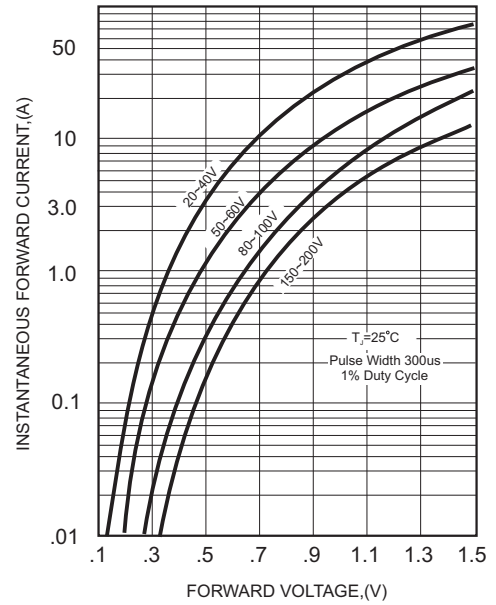


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

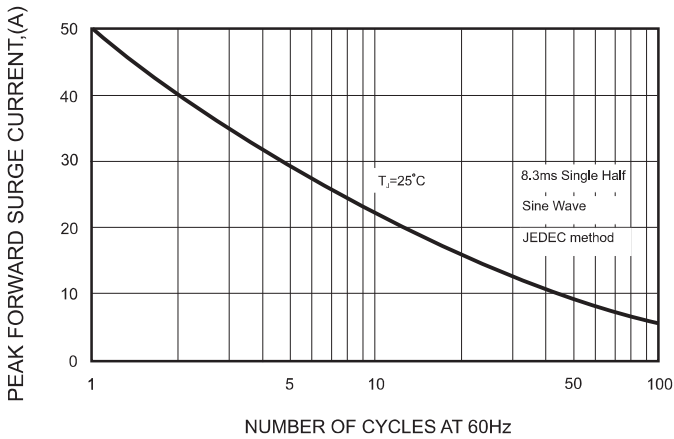


FIG.4-TYPICAL JUNCTION CAPACITANCE

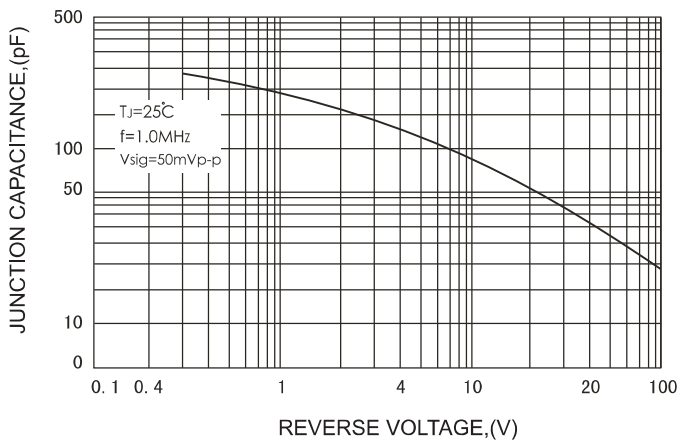
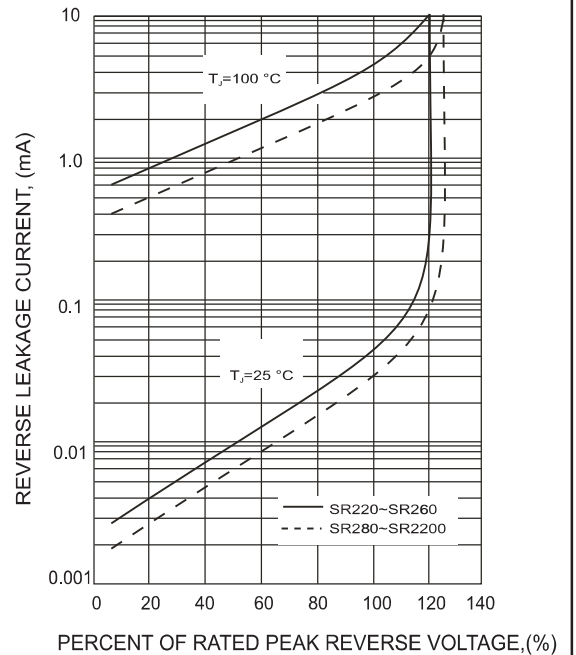




FIG.5 - TYPICAL REVERSE CHARACTERISTICS



### Pinning information

| Pin                        | Simplified outline   | Symbol  |
|----------------------------|--|---|
| Pin1 cathode<br>Pin2 anode |  |  |

### Marking

| Type number | Marking code |
|-------------|--------------|
| SR220       | SR220        |
| SR230       | SR230        |
| SR240       | SR240        |
| SR250       | SR250        |
| SR260       | SR260        |
| SR280       | SR280        |
| SR2100      | SR2100       |
| SR2150      | SR2150       |
| SR2200      | SR2200       |