

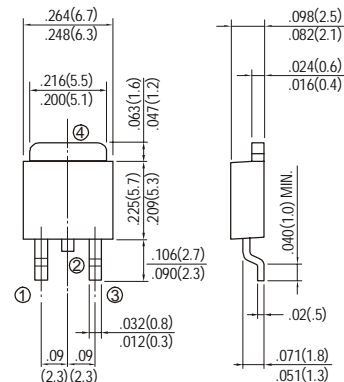
SD1020S Thru SD10100S

DPAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER VOLTAGE - 20 to 100 Volts CURRENT - 10.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

DPAK / TO-252



MECHANICAL DATA

Case: D PAK/TO-252 molded plastic

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode

Standard packaging: 16mm tape (EIA-481)

Weight: 0.015 ounce, 0.4 gram.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load.

| | SYMBOLS | SD1020S | SD1030S | SD1040S | SD1050S | SD1060S | SD1080S | SD10100S | UNITS |
|--|------------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | Volts |
| Maximum Average Forward Rectified Current at $T_c=75^\circ\text{C}$ | $I_{(AV)}$ | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 200 | 200 | 200 | 200 | 200 | 200 | 200 | Amps |
| Maximum Instantaneous Forward Voltage at 10.0A (Note 1) | V_F | 0.55 | 0.55 | 0.55 | 0.75 | 0.75 | 0.85 | 0.85 | Volts |
| Maximum DC Reverse Current (Note 1) $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$ | I_R | 0.2 20 | 0.2 20 | 0.2 20 | 0.2 20 | 0.2 20 | 0.2 20 | 0.2 20 | mA |
| Maximum Thermal Resistance (Note 2) | $R_{\theta JC}$ $R_{\theta JA}$ | 6 80 | 6 80 | 6 80 | 6 80 | 6 80 | 6 80 | 6 80 | $^\circ\text{C} / \text{W}$ |
| Operating Junction Temperature Range | T_J | -55 to +125 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES:

1. Pulse Test with $PW=300\mu\text{sec}$, 2% Duty Cycle.
2. Mounted on P.C. Board with 14mm^2 (.013mm thick) copper pad areas.

RATING AND CHARACTERISTIC CURVES

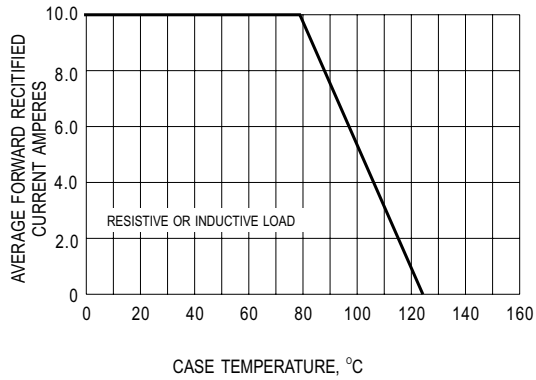


Fig.1- FORWARD CURRENT DERATING CURVE

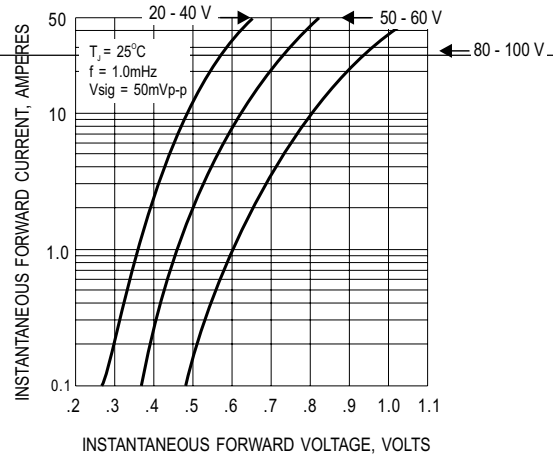


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

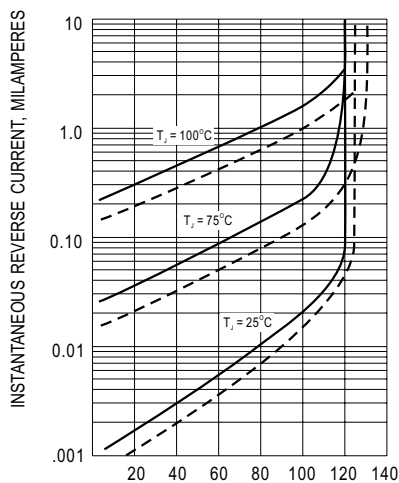


Fig.3- TYPICAL REVERSE CHARACTERISTIC

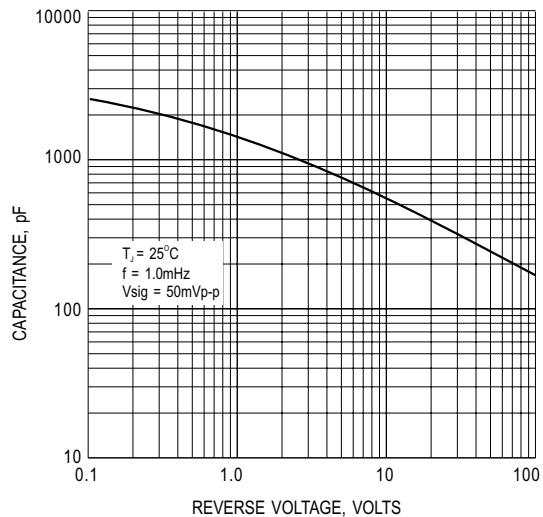


Fig.4- TYPICAL JUNCTION CAPACITANCE

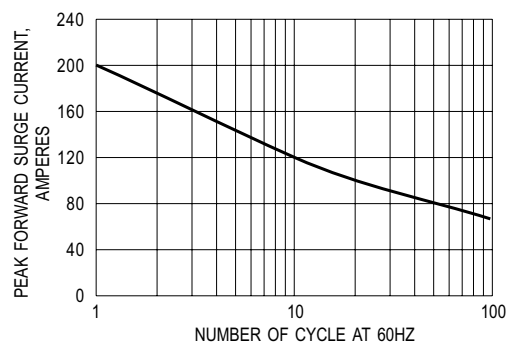


Fig.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT