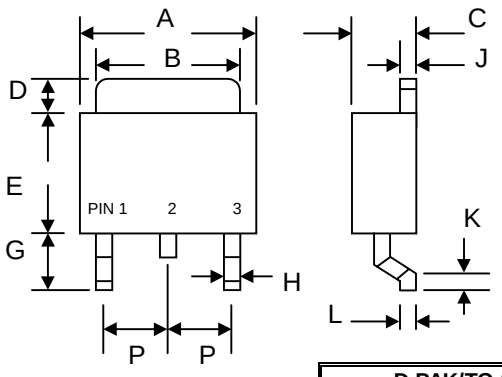
# SD620CS – SD6100CS

## 6.0A DPAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

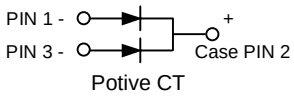
## Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications




## Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band
- Weight: 0.4 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Standard Packaging: 16mm Tape (EIA-481)



Potive CT

| D PAK/TO-252AA | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 6.4 | 6.8 |
| **B** | 5.0 | 5.4 |
| **C** | 2.35 | 2.75 |
| **D** | — | 1.60 |
| **E** | 5.3 | 5.7 |
| **G** | 2.3 | 2.7 |
| **H** | 0.4 | 0.8 |
| **J** | 0.4 | 0.6 |
| **K** | 0.3 | 0.7 |
| **L** | 0.50 Typical | |
| **P** | — | 2.3 |
| **All Dimensions in mm** | | |

## Maximum Ratings and Electrical Characteristics @$T_A$=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic | Symbol | SD 620CS | SD 630CS | SD 640CS | SD 650CS | SD 660CS | SD 680CS | SD 6100CS | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Average Rectified Output Current @$T_L$ = 75°C | $I_O$ | 6.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 75 | | | | | | | A |
| Forward Voltage (Note 1) @$I_F$ = 3.0A | $V_{FM}$ | 0.55 | | | 0.70 | | 0.85 | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 100°C | $I_{RM}$ | 0.2<br>15 | | | | | | | mA |
| Typical Junction Capacitance (Note 2) | $C_j$ | 400 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 80 | | | | | | | K/W |
| Operating Temperature Range | $T_j$ | -50 to +125 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -50 to +150 | | | | | | | °C |

Note: 1. Mounted on P.C. Board with 14mm$^2$ (0.13mm thick) copper pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.


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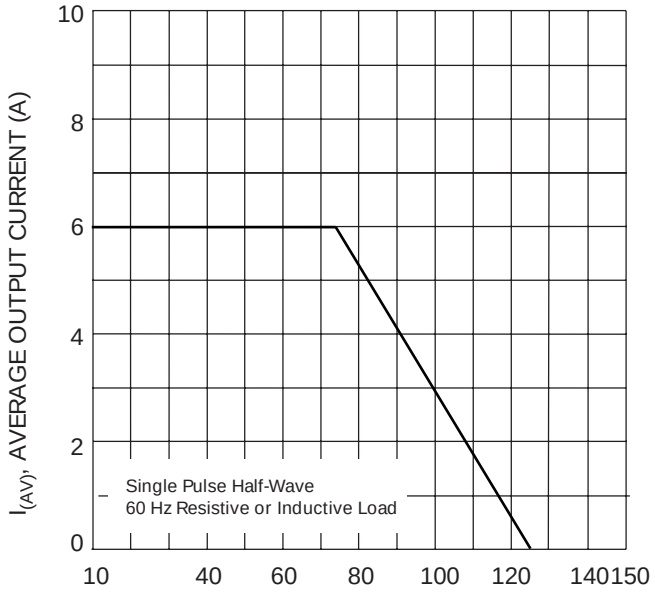



Fig. 1 Forward Current Derating Curve

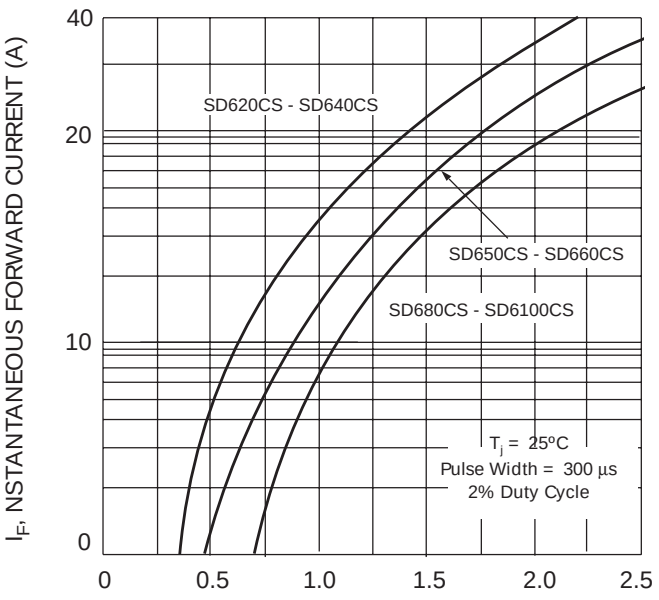



Fig. 2 Typical Forward Characteristics

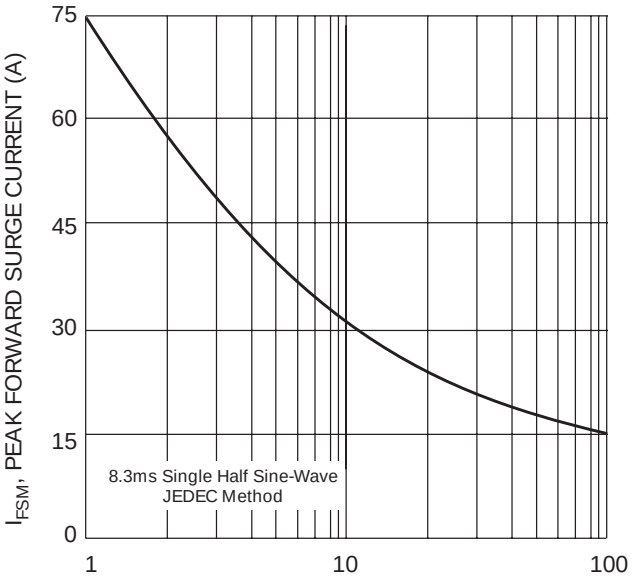



Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

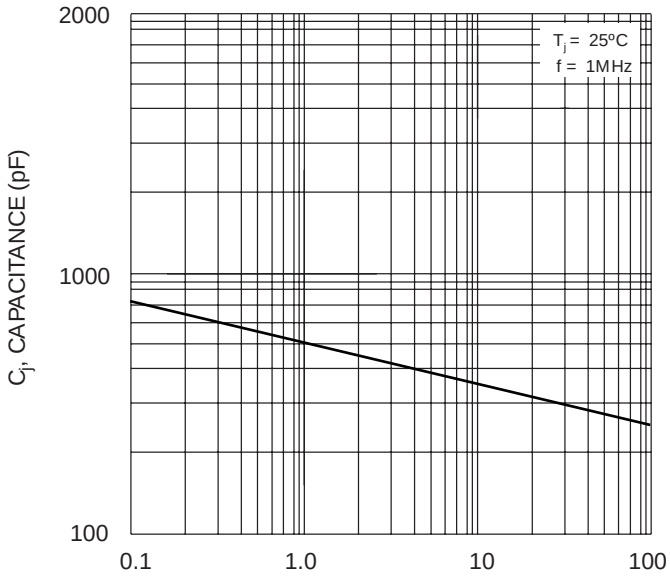



Fig. 4 Typical Junction Capacitance

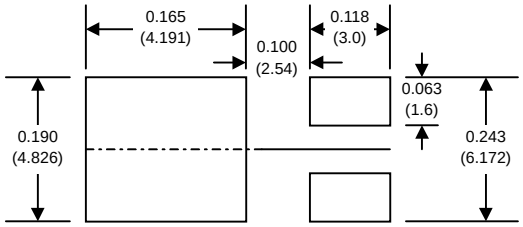
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## ORDERING INFORMATION

| Product No.◆ | Package Type | Shipping Quantity |
|---|---|---|
| SD620CS-T3 | DPAK | 2500/Tape & Reel |
| SD630CS-T3 | DPAK | 2500/Tape & Reel |
| SD640CS-T3 | DPAK | 2500/Tape & Reel |
| SD650CS-T3 | DPAK | 2500/Tape & Reel |
| SD660CS-T3 | DPAK | 2500/Tape & Reel |
| SD680CS-T3 | DPAK | 2500/Tape & Reel |
| SD6100CS-T3 | DPAK | 2500/Tape & Reel |

◆T3 suffix refers to a 13" reel.
Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT




inches(mm)

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