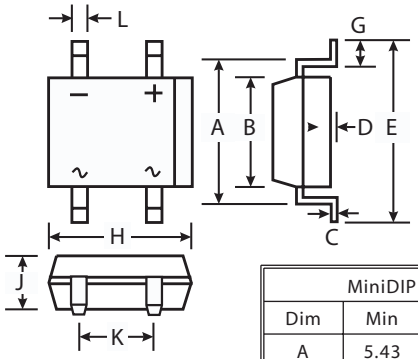
# DEC

## S40S THRU S500S

CURRENT 0.8 Amperes
VOLTAGE 100 to 1000 Volts

## Features

- Glass Passivated Die Construction
- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 30A Peak
- Designed for Printed Circuit Board Applications
- Plastic Material - UL Flammability Classification 94V-0




| MiniDIP | | |
|---|---|---|
| Dim | Min | Max |
| A | 5.43 | 5.75 |
| B | 3.60 | 4.00 |
| C | 0.15 | 0.35 |
| D | 0.05 | 0.20 |
| E | — | 7.00 |
| G | 0.70 | 1.10 |
| H | 4.50 | 4.90 |
| J | 2.80 | 2.90 |
| K | 2.50 | 2.70 |
| L | 0.50 | 0.80 |
| All Dimensions in mm | | |

## Mechanical Data

- Case : Molded Plastic
- Terminals : Solder Plated Leads,
  Solderable per MIL-STD-202, Method 2026
- Polarity : As Marked on Case
- Approx. Weight : 0.125 grams
- Mounting Position : Any
- Marking : Type Number

## Maximum Ratings And Electrical Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

| | Symbols | S40S | S80S | S125S | S250S | S380S | S500S | Units |
|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse voltage<br>Working Peak Reverse voltage<br>DC Blocking voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| RMS Reverse voltage | $V_{RMS}$ | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Average Rectified Output Current @ $T_A$=40℃ | Io | 0.8 | | | | | | Amp |
| Non-Repetitive Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 30 | | | | | | Amp |
| Forward voltage (per element) @ $I_F$=0.4 A | $V_{FM}$ | 1.0 | | | | | | Volts |
| Peak Reverse Current at Rated DC Blocking voltage (per element) @ $T_A$=25℃ | $I_{RM}$ | 10 | | | | | | μ A |
| Peak Reverse Current at Rated DC Blocking voltage (per element) @ $T_A$=125℃ | $I_{RM}$ | 500 | | | | | | μ A |
| Typical Junction Capacitance per element (Note 1) | $C_j$ | 10 | | | | | | pF |
| Typical Thermal Resistance, Junction to Ambient (Note 2) | $R\theta_{JA}$ | 75 | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_j$<br>$T_{STG}$ | -55 to +150 | | | | | | ℃ |

Notes:
(1) Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
(2) Thermal Resistance, junction to ambient, measured on PC board with $5.0^2$mm (0.03mm thick) land areas.

# RATING AND CHARACTERISTIC CURVES S40S THRU S500S

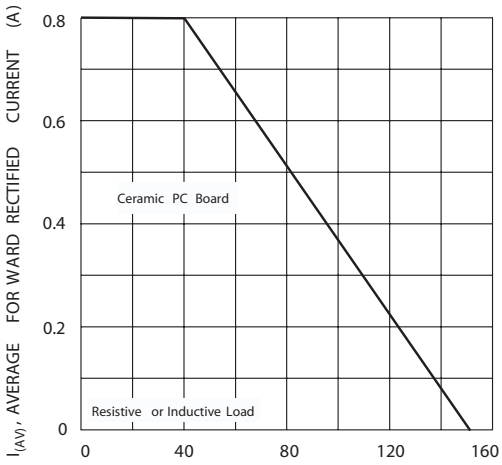


Fig. 1 Output Current Derating Curve

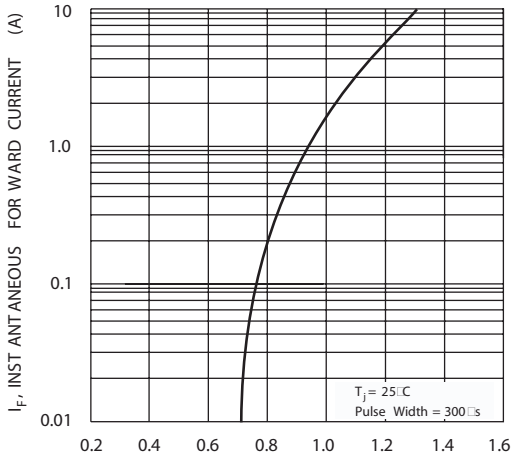


Fig. 2 Typical Forward Characteristics (per leg)

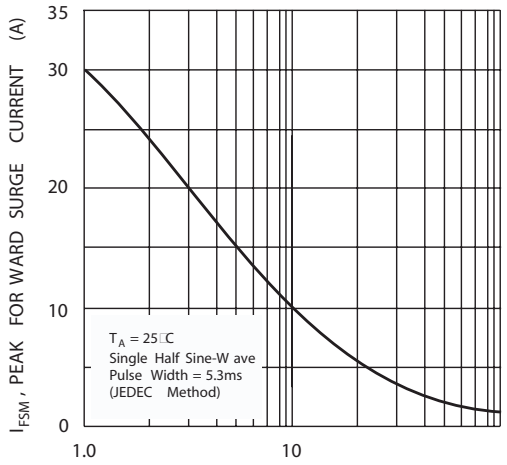


Fig. 3 Maximum Peak Forward Surge Current (per leg)

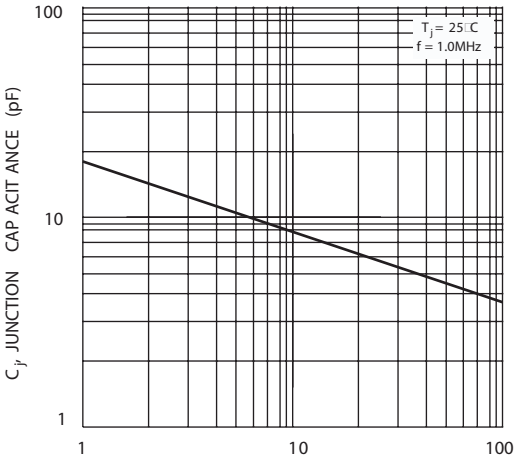


Fig. 4 Typical Junction Capacitance

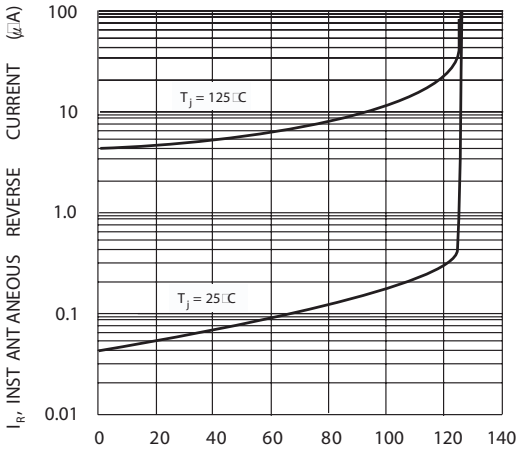


Fig. 5 Typical Reverse Characteristics (per element)