



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**B05S
THRU
B10S**

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE MINI SURFACE MOUNT BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 0.5 Ampere

FEATURES

- * Surge overload rating - 30 Amperes peak
- * Ideal for printed circuit board
- * Reliable low cost construction
- * Glass passivated junction

MECHANICAL DATA

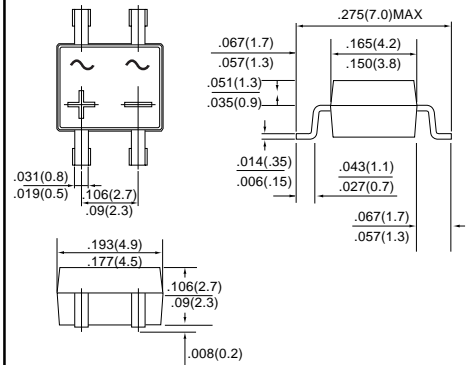
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Symbols molded or marked on body
- * Mounting position: Any
- * Weight: 0.22 gram

MAXIMUM RATINGS AND 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%.



DB-1MS



Dimensions in inches and (millimeters)

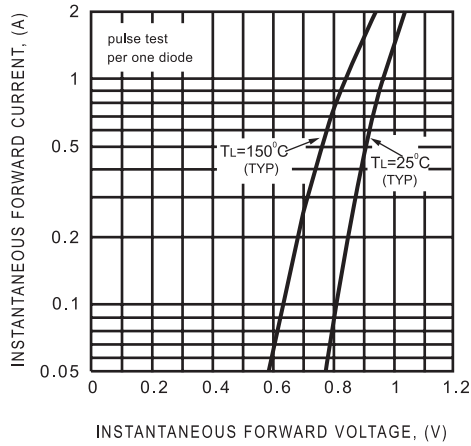
| | SYMBOL | B05S | B1S | B2S | B4S | B6S | B8S | B10S | UNITS |
|---|-----------------------------------|--------------|-----|-----|-----|-----|-----|------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Output Current at T _A = 40°C | I _O | 0.5 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 30 | | | | | | | Amps |
| Maximum DC Forward Voltage Drop per Bridge Element at 0.5A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum Reverse Current at rated DC Blocking Voltage per element | @ T _A = 25°C | 5.0 | | | | | | | uAmps |
| | @ T _A = 125°C | 500 | | | | | | | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 10 | | | | | | | A ² Sec |
| Typical Junction Capacitance (Note1) | C _J | 25 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJA} | 85 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | °C |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

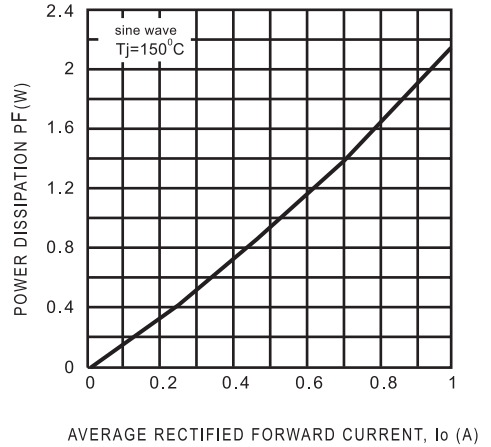
2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

RATING AND CHARACTERISTIC CURVES (B05S THRU B10S)

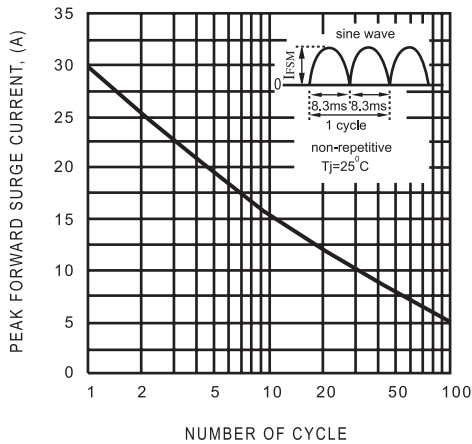
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



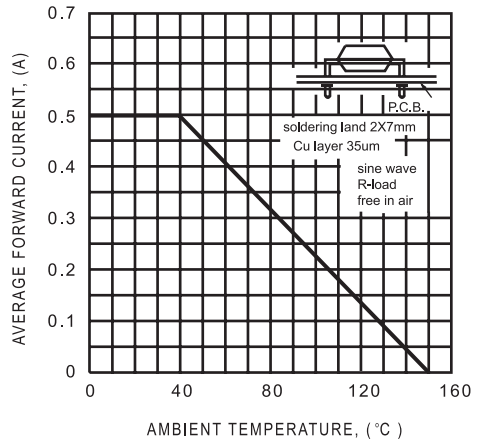
POWER DISSIPATION



SURGE FORWARD CURRENT CAPABILITY



TYPICAL FORWARD CURRENT DERATING CURVE



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