

Pb Free Plating Product

H16C20A/H16C30A/H16C40A/H16C50A/H16C60A



16.0 Ampere Heatsink Common Anode Ultra Fast Recovery Rectifiers

**Features**

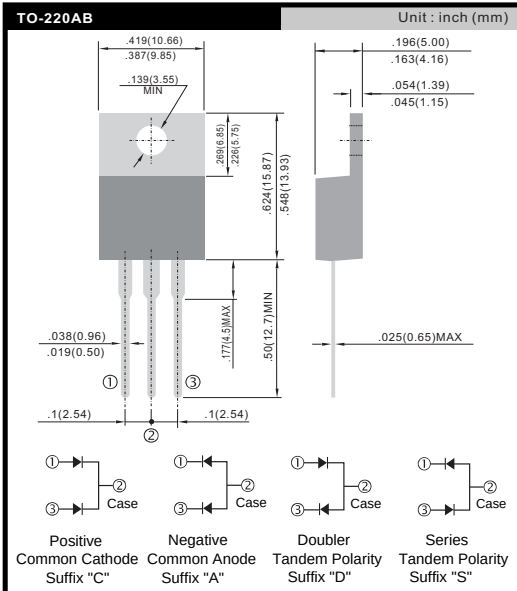
- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

**Application**

- \* Automotive Inverters and Solar Inverters
- \* Plating Power Supply, SMPS and UPS
- \* Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- \* Case: Heatsink TO-220AB open package
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202 method 208
- \* Polarity: As marked on diode body
- \* Mounting position: Any
- \* Weight: 2.2 gram approximately

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

|                                                                                                       | SYMBOL                            | H16C20A      | H16C30A<br>H16C40A | H16C50A<br>H16C60A | UNIT     |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|--------------------|--------------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                | V <sub>RRM</sub>                  | 200          | 400                | 600                | V        |
| Maximum RMS Voltage                                                                                   | V <sub>RMS</sub>                  | 140          | 280                | 420                | V        |
| Maximum DC Blocking Voltage                                                                           | V <sub>DC</sub>                   | 200          | 400                | 600                | V        |
| Maximum Average Forward Rectified Current T <sub>c</sub> =100°C (Total Device 2x8A=16A)               | I <sub>F(AV)</sub>                | 16.0         |                    |                    | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)     | I <sub>FSM</sub>                  | 175          | 150                |                    | A        |
| Maximum Instantaneous Forward Voltage @ 8.0 A (Per Diode/Per Leg)                                     | V <sub>F</sub>                    | 0.98         | 1.3                | 1.7                | V        |
| Maximum DC Reverse Current @T <sub>J</sub> =25 °C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C | I <sub>R</sub>                    | 5.0<br>100   |                    |                    | μA<br>μA |
| Maximum Reverse Recovery Time (Note 1)                                                                | T <sub>rr</sub>                   | 35           |                    |                    | nS       |
| Typical junction Capacitance (Note 2)                                                                 | C <sub>J</sub>                    | 90           |                    |                    | pF       |
| Typical Thermal Resistance (Note 3)                                                                   | R <sub>θJC</sub>                  | 1.5          |                    |                    | °C/W     |
| Operating Junction and Storage Temperature Range                                                      | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 150 |                    |                    | °C       |

NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

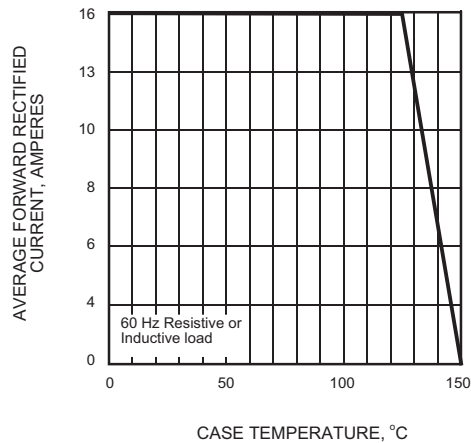


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

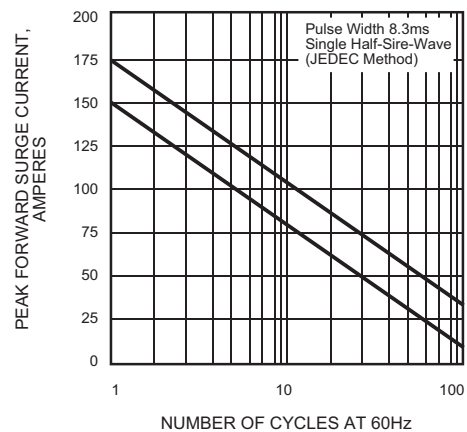


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

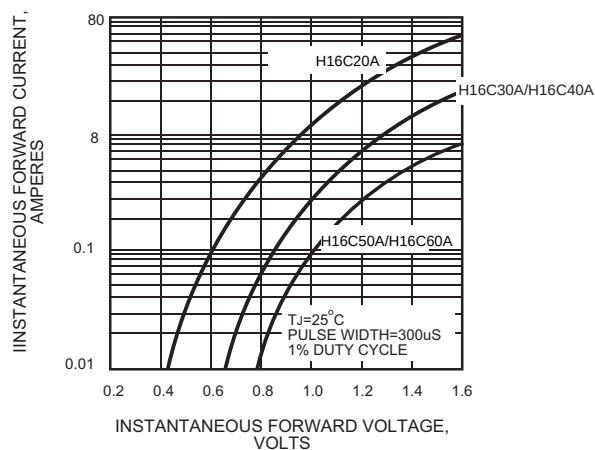


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

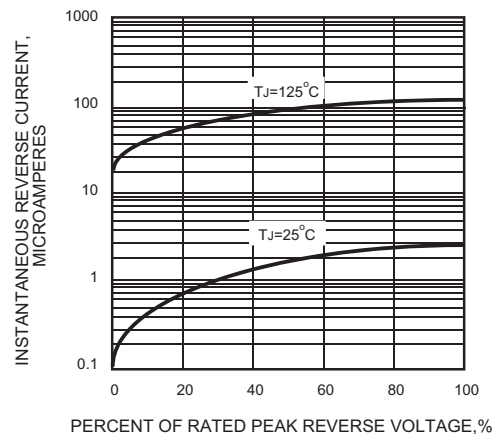


FIG.5 - TYPICAL JUNCTION CAPACITANCE

