

## 2A01 THRU 2A07

### GENERAL PURPOSE PLASTIC RECTIFIERS

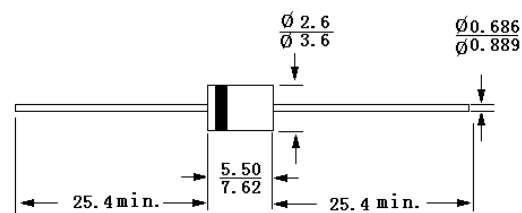
Reverse Voltage – 50 to 1000 Volts

Forward Current – 2.0 Amperes

#### Features

- Diffused junction
- High current capability and low forward voltage drop
- Surge overload rating to 70A peak

D0-15



Dimensions in mm

#### Mechanical Data

- **Case:** Molded plastic
- **Terminates:** Plated leads solderable per MIL-STD-202, Method 208
- **Polarity:** Cathode band
- **Mounting position:** Any
- **Marking:** Type number

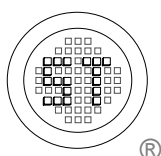
#### Absolute Maximum Ratings and Characteristics

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

|                                                                                                                 | Symbols         | 2A01        | 2A02 | 2A03 | 2A04 | 2A05 | 2A06 | 2A07 | Units                |
|-----------------------------------------------------------------------------------------------------------------|-----------------|-------------|------|------|------|------|------|------|----------------------|
| Maximum peak repetitive reverse voltage                                                                         | $V_{RRM}$       | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts                |
| Maximum working peak reverse voltage                                                                            | $V_{RWM}$       | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts                |
| Maximum DC blocking voltage                                                                                     | $V_R$           | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts                |
| Maximum RMS reverse voltage                                                                                     | $V_{R(RMS)}$    | 35          | 70   | 140  | 280  | 420  | 560  | 700  | Volts                |
| Maximum average rectified output current <sup>(1)</sup> @ $T_A=55^\circ\text{C}$                                | $I_O$           | 2           |      |      |      |      |      |      | Amps                 |
| Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 70          |      |      |      |      |      |      | Amps                 |
| Maximum forward voltage @ $I_F=2\text{A}$                                                                       | $V_{FM}$        | 1.1         |      |      |      |      |      |      | Volts                |
| Maximum peak reverse current @ $T_A=25^\circ\text{C}$                                                           | $I_{RM}$        | 5           |      |      |      |      |      |      | $\mu\text{A}$        |
| at rated DC blocking voltage @ $T_A=100^\circ\text{C}$                                                          |                 | 50          |      |      |      |      |      |      | $\mu\text{A}$        |
| $I^2t$ rating for fusing ( $t<8.3\text{ms}$ )                                                                   | $I^2t$          | 17.5        |      |      |      |      |      |      | $\text{A}^2\text{s}$ |
| Typical junction capacitance <sup>(2)</sup>                                                                     | $C_J$           | 15          |      |      |      |      |      |      | pF                   |
| Typical thermal resistance junction to ambient <sup>(1)</sup>                                                   | $R_{\theta JA}$ | 60          |      |      |      |      |      |      | K/W                  |
| Operating and Storage temperature range                                                                         | $T_J, T_S$      | -65 to +150 |      |      |      |      |      |      | $^\circ\text{C}$     |

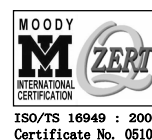
Notes: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.

2. Measured at 1MHz and applied reverse voltage of 4V DC



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Dated : 20/06/2003

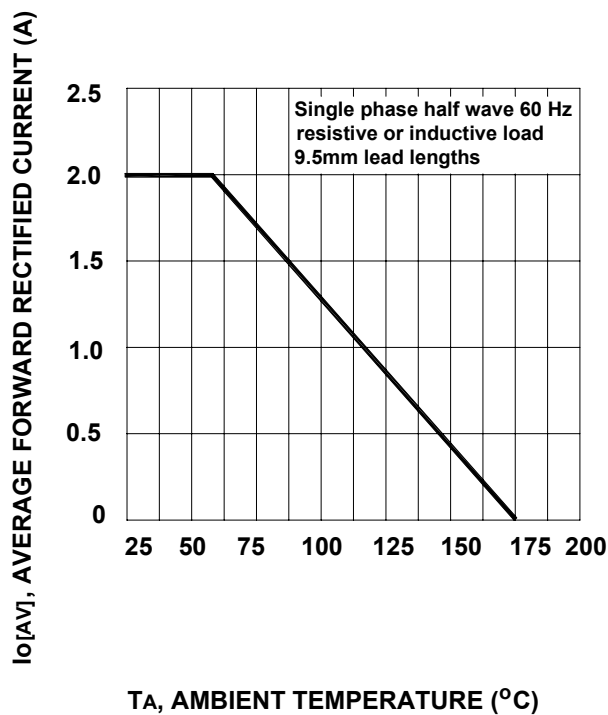


Fig.1 Forward Current Derating Curve

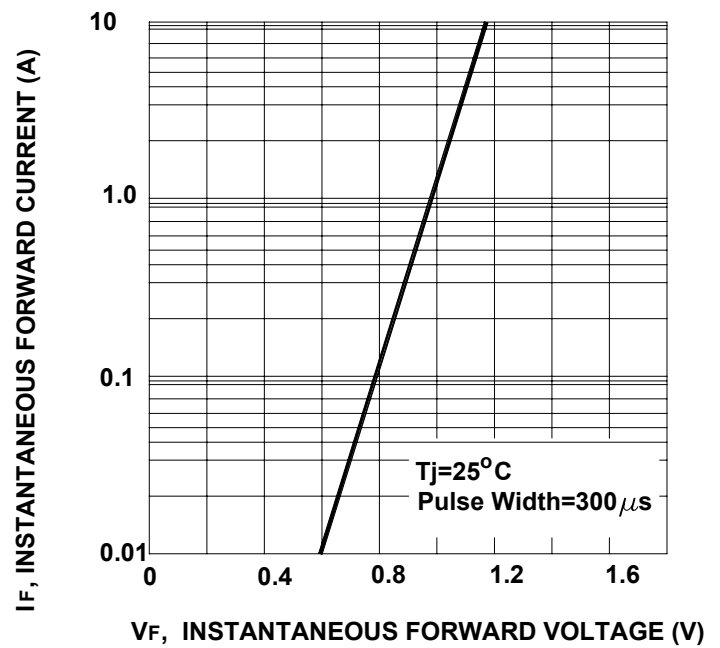


Fig.2 Typical Forward Characteristics

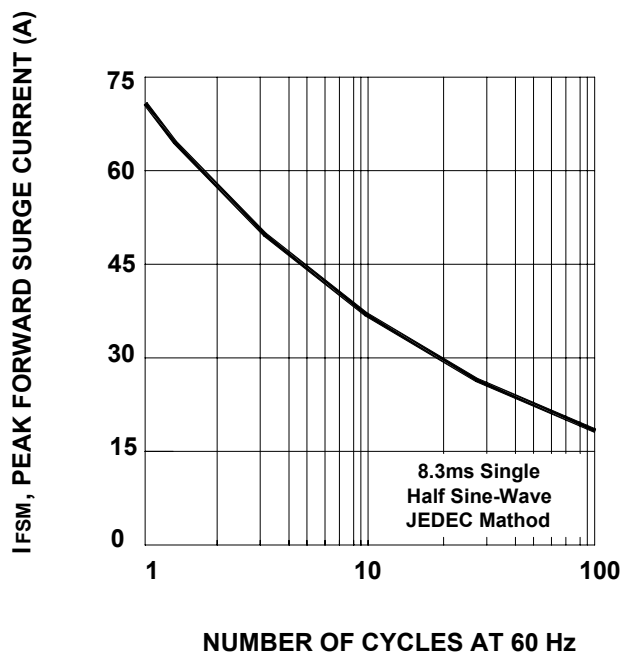


Fig.3 Max Non-Repetitive Peak Forward Surge Current

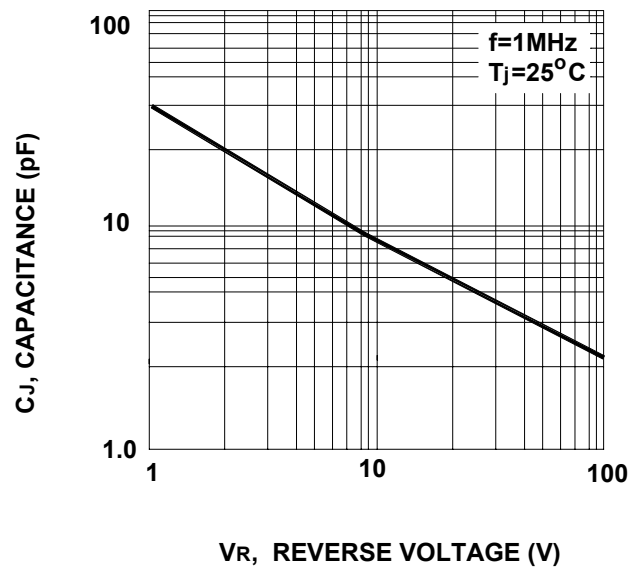
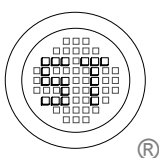
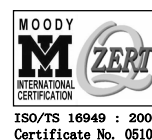


Fig.4 Typical Junction Capacitance



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