



**CHENMKO ENTERPRISE CO.,LTD**

Lead free devices

**ULTRA FAST RECTIFIER**

VOLTAGE RANGE 50 - 600 Volts CURRENT 8 Amperes

**U08A05PT**

**THRU**

**U08A60PT**

**FEATURES**

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Dual rectifier construction, positive centertap
- \* Glass passivated chip junctions
- \* Low power loss
- \* Low forward voltage, high current capability
- \* High surge current capability
- \* Ultra fast recovery times for high efficiency
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

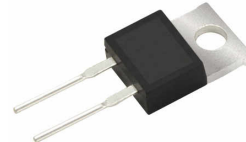
**MECHANICAL DATA**

**Case:** JEDEC TO-220A molded plastic

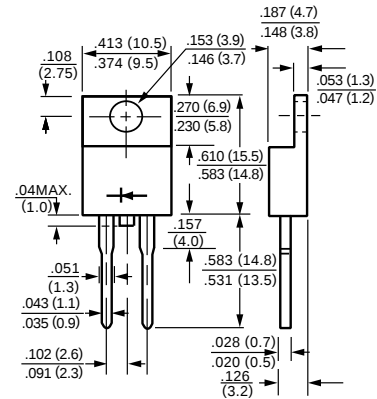
**Terminals:** Lead solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Weight:** 1.81 grams ( Approximately )



**TO-220A**



Dimensions in inches and (millimeters)

**TO-220A**

**MAXIMUM RATINGS** ( At  $T_A = 25^\circ\text{C}$  unless otherwise noted )

| RATINGS                                                                                           | SYMBOL   | U08A05PT    | U08A10PT | U08A15PT | U08A20PT | U08A30PT | U08A40PT | U08A50PT | U08A60PT | UNITS  |
|---------------------------------------------------------------------------------------------------|----------|-------------|----------|----------|----------|----------|----------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM     | 50          | 100      | 150      | 200      | 300      | 400      | 500      | 600      | Volts  |
| Maximum RMS Voltage                                                                               | VRMS     | 35          | 70       | 105      | 140      | 210      | 280      | 350      | 420      | Volts  |
| Maximum DC Blocking Voltage                                                                       | VDC      | 50          | 100      | 150      | 200      | 300      | 400      | 500      | 600      | Volts  |
| Maximum Average Forward Rectified Current                                                         | Io       | 8.0         |          |          |          |          |          |          |          | Amps   |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 125         |          |          |          |          |          |          |          | Amps   |
| Typical Junction capacitance per leg ( NOTE 1 )                                                   | CJ       | 120         |          |          |          | 70       |          |          |          | pF     |
| Typical thermal resistance ( NOTE 2 )                                                             | R θJC    | 3.0         |          |          |          |          |          |          |          | °C / W |
| Operating and Storage Temperature Range                                                           | TJ, TSTG | -65 to +150 |          |          |          |          |          |          |          | °C     |

**ELECTRICAL CHARACTERISTICS** ( At  $T_A = 25^\circ\text{C}$  unless otherwise noted )

| CHARACTERISTICS                                   |                        | SYMBOL          | U08A05PT | U08A10PT | U08A15PT | U08A20PT | U08A30PT | U08A40PT | U08A50PT | U08A60PT | UNITS |       |
|---------------------------------------------------|------------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|-------|
| Maximum Instantaneous Forward Voltage at 8.0 A DC |                        | V <sub>F</sub>  | 0.975    |          |          |          | 1.30     |          | 1.50     |          | Volts |       |
| Maximum DC reverse current                        | T <sub>C</sub> = 25°C  | I <sub>R</sub>  | 10.0     |          |          |          |          |          |          |          |       | uAmps |
| at rated DC blocking voltage per leg              | T <sub>C</sub> = 100°C |                 | 500      |          |          |          |          |          |          |          |       |       |
| Maximum reverse recovery time ( NOTE 3 ) per leg  |                        | t <sub>rr</sub> | 35       |          |          |          | 50       |          |          |          | nS    |       |

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
2. Thermal resistance from junction to case per leg mounted on heatsink  
3. Reverse recovery test conditions :  $I_F = 0.5 \text{ A}$ ,  $I_R = -1.0 \text{ A}$ ,  $I_{rr} = -0.25 \text{ A}$ .  
4. Suffix " P " = Case Positive, Suffix " R " = Case Negative.

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## RATING CHARACTERISTIC CURVES ( U08A05PT THRU U08A60PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

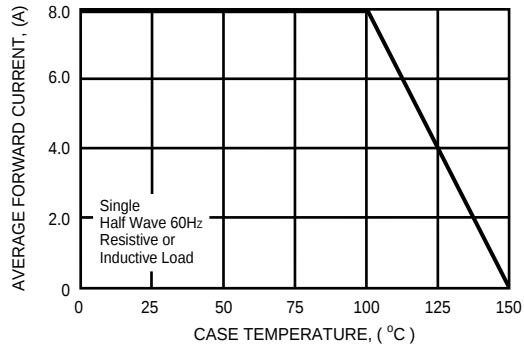


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

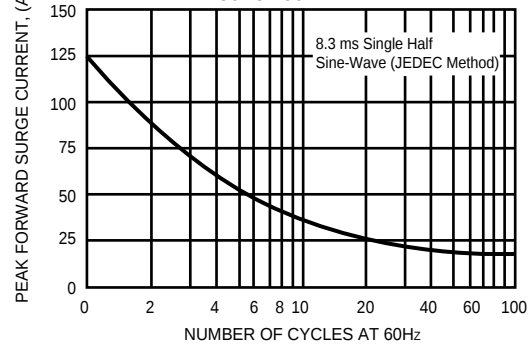


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

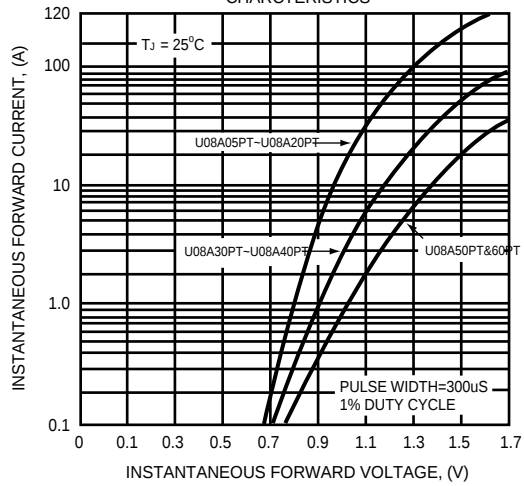


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

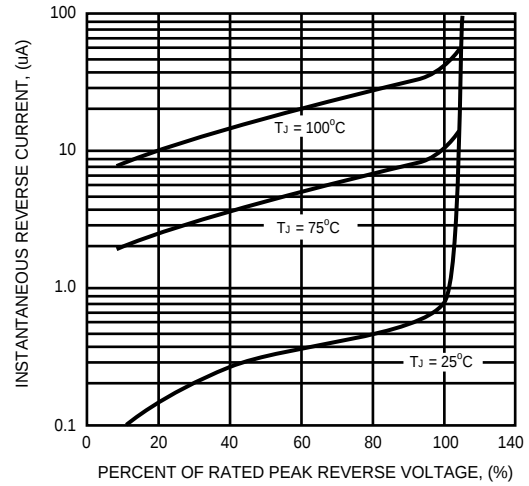


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

