



**CHENMKO ENTERPRISE CO.,LTD**

**UF5400PT**

**THRU**

**UF5408PT**

**HIGH EFFICIENCY RECTIFIER**

**VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes**

*Lead free devices*

#### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Glass passivated chip junction
- \* Low cost
- \* Ultrafast recovery time for high efficiency
- \* Low forward voltage, high current capability
- \* Low leakage
- \* High temperature soldering guaranteed: 260°C, 0.375" (9.5mm) lead length for 10 seconds, 5 lbs. (2.3 kg) tension

#### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

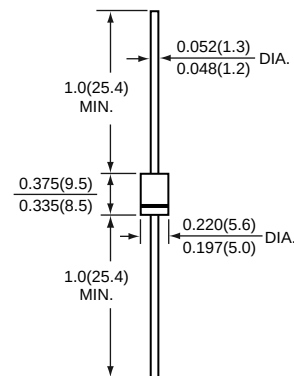
**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 1.18 grams



**DO-201AD**



Dimensions in inches and (millimeters)

**DO-201AD**

#### 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%.

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

| RATINGS                                                                                              | SYMBOL                            | UF5400PT    | UF5401PT | UF5402PT | UF5403PT | UF5404PT | UF5405PT | UF5406PT | UF5407PT | UF5408PT | UNITS  |
|------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage                                                               | VRRM                              | 50          | 100      | 200      | 300      | 400      | 500      | 600      | 800      | 1000     | Volts  |
| Maximum RMS Voltage                                                                                  | VRMS                              | 35          | 70       | 140      | 210      | 280      | 350      | 420      | 560      | 700      | Volts  |
| Maximum DC Blocking Voltage                                                                          | VDC                               | 50          | 100      | 200      | 300      | 400      | 500      | 600      | 800      | 1000     | Volts  |
| Maximum Average Forward Rectified Current<br>0.375" (9.5mm) Lead Length $T_A = 55^\circ\text{C}$     | I <sub>O</sub>                    | 3.0         |          |          |          |          |          |          |          |          | Amps   |
| Peak Forward Surge Current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 150         |          |          |          |          |          |          |          |          | Amps   |
| Typical Junction Capacitance (Note 1)                                                                | C <sub>J</sub>                    | 45          |          |          |          |          |          |          |          |          | pF     |
| Maximum Thermal Resistance (Note 2)                                                                  | R $\theta$ JL                     | 8.5         |          |          |          |          |          |          |          |          | °C / W |
|                                                                                                      | R $\theta$ JA                     | 20          |          |          |          |          |          |          |          |          | °C / W |
| Operating and Storage Temperature Range                                                              | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |          |          |          |          |          |          |          |          | °C     |

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

| CHARACTERISTICS                                   |                        | SYMBOL          | UF5400PT | UF5401PT | UF5402PT | UF5403PT | UF5404PT | UF5405PT | UF5406PT | UF5407PT | UF5408PT | UNITS |       |
|---------------------------------------------------|------------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|-------|
| Maximum Instantaneous Forward Voltage at 3.0 A DC |                        | V <sub>F</sub>  | 1.0      |          |          |          |          |          | 1.7      |          |          |       | Volts |
| Maximum DC Reverse Current                        | T <sub>A</sub> = 25°C  | I <sub>R</sub>  | 10       |          |          |          |          |          |          |          |          |       | uAmps |
| at Rated DC Blocking Voltage                      | T <sub>A</sub> = 125°C |                 | 50       |          |          |          |          |          |          |          |          |       | uAmps |
| Maximum Reverse Recovery Time (Note 3)            |                        | t <sub>rr</sub> | 50       |          |          |          |          |          | 75       |          |          |       | nSec  |

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
2. Thermal Resistance from Junction to lead and from junction to ambient with 0.375" (9.5mm) lead length, both leads attached to heatsink  
3. Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = -1.0 A, I<sub>RR</sub> = -0.25 A

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## RATING CHARACTERISTIC CURVES ( UF5400PT THRU UF5408PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

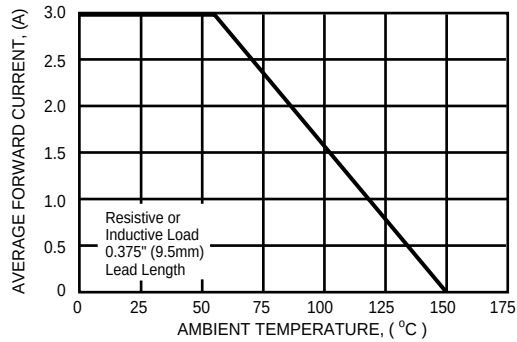


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

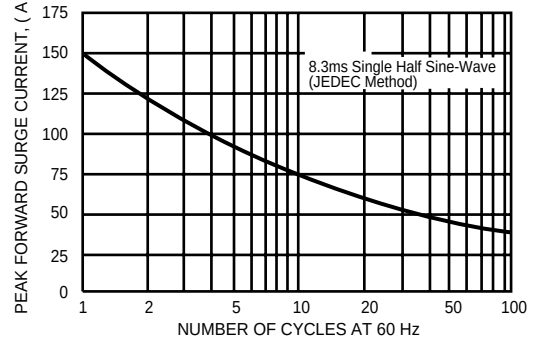


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

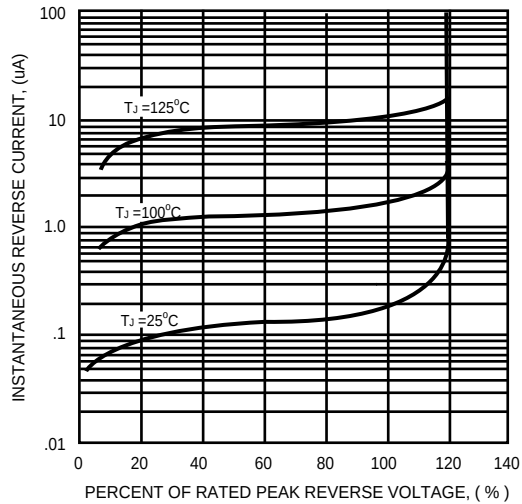


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

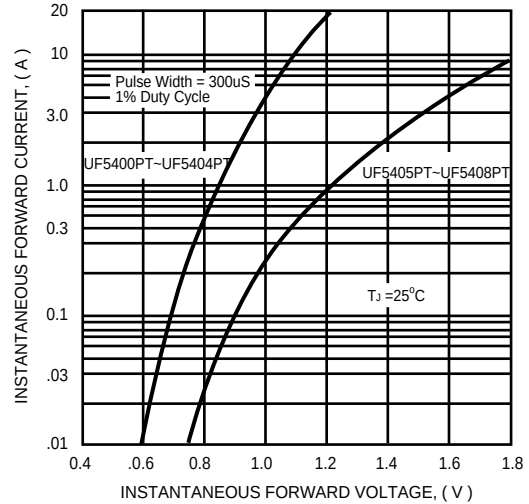


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

