



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

ULTRA FAST RECTIFIER

VOLTAGE RANGE 50 - 600 Volts CURRENT 15 Amperes

**U15A05PT
THRU
U15A60PT**

FEATURES

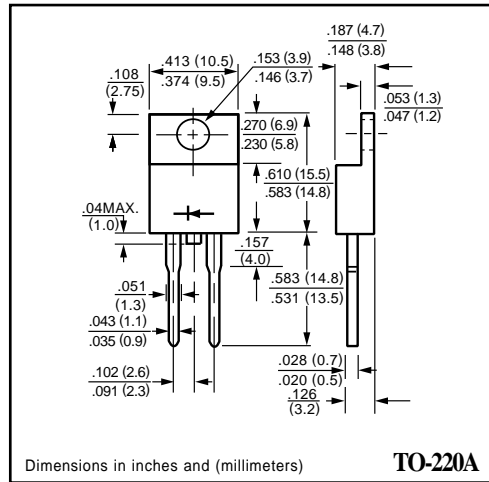
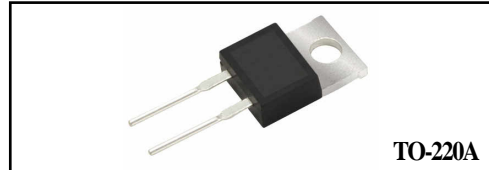
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Dual rectifier construction, positive centertap
- * Glass passivated chip junctions
- * Low power loss
- * Low forward voltage, high current capability
- * High surge current capability
- * Ultra fast recovery times 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)

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 TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | U15A05PT | U15A10PT | U15A15PT | U15A20PT | U15A30PT | U15A40PT | U15A50PT | U15A60PT | UNITS |
|---|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 350 | 420 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | Volts |
| Maximum Average Forward Rectified Current | I _O | 15.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 250 | | | | | | | | Amps |
| Typical Junction capacitance per leg (NOTE 1) | C _J | 200 | | | | 140 | | | | pF |
| Typical thermal resistance (NOTE 2) | R _{θJC} | 2.5 | | | | | | | | °C / W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | U15A05PT | U15A10PT | U15A15PT | U15A20PT | U15A30PT | U15A40PT | U15A50PT | U15A60PT | UNITS |
|---|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 15.0 A DC | V _F | 0.975 | | | 1.30 | | 1.50 | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage per leg | I _R | 10.0 | | | | | | | | uAmps |
| | | 500 | | | | | | | | |
| Maximum reverse recovery time (NOTE 3) per leg | t _{rr} | 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 A, I_r = -1.0 A, I_{rr} = -0.25 A.
 4. Suffix " P " = Case Positive, Suffix " R " = Case Negative.

RATING CHARACTERISTIC CURVES (U15A05PT THRU U15A60PT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

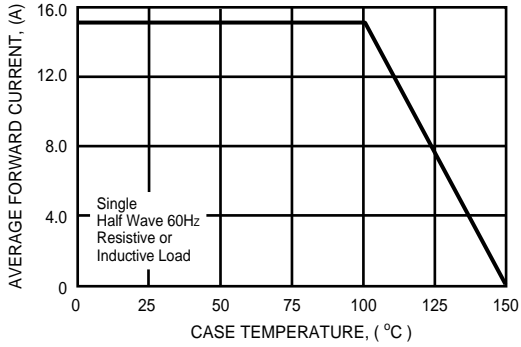


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

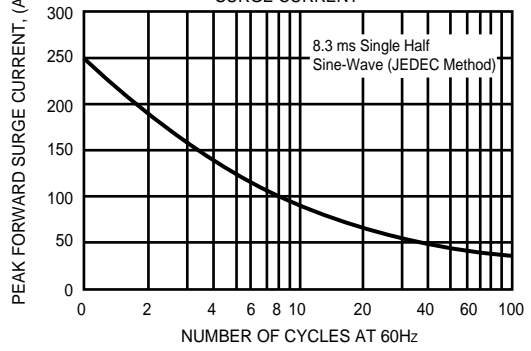


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

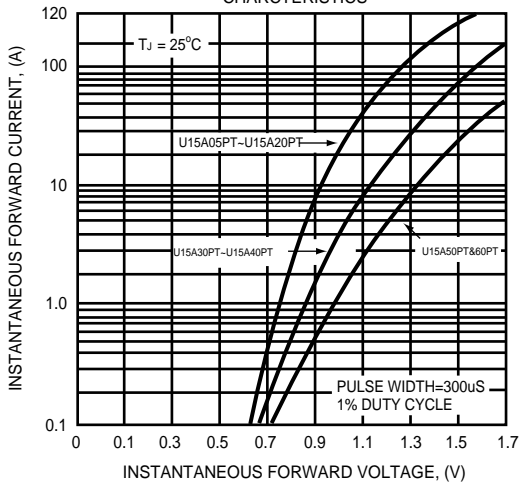


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

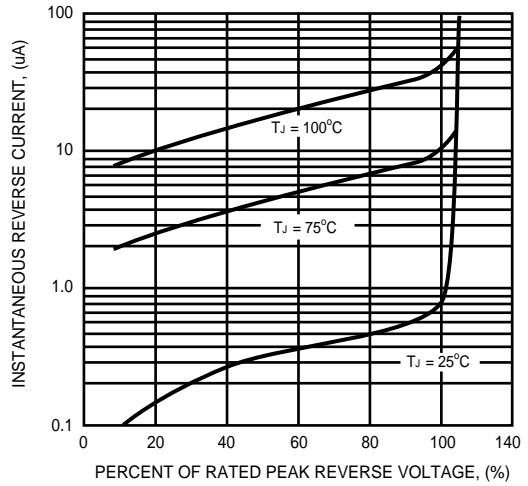


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

