



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

FAST RECOVERY RECTIFIER

VOLTAGE RANGE 50 - 600 Volts CURRENT 12 Amperes

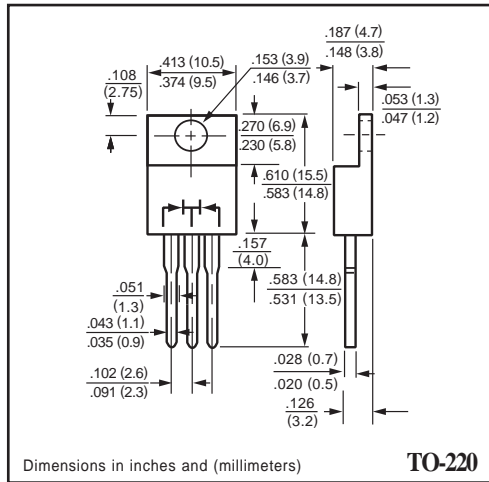
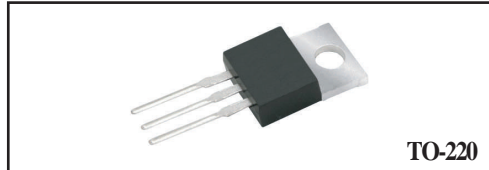
**F12C05PT
THRU
F12C60PT**

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
- * Fast recovery times for high efficiency
- * High temperature soldering guaranteed : 260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC TO-220 molded plastic
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Weight: 2.24 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 | F12C05PT | F12C10PT | F12C15PT | F12C20PT | F12C30PT | F12C40PT | F12C50PT | F12C60PT | 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 | 12.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 120 | | | | | | | | Amps |
| Typical Junction capacitance per leg (NOTE 1) | CJ | 100 | | | | 60 | | | | pF |
| Typical thermal resistance (NOTE 2) | R θJC | 3.0 | | | | | | | | °C / W |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to +175 | | | | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | F12C05PT | F12C10PT | F12C15PT | F12C20PT | F12C30PT | F12C40PT | F12C50PT | F12C60PT | UNITS |
|---|------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 6.0 A DC | VF | 1.30 | | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage per leg | TC = 25°C | 10.0 | | | | | | | | uAmps |
| | TC = 100°C | 250 | | | | | | | | |
| Maximum reverse recovery time (NOTE 3) per leg | trr | 150 | | | | 250 | | | | 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 : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A.
 4. Suffix " C " = Common Cathod, Suffix " A " = Common Anode, Suffix " D " = Double.

RATING CHARACTERISTIC CURVES (F12C05PT THRU F12C60PT)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

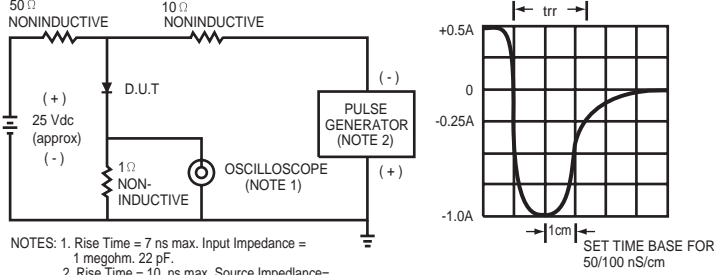


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

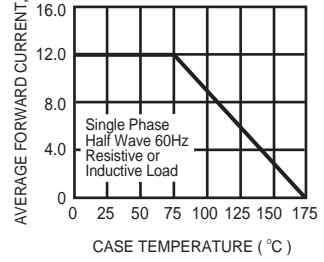


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

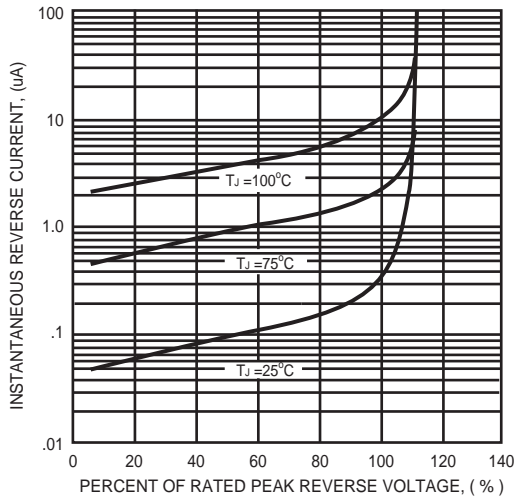


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

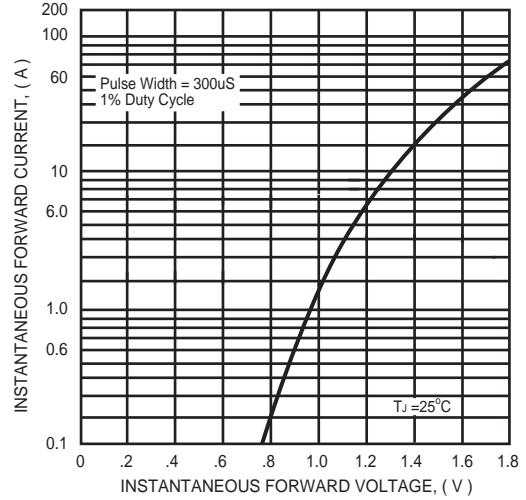


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

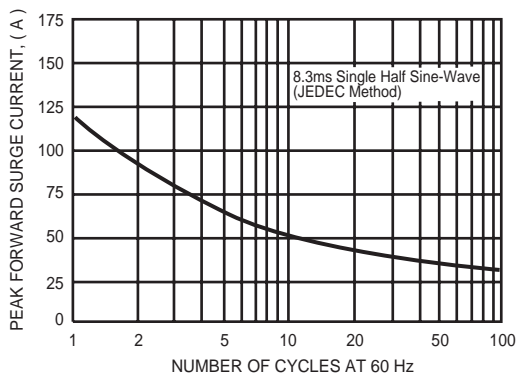


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

