



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

FAST RECOVERY RECTIFIER

VOLTAGE RANGE 50 - 600 Volts CURRENT 12 Amperes

F12C05PT

THRU

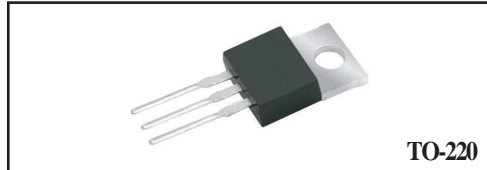
F12C60PT

FEATURES

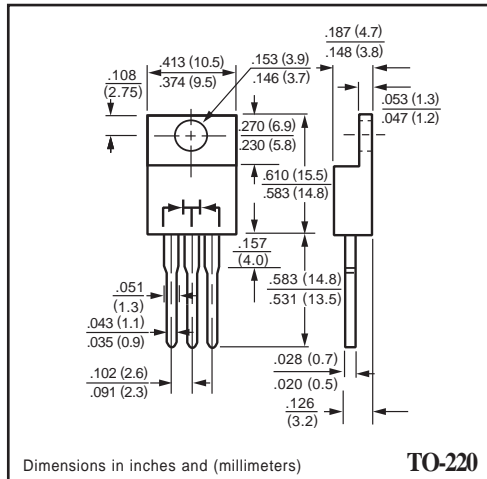
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Dual rectifier construction, positive centertap
- * Glass passivated chip junctions
- * Low power loss
- * Low forward voltage, high current capability
- * High surge current capability
- * Fast recovery times for high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



TO-220



Dimensions in inches and (millimeters)

TO-220

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

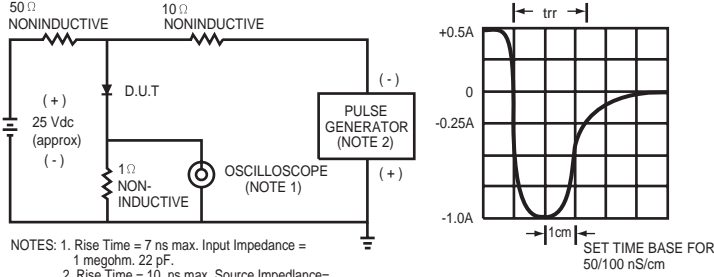
ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

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



NOTES: 1. Rise Time = 7 ns max. Input Impedance = 1 megohm, 22 pF.
2. Rise Time = 10 ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

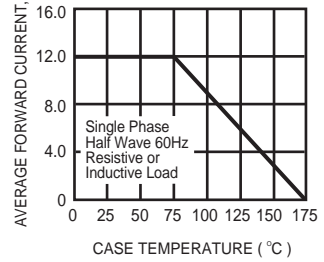


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

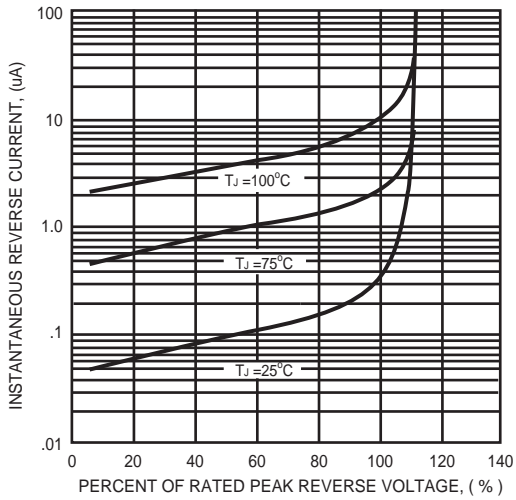


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

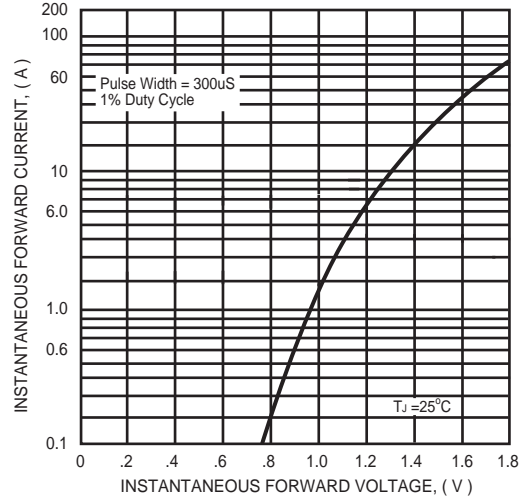


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

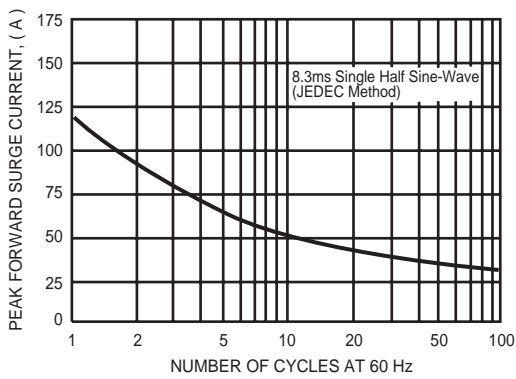


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

