CHENMKO ENTERPRISE CO.,LTD

ULTRA FAST RECTIFIER

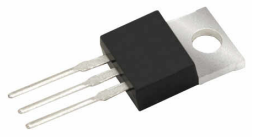
VOLTAGE RANGE 50 - 600 Volts CURRENT 20 Amperes

U20C05PT
THRU
U20C60PT

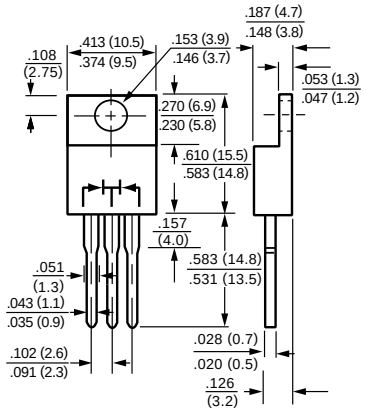
Lead free devices

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



TO-220



Dimensions in inches and (millimeters)

TO-220

MECHANICAL DATA

Case: JEDEC TO-220 molded plastic

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 RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	U20C05PT	U20C10PT	U20C15PT	U20C20PT	U20C30PT	U20C40PT	U20C50PT	U20C60PT	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	20.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200								Amps
Typical Junction capacitance per leg (NOTE 1)	C_J	120				70				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	2.2								°C / W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150								°C

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

CHARACTERISTICS		SYMBOL	U20C05PT	U20C10PT	U20C15PT	U20C20PT	U20C30PT	U20C40PT	U20C50PT	U20C60PT	UNITS
Maximum Instantaneous Forward Voltage at 10.0 A DC		V_F	0.975				1.30		1.50		Volts
Maximum DC reverse current at rated DC blocking voltage per leg	T_C = 25°C	I_R	10.0								uAmps
	T_C = 100°C		500								
Maximum reverse recovery time (NOTE 3) per leg		trr	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.

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RATING CHARACTERISTIC CURVES (U20C05PT THRU U20C60PT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

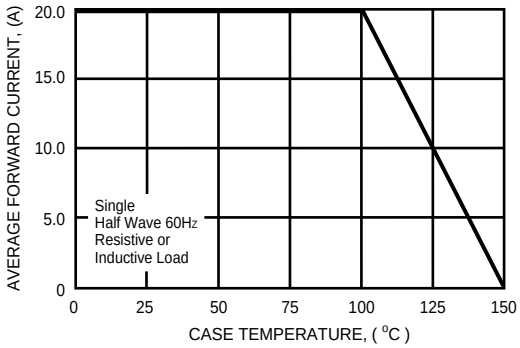

FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

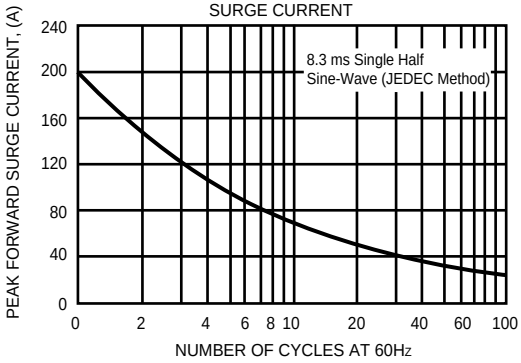

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

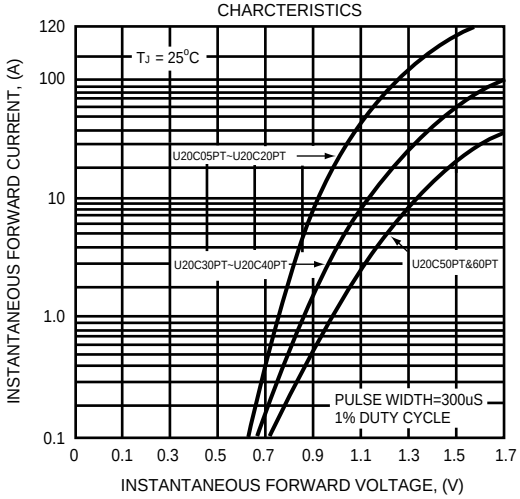

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

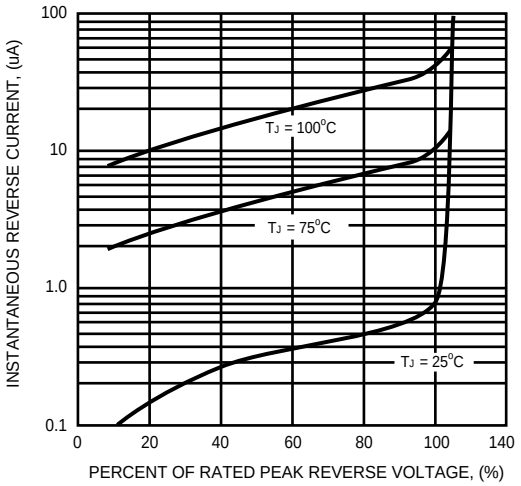

FIG. 5 - TYPICAL JUNCTION CAPACITANCE