CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

MCL31PT

THRU

MCL37PT

Lead free devices

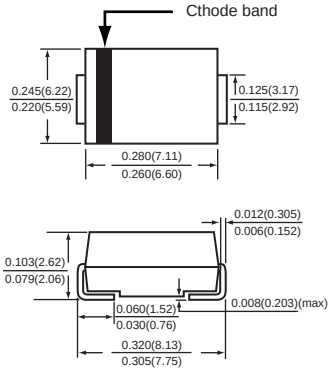
FEATURES

* Low leakage current
* Ideal for surface mounted applications
* Metallurgically bonded construction
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Glass passivated junction
* High temperature soldering guaranteed : 260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC SMC molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Weight: 0.003 ounces, 0.093 gram

SMC



Dimensions in inches and (millimeters)

SMC

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	MCL31PT	MCL32PT	MCL33PT	MCL34PT	MCL35PT	MCL36PT	MCL37PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	I_O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60							Amps
Typical Junction Capacitance (Note)	C_J	20							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

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

CHARACTERISTICS	SYMBOL	MCL31PT	MCL32PT	MCL33PT	MCL34PT	MCL35PT	MCL36PT	MCL37PT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	V_F	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at T_A = 25°C	I_R	5.0							uAmps
Maximum Full Load Reverse Current Average, Full Cycle at T_A = 75°C		50							uAmps

NOTES : Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

RATING CHARACTERISTIC CURVES (MCL31PT THRU MCL37PT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

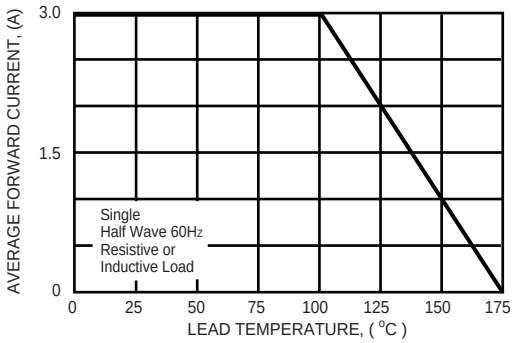


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

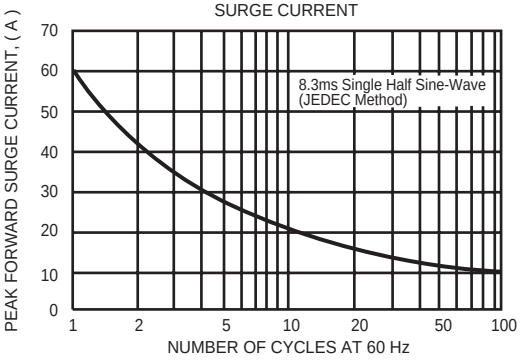


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

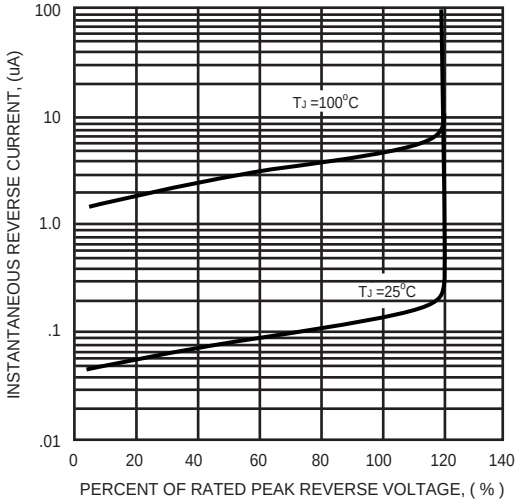


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

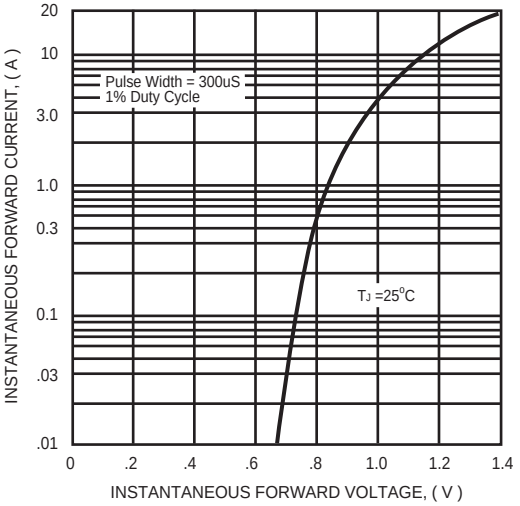


FIG. 5 - TYPICAL JUNCTION CAPACITANCE