



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

MCL31GP

THRU

MCL37GP

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

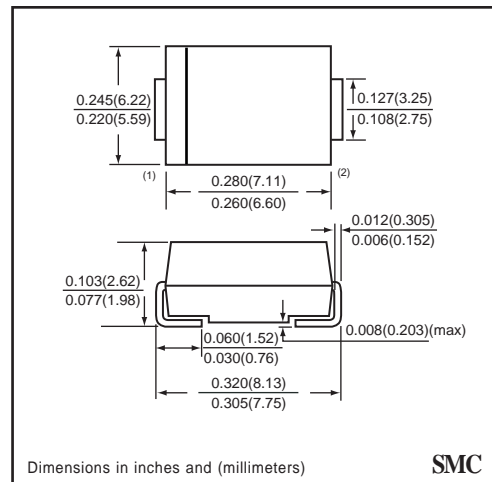
MECHANICAL DATA

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



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	MCL31GP	MCL32GF	MCL33GP	MCL34GP	MCL35GP	MCL36GP	MCL37GP	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	Io	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	60							Amps
Typical Junction Capacitance (Note)	CJ	20							pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to +175							°C

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

CHARACTERISTICS	SYMBOL	MCL31GP	MCL32GF	MCL33GP	MCL34GP	MCL35GP	MCL36GP	MCL37GP	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	VF	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	IR	5.0							uAmps
Maximum Full Load Reverse Current Average, Full Cycle at TA = 75°C		50							uAmps

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

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RATING CHARACTERISTIC CURVES (MCL31GP THRU MCL37GP)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

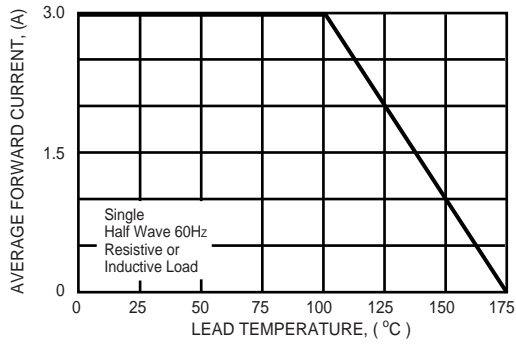


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

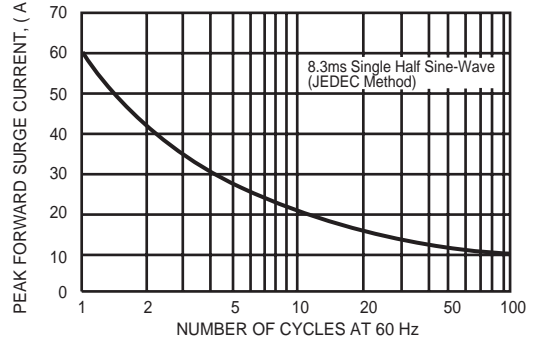


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

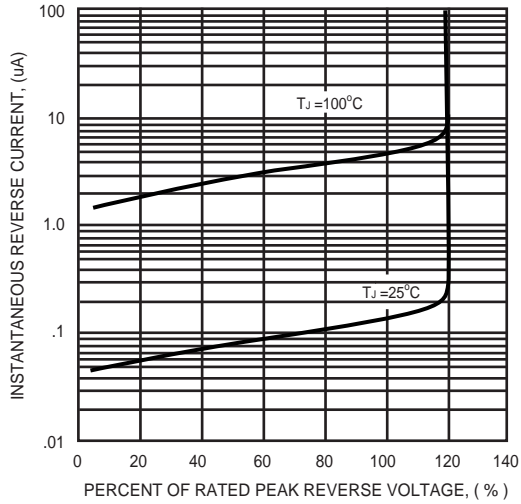


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

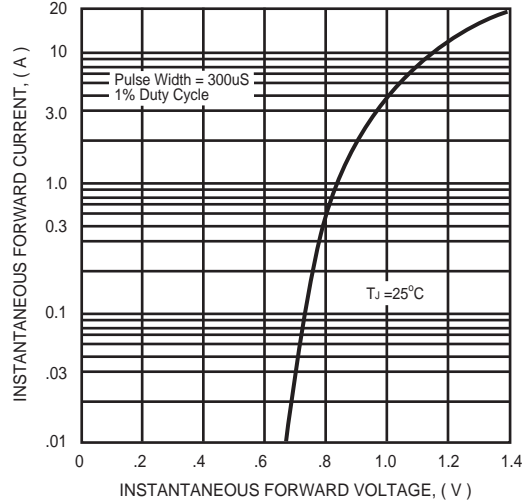


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

