



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

MCL51PT

THRU

MCL57PT

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

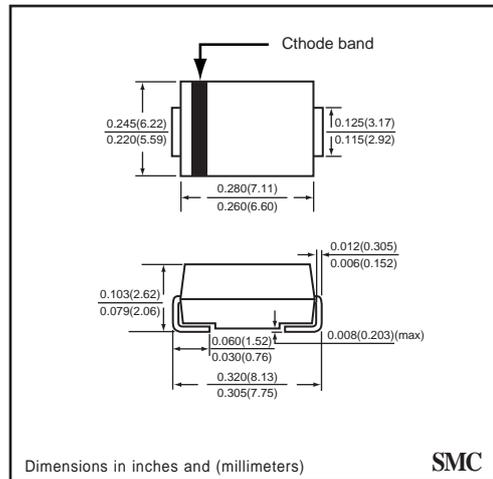
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Weight: 0.003 ounces, 0.093 gram

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	MCL51PT	MCL52PT	MCL53PT	MCL54PT	MCL55PT	MCL56PT	MCL57PT	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	5.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	100							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 TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MCL51PT	MCL52PT	MCL53PT	MCL54PT	MCL55PT	MCL56PT	MCL57PT	UNITS
Maximum Instantaneous Forward Voltage at 5.0 A DC	V _F	1.15							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	I _R	10							uAmps
Maximum Full Load Reverse Current Average, Full Cycle at TA = 75°C		100							uAmps

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

2004-10

RATING CHARACTERISTIC CURVES (MCL51PT THRU MCL57PT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

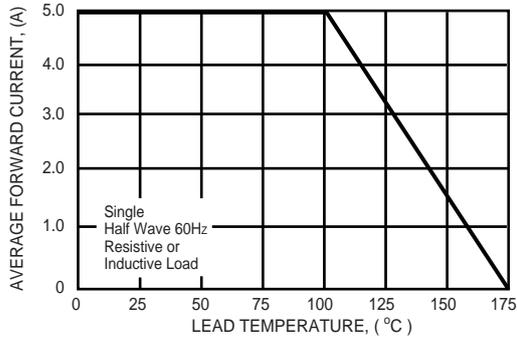


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

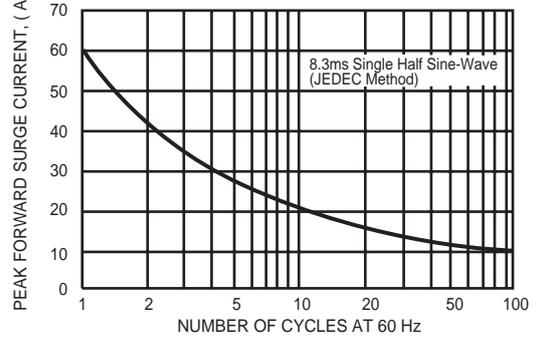


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

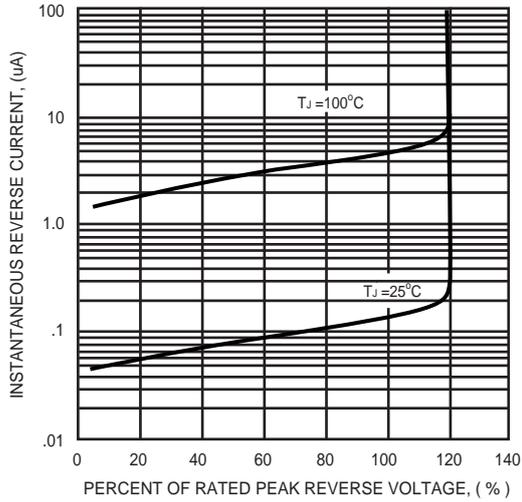


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

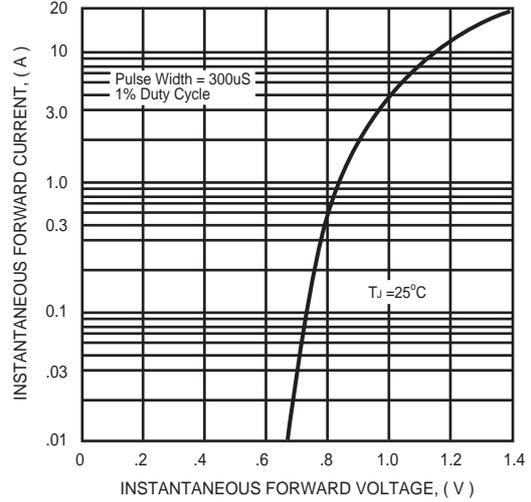


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

