



**CHENMKO ENTERPRISE CO.,LTD**

**SURFACE MOUNT**

**SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 - 40 Volts CURRENT 2.0 Ampere**

**SMD22PT**

**THRU**

**SMD24PT**

*Lead free devices*

**FEATURES**

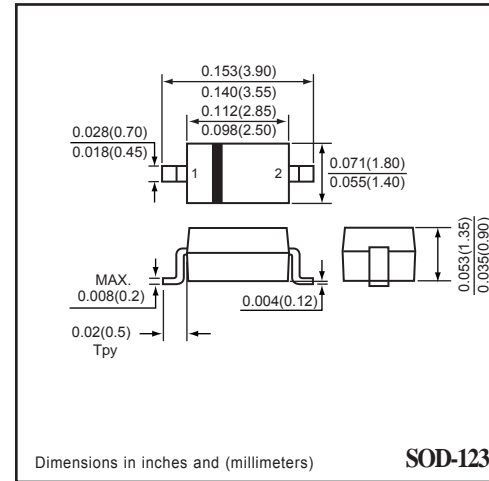
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* For surface mounted applications
- \* Low profile package
- \* Built-in strain relief
- \* Metal silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* High surge capability
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

**MECHANICAL DATA**

**Case:** JEDEC SOD-123 molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Weight:** 0.001 ounce 0.032 gram



**SOD-123**



Dimensions in inches and (millimeters)

**SOD-123**

**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	SMD22PT	SMD23PT	SMD24PT	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	Volts
Maximum RMS Voltage	VRMS	14	21	28	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	Volts
Maximum Average Forward Rectified Current at TL = 45°C	Io		2.0		Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) TL = 45°C	IFSM		40		Amps
Typical Junction Capacitance (Note 2)	CJ		210		pF
Typical Thermal Resistance (Note 1)	R θJL		80		°C / W
Storage and Operating Temperature Range	TJ, TSTG		-65 to +125		°C

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

CHARACTERISTICS	SYMBOL	SMD22PT	SMD23PT	SMD24PT	UNITS
Maximum Instantaneous Forward Voltage at 0.5 A DC	VF	0.385	0.400	0.420	Volts
Maximum Instantaneous Forward Voltage at 1.0 A DC	VF	0.450	0.470	0.500	Volts
Maximum Instantaneous Forward Voltage at 2.0 A DC	VF	0.650	0.680	0.720	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C		1.0		mAmps
	@ TA = 100°C		10		mAmps

NOTES : 1. Thermal Resistance ( Junction to Lead ) : PC Board Mounted on 0.2 X 0.2" ( 5 X 5mm ) copper pad area.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

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## RATING CHARACTERISTIC CURVES ( SMD22PT THRU SMD24PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

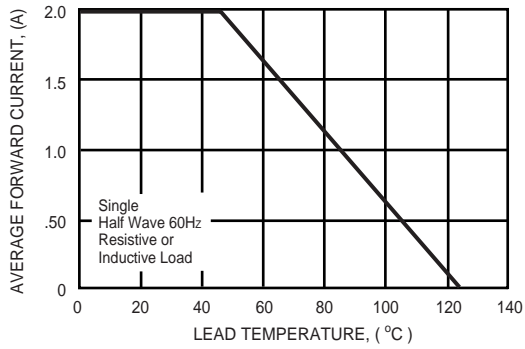


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

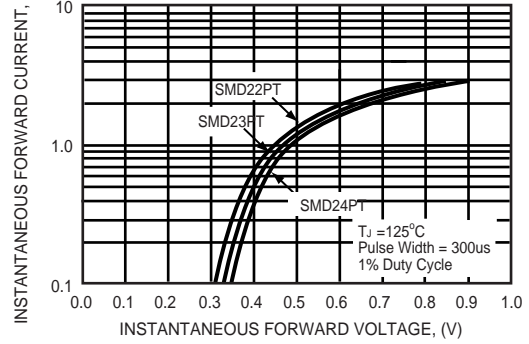


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

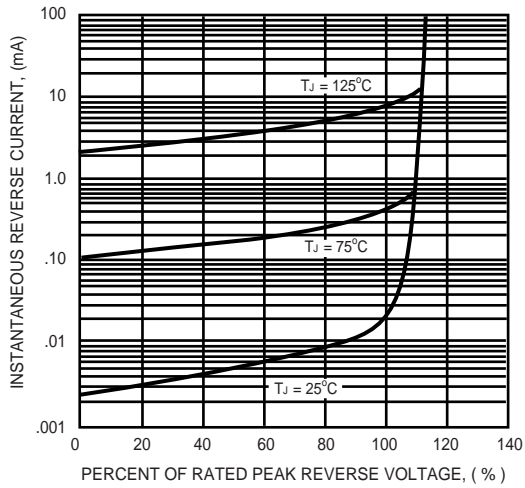


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

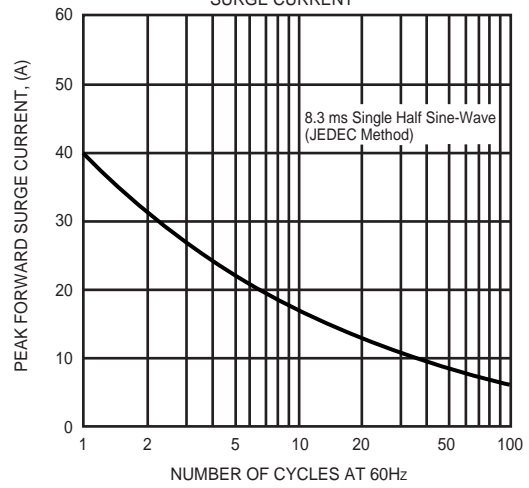


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

