



**CHENMKO ENTERPRISE CO.,LTD**

**S50D30PT  
THRU  
S50D60PT**

*Lead free devices*

**SCHOTTKY BARRIER RECTIFIER**

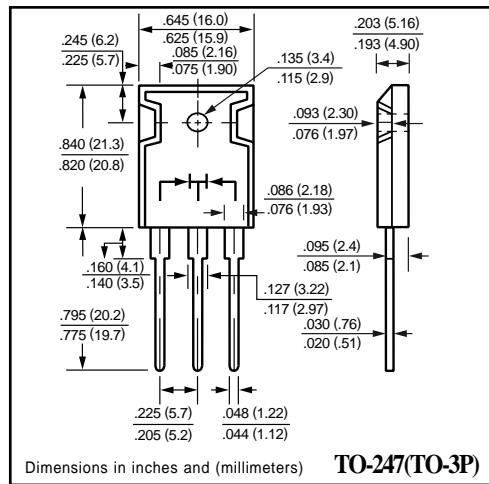
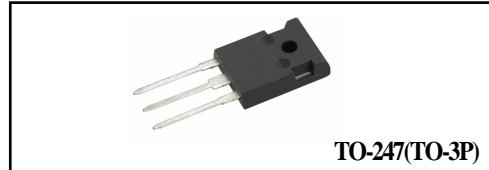
VOLTAGE RANGE 30 - 60 Volts CURRENT 50 Amperes

**FEATURES**

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Metal Silicon junction, majority carrier conduction
- \* Low power loss,high efficiency
- \* High current capability, low forward voltage drop
- \* Guardring for overvoltage protection
- \* For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering in accordance with CECC 802 / Reflow guaranteed

**MECHANICAL DATA**

**Case:** JEDEC TO-247 molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 5.6 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 RATINGS** ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	S50D30PT	S50D35PT	S50D40PT	S50D45PT	S50D50PT	S50D60PT	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	30	35	40	45	50	60	Volts
Maximum RMS Voltage	VRMS	21	24	28	31	35	42	Volts
Maximum DC Blocking Voltage	VDC	30	35	40	45	50	60	Volts
Maximum Average Forward Rectified Current	Io	50.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	400						Amps
Typical thermal resistance per leg ( NOTE 1 )	R θJC	0.8						°C / W
Operating and Storage Temperature Range	TJ, TSTG	-60 to +125						°C

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

CHARACTERISTICS	SYMBOL	S50D30PT	S50D35PT	S50D40PT	S50D45PT	S50D50PT	S50D60PT	UNITS
Maximum Instantaneous Forward Voltage at 25.0 A DC	VF	0.60				0.70		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg ( NOTE 2 )	Tc = 25°C	10.0						mAmps
	Tc = 100°C	150						mAmps

- NOTES : 1. Thermal resistance from junction to case per leg  
 2. Pulse test : 300 us pulse width, 1% duty cycle  
 3. Suffix " C " = Common Cathod, Suffix " A " = Common Anode, Suffix " D " = Double.

## RATING CHARACTERISTIC CURVES ( S50D30PT THRU S50D60PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

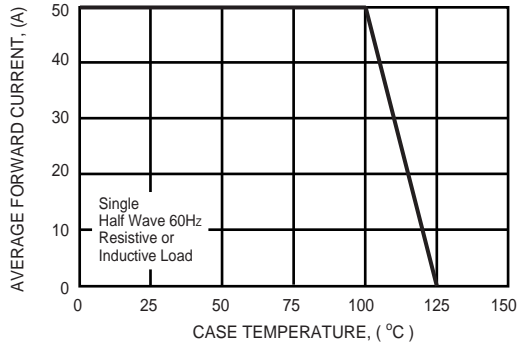


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

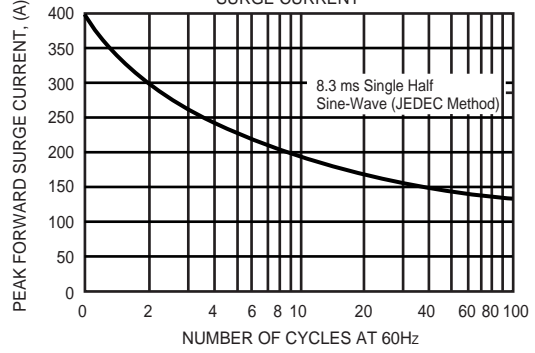


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

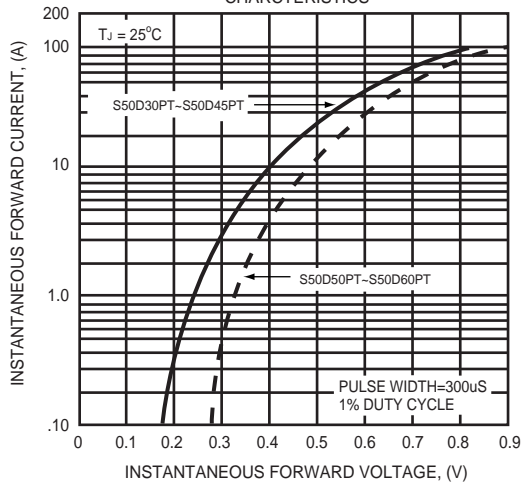


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

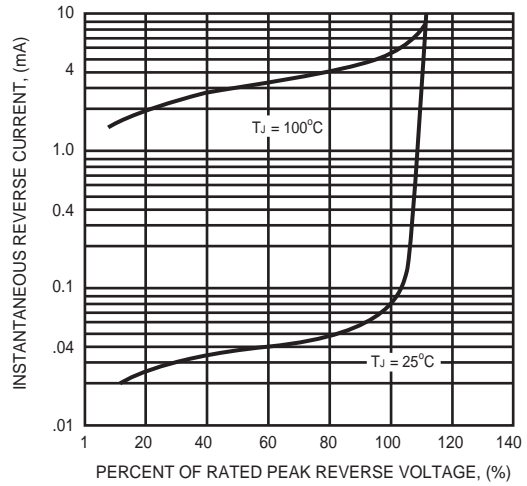


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

