



**CHENMKO ENTERPRISE CO.,LTD**

*Lead free devices*

**SCHOTTKY BARRIER RECTIFIER**

VOLTAGE RANGE 30 - 60 Volts CURRENT 20 Amperes

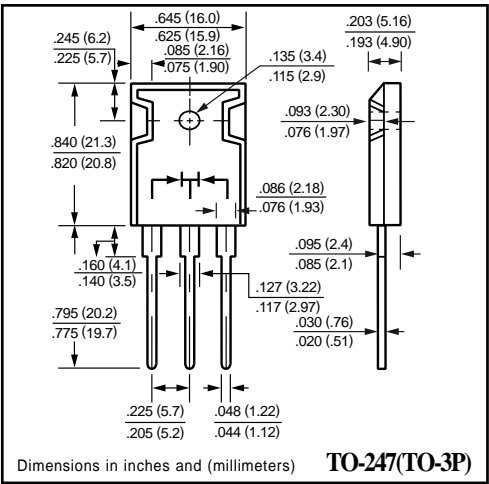
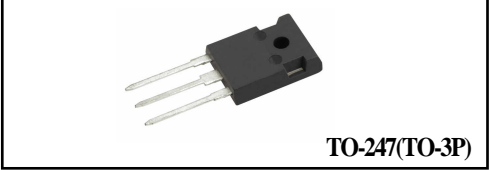
**S20D30PT  
THRU  
S20D60PT**

**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	S20D30PT	S20D35PT	S20D40PT	S20D45PT	S20D50PT	S20D60PT	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	20.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	200						Amps
Typical thermal resistance per leg ( NOTE 1 )	R θJC	2.2						°C / W
Operating and Storage Temperature Range	TJ, TSTG	-60 to +125						°C

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

CHARACTERISTICS	SYMBOL	S20D30PT	S20D35PT	S20D40PT	S20D45PT	S20D50PT	S20D60PT	UNITS
Maximum Instantaneous Forward Voltage at 10.0 A DC	VF	0.55				0.65		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg ( NOTE 2 )	Tc = 25°C	5.0						mAmps
	Tc = 100°C	50						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 ( S20D30PT THRU S20D60PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

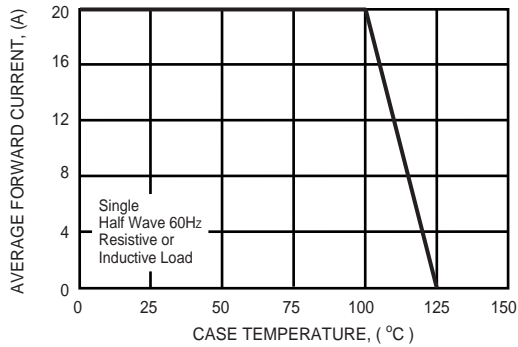


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

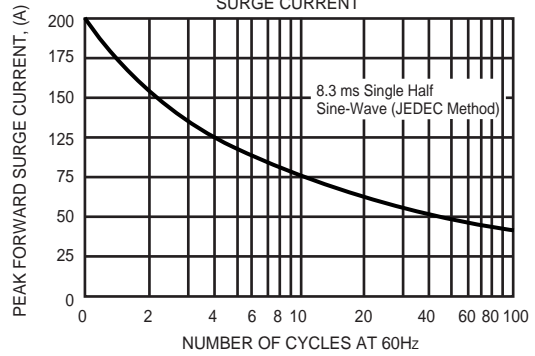


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

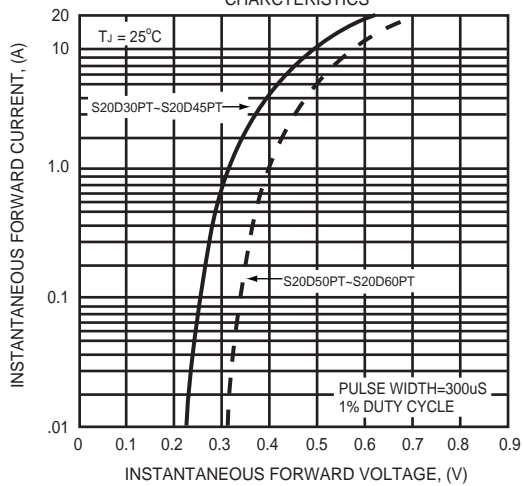


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

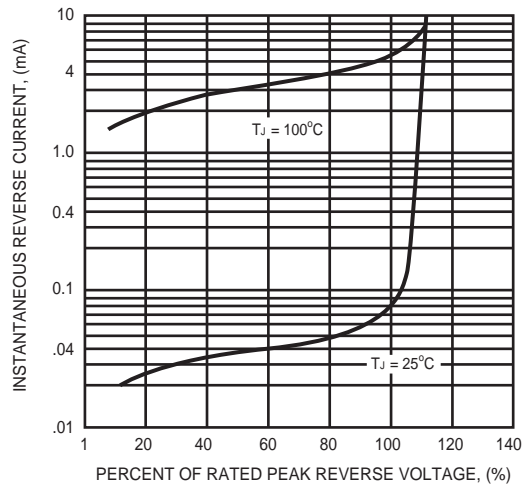


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

