



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SCHOTTKY BARRIER RECTIFIER**

VOLTAGE RANGE 30 - 60 Volts CURRENT 5 Amperes

**S05A30GP**

**THRU**

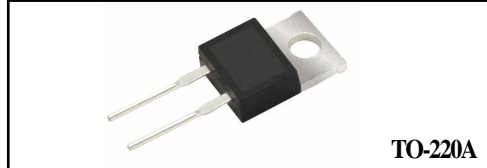
**S05A60GP**

**FEATURES**

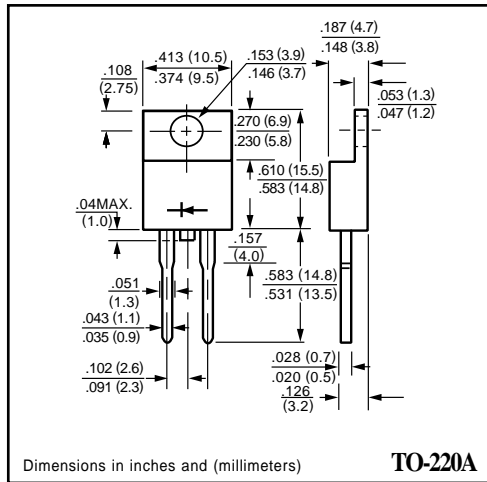
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Metal Silicon junction, majority carrier conduction
- \* Low power loss,high efficiency
- \* High current capability, low forward voltage drop
- \* Guardring for overvoltage protection
- \* For use in low voltage,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

**MECHANICAL DATA**

**Case:** JEDEC TO-220A molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 1.81 grams ( Approximately )



**TO-220A**



**TO-220A**

**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	S05A30GP	S05A35GP	S05A40GP	S05A45GP	S05A50GP	S05A60GP	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	5.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125						Amps
Typical thermal resistance per leg ( NOTE 1 )	R θJC	5.0						°C / W
Operating and Storage Temperature Range	TJ, TSTG	-60 to +125						°C

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

CHARACTERISTICS	SYMBOL	S05A30GP	S05A35GP	S05A40GP	S05A45GP	S05A50GP	S05A60GP	UNITS
Maximum Instantaneous Forward Voltage at 5.0 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 " P " = Case Positive, Suffix " R " = Case Negative.

## RATING CHARACTERISTIC CURVES ( S05A30GP THRU S05A60GP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

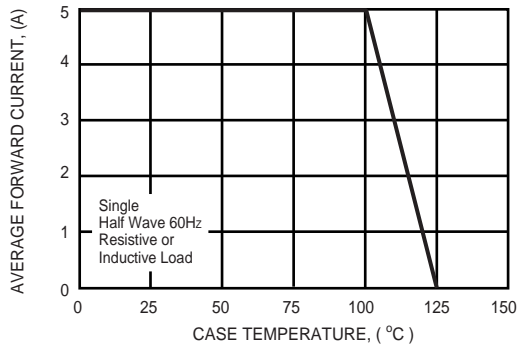


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

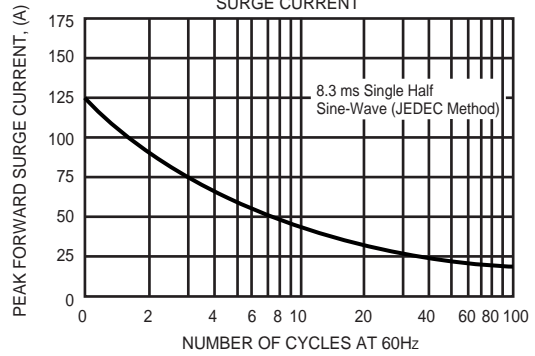


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

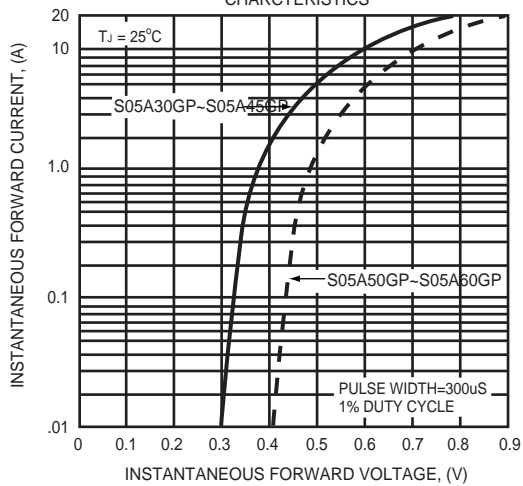


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

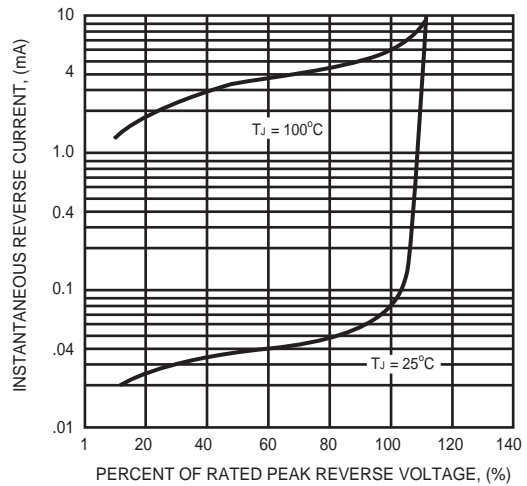


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

