# CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

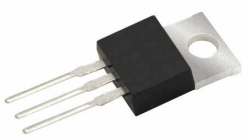
## SCHOTTKY BARRIER RECTIFIER

*VOLTAGE RANGE 30 - 60 Volts  CURRENT 20 Amperes*

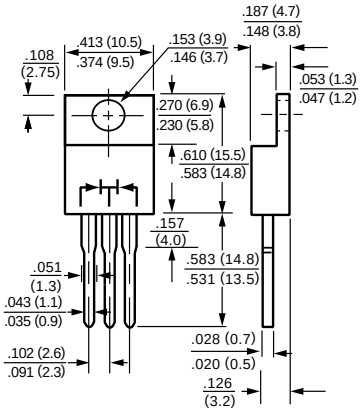
**S20C30GP**
**THRU**
**S20C60GP**

### FEATURES

* 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



TO-220




Dimensions in inches and (millimeters)

TO-220

### 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 RATINGES** ( At $T_A$ = 25°C unless otherwise noted )

| RATINGS | SYMBOL | S20C30GP | S20C35GP | S20C40GP | S20C45GP | S20C50GP | S20C60GP | UNITS |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 30 | 35 | 40 | 45 | 50 | 60 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 21 | 24 | 28 | 31 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 30 | 35 | 40 | 45 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current | $I_O$ | 20.0 | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 200 | | | | | | Amps |
| Typical thermal resistance per leg ( NOTE 1 ) | $R_{\theta JC}$ | 2.2 | | | | | | °C / W |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -60 to +125 | | | | | | °C |

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

| CHARACTERISTICS | | SYMBOL | S20C30GP | S20C35GP | S20C40GP | S20C45GP | S20C50GP | S20C60GP | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage at 10.0 A DC | | $V_F$ | 0.55 | | | | 0.65 | | Volts |
| Maximum instantaneous reverse current at | $T_C$ = 25°C | $I_R$ | 5.0 | | | | | | mAmps |
| rated DC blocking voltage per leg ( NOTE 2 ) | $T_C$ = 100°C | | 50 | | | | | | mAmps |

NOTES : 1. Thermal resistance from junction to case per leg
2. Pulse test : 300 us pulse width, 1% duty cycle

# RATING CHARACTERISTIC CURVES ( S20C30GP THRU S20C60GP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

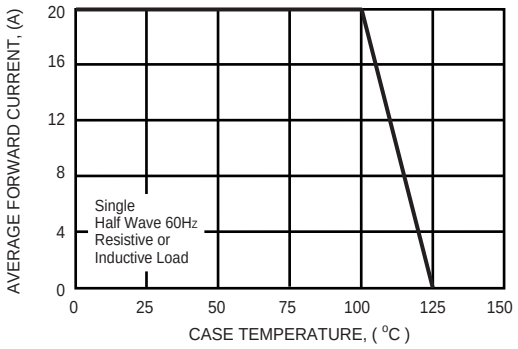



FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

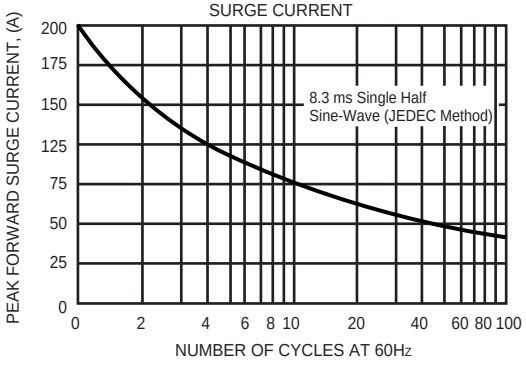



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

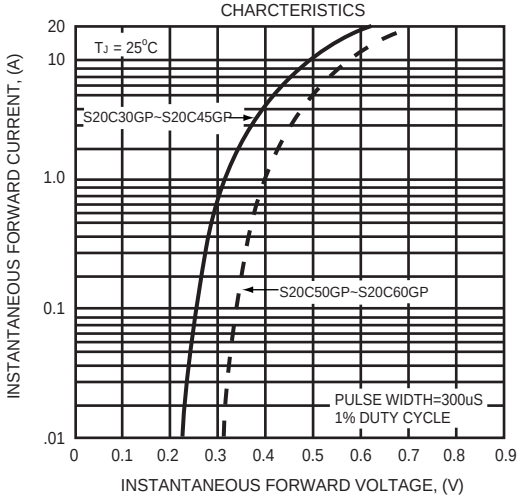



FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

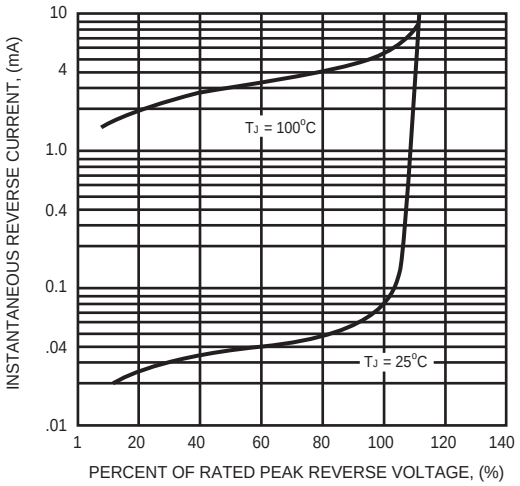



FIG. 5 - TYPICAL JUNCTION CAPACITANCE