



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SCHOTTKY BARRIER RECTIFIER**

VOLTAGE RANGE 20 - 40 Volts CURRENT 10 Amperes

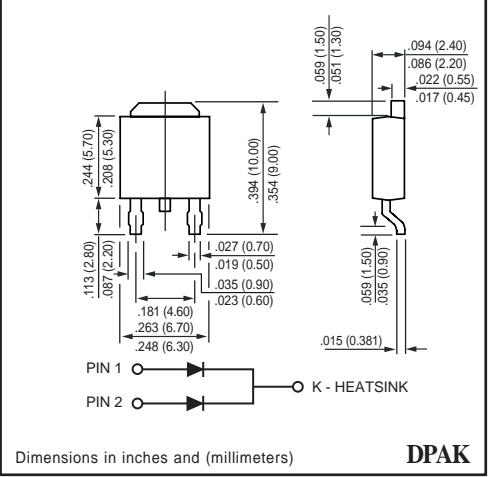
**S10P20GP  
THRU  
S10P40GP**

**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 DPAK molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 1.7 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                            | S10P20GP    | S10P30GP | S10P40GP | UNITS  |
|---|-----------------------------------|-------------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                  | 20          | 30       | 40       | Volts  |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 14          | 21       | 28       | Volts  |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                   | 20          | 30       | 40       | Volts  |
| Maximum Average Forward Rectified Current   | I <sub>O</sub>                    | 10.0        |          |          | Amps   |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 150         |          |          | Amps   |
| Typical thermal resistance per leg ( NOTE 1 )   | R <sub>θJC</sub>                  | 3.0         |          |          | °C / W |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -40 to +125 |          |          | °C     |

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

| CHARACTERISTICS   | SYMBOL                 | S10P20GP       | S10P30GP | S10P40GP | UNITS |
|---|------------------------|----------------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 5.0 A DC                                     | V <sub>F</sub>         | 0.55           |          |          | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage per leg ( NOTE 2 ) | T <sub>C</sub> = 25°C  | I <sub>R</sub> | 1.0      |          | mAmps |
|   | T <sub>C</sub> = 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 ( S10P20GP THRU S10P40GP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

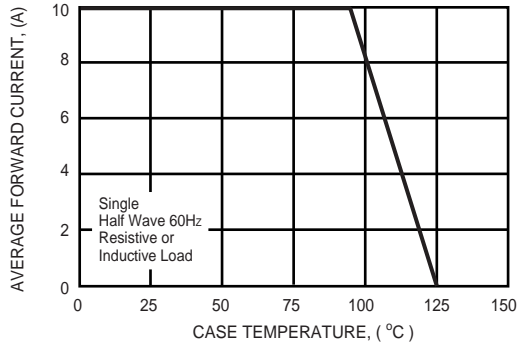


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

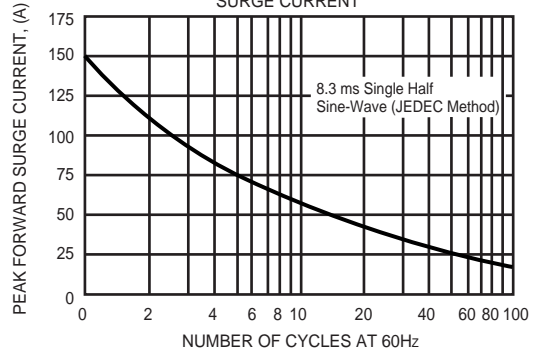


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

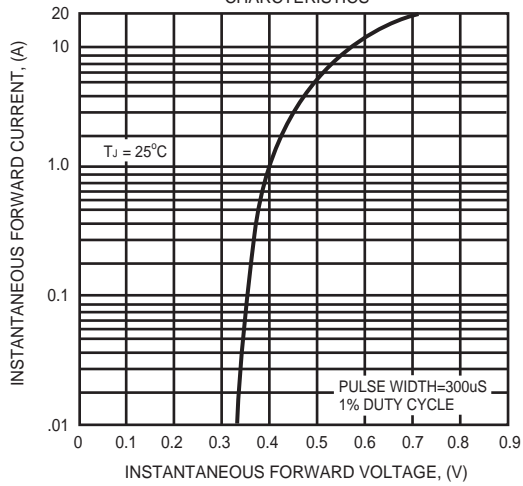


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

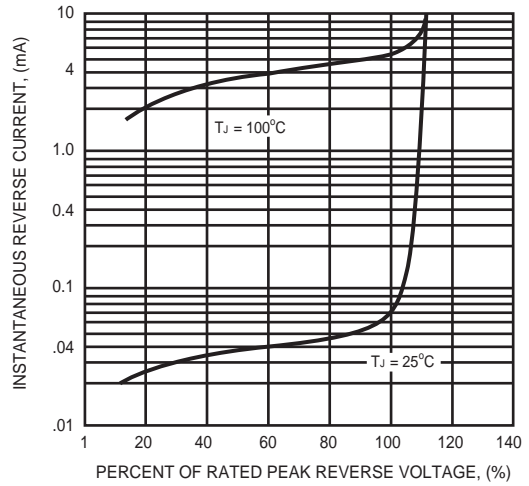


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

