



# CHENMKO ENTERPRISE CO.,LTD

**S16S30PT  
THRU  
S16S45PT**

## SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 30 - 45 Volts CURRENT 16 Amperes

Lead free devices

### FEATURES

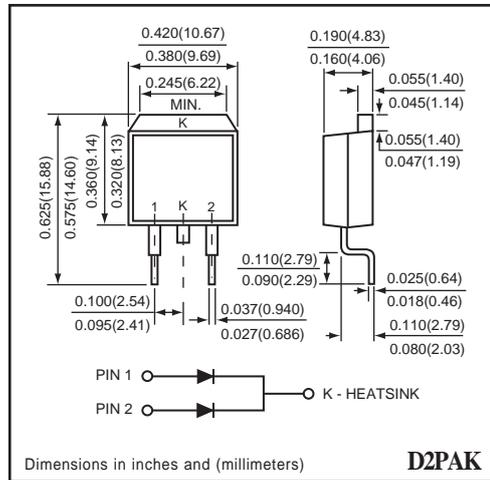
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Metal Silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* Guardring for overvoltage protection
- \* For use in low voltage,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

### MECHANICAL DATA

**Case:** JEDEC D2PAK molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 0.08 ounces, 2.24 grams

### 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	S16S30PT	S16S35PT	S16S40PT	S16S45PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	30	35	40	45	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	21	24	28	31	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	30	35	40	45	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	16.0				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>	2.0				°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	S16S30PT	S16S35PT	S16S40PT	S16S45PT	UNITS
Maximum Instantaneous Forward Voltage at 8.0 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	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 ( S16S30PT THRU S16S45PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

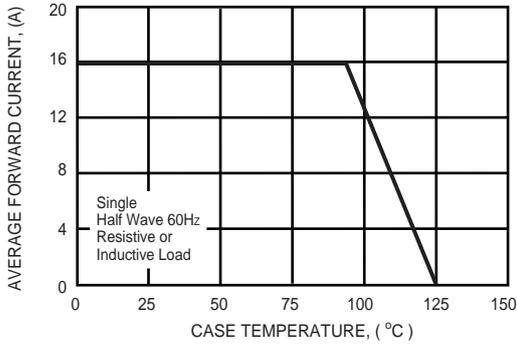


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

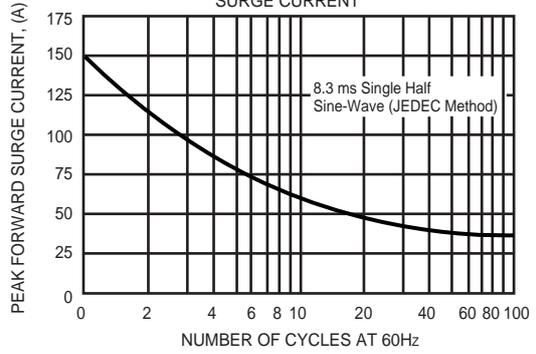


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

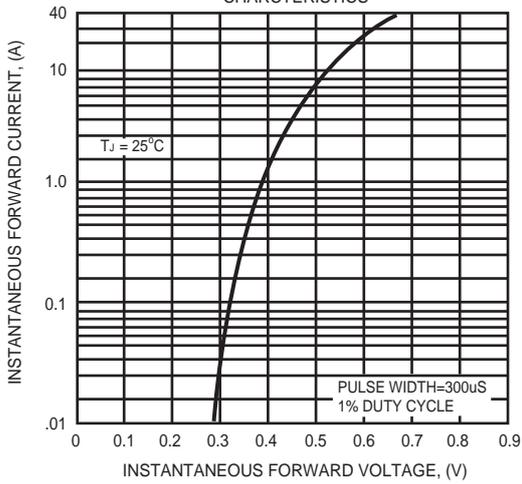


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

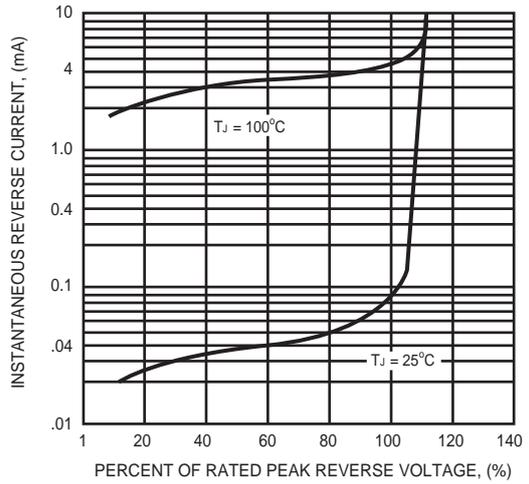


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

