



# CHENMKO ENTERPRISE CO.,LTD

**S20C45FGP**

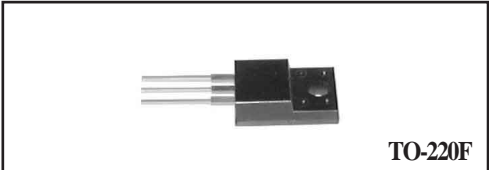
*Halogens free devices*

## SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 45 Volts CURRENT 20 Amperes

**FEATURES**

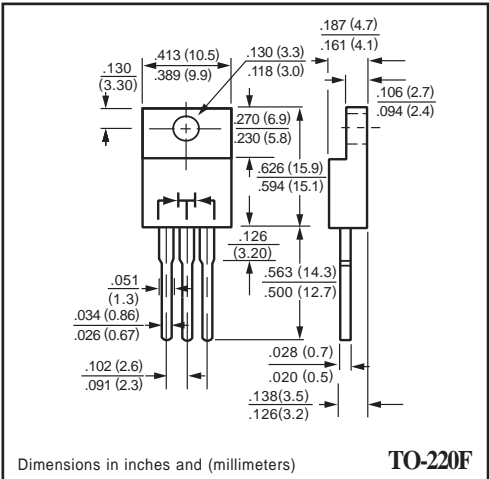
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Metal Silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* Guardring for overvoltage protection
- \* For use in low voltage,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



TO-220F

**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	S20C45FGP	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	45	Volts
Maximum RMS Voltage	VRMS	32	Volts
Maximum DC Blocking Voltage	VDC	45	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	150	Amps
Typical thermal resistance per leg ( NOTE 1 )	R θJC	2.0	°C / W
Operating and Storage Temperature Range	TJ, TSTG	-40 to +125	°C

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

CHARACTERISTICS	SYMBOL	S20C45FGP	UNITS
Maximum Instantaneous Forward Voltage at 10.0 A DC	VF	0.55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg ( NOTE 2 )	Tc = 25°C	1.0	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

## RATING CHARACTERISTIC CURVES ( S20C45FGP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

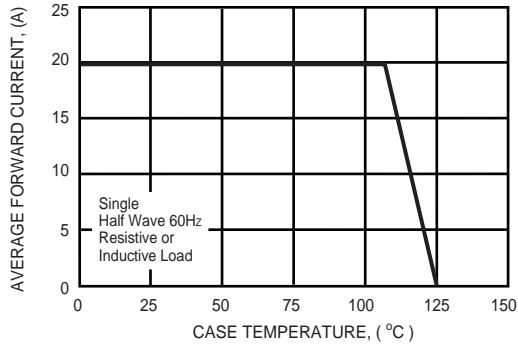


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

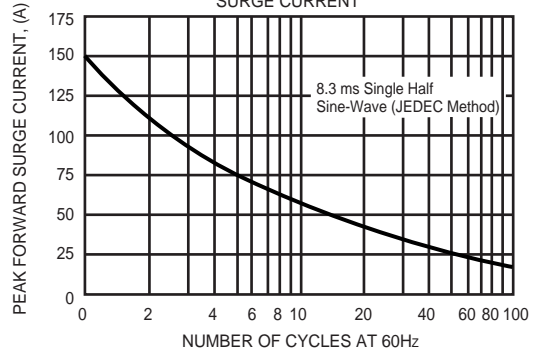


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

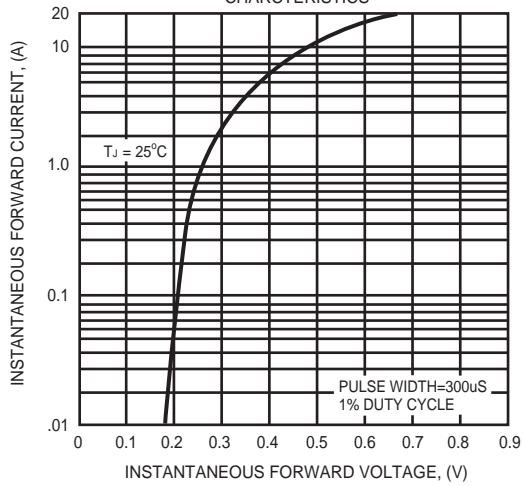


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

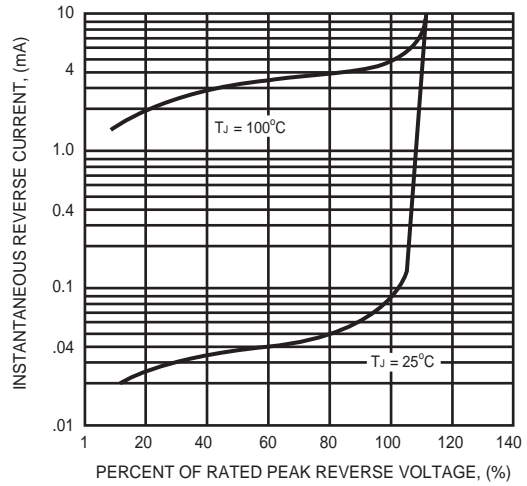


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

