



# CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT GLASS PASSIVATED  
HIGH EFFICIENCY SILICON RECTIFIER**

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

**HSM11SGP  
THRU  
HSM18SGP**

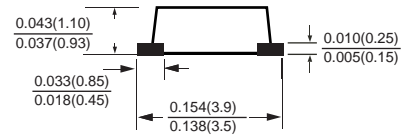
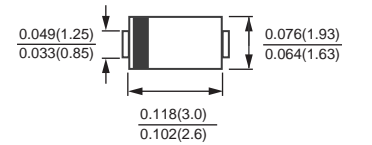
## FEATURES

- \*Small surface mounting type. (SOD-123S)
- \* Low forward voltage, high current capability
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Glass passivated junction
- \* High temperature soldering guaranteed :  
260°C/10 seconds at terminals



SOD-123S

## CIRCUIT



Dimensions in inches and (millimeters)

SOD-123S

## MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	HSM11SGP	HSM12SGP	HSM13SGP	HSM14SGP	HSM15SGP	HSM16SGP	HSM17SGP	HSM18SGP	UNITS	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	Volts	
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current TL = 110°C	Io	1.0								Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30								Amps	
Typical Junction Capacitance (Note 1)	Cj	15					12				pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150								°C	

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

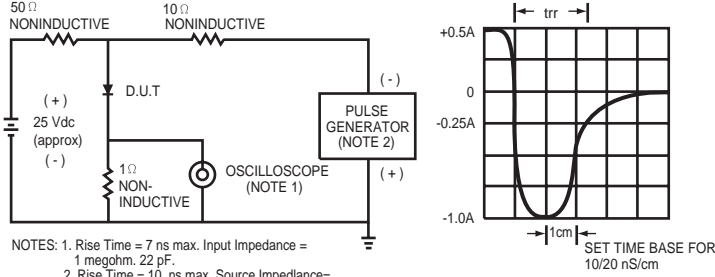
CHARACTERISTICS	SYMBOL	HSM11SGP	HSM12SGP	HSM13SGP	HSM14SGP	HSM15SGP	HSM16SGP	HSM17SGP	HSM18SGP	UNITS	
Maximum Instantaneous Forward Voltage at 1.0 A DC	VF	1.0			1.3	1.5	1.7			Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	IR	5.0								uAmps	
Maximum Full Load Reverse Current Average, Full Cycle at TA = 55°C	IR	100								uAmps	
Maximum Reverse Recovery Time (Note 2)	trr	50					70				nSec

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
2. Test Conditions : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A

2004-07

# RATING CHARACTERISTIC CURVES ( HSM11SGP THRU HSM18SGP )

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7 ns max. Input Impedance = 1 megohm. 22 pF.  
2. Rise Time = 10 ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

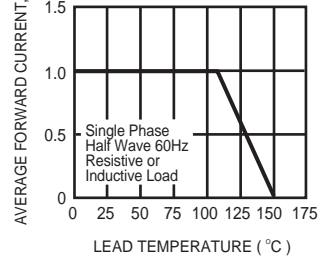


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

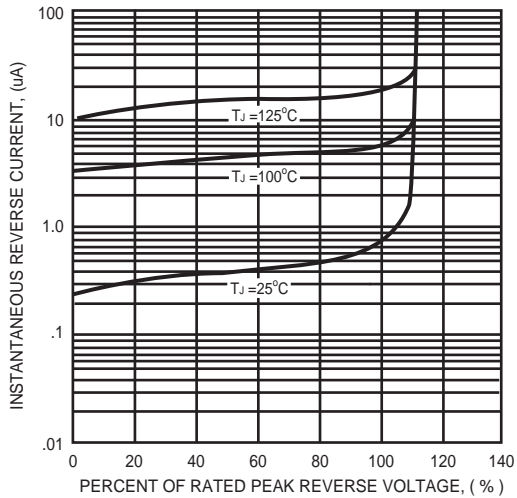


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

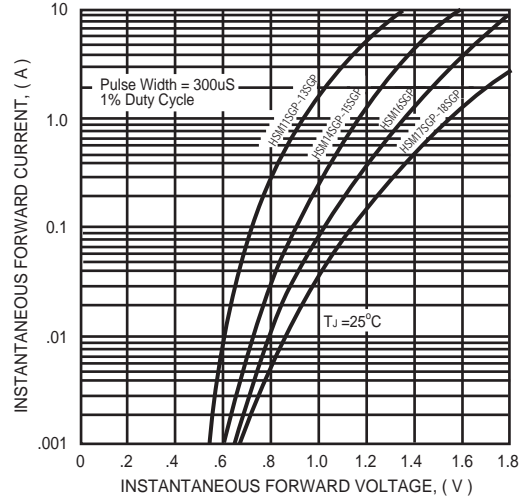


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

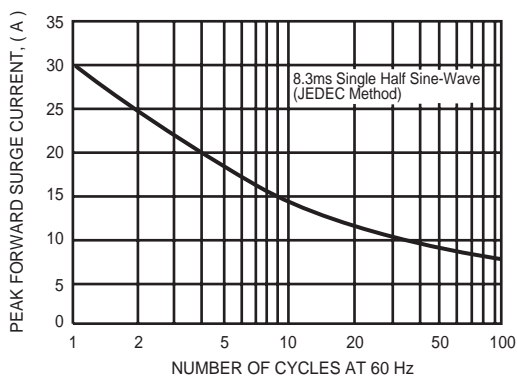


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

