



# CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

## SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

**HSM11GP**

**THRU**

**HSM18GP**

### FEATURES

- \* For surface mounted applications
- \* Low forward voltage, high current capability
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Glass passivated junction
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

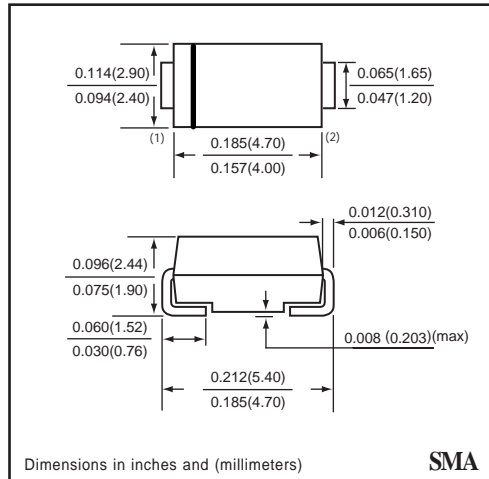
**Case:** JEDEC SMA molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Indicated by cathode band  
**Weight:** 0.002 ounces, 0.064 gram

### 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%.



SMA



Dimensions in inches and (millimeters)

SMA

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

RATINGS	SYMBOL	HSM11GP	HSM12GP	HSM13GP	HSM14GP	HSM15GP	HSM16GP	HSM17GP	HSM18GP	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

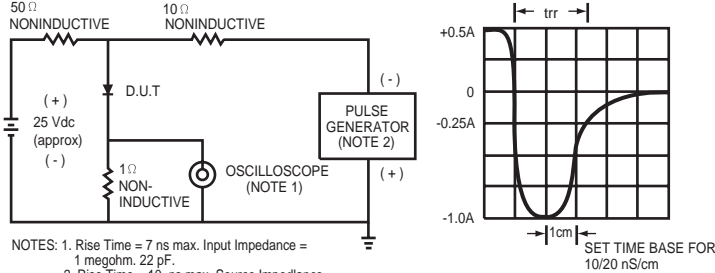
### ELECTRICAL CHARACTERISTICS ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	HSM11GP	HSM12GP	HSM13GP	HSM14GP	HSM15GP	HSM16GP	HSM17GP	HSM18GP	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		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

# RATING CHARACTERISTIC CURVES ( HSM11GP THRU HSM18GP )

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

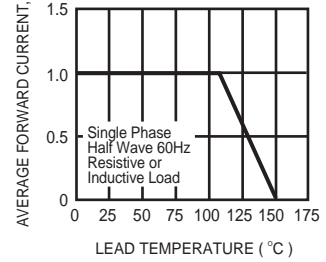


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

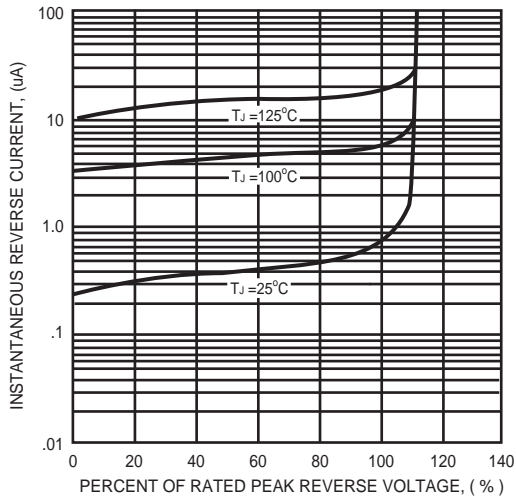


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

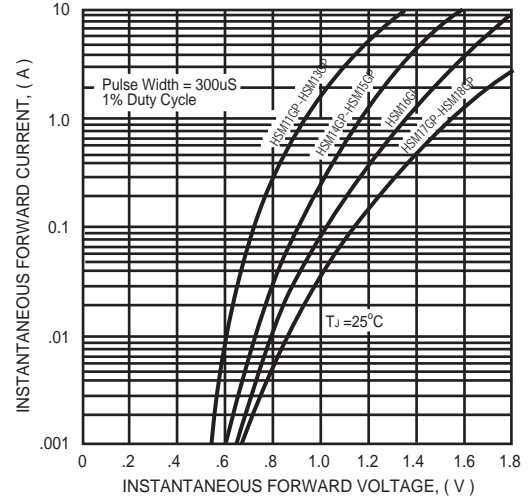


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

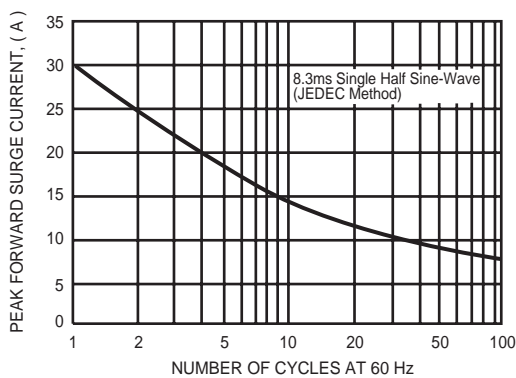


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

