



CHENMKO ENTERPRISE CO.,LTD

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

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

HSM11SPT

THRU

HSM18SPT

Lead free devices

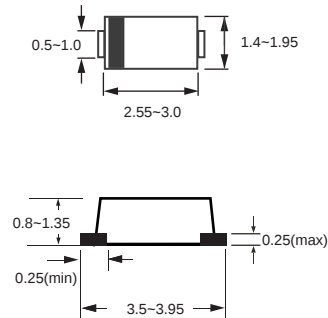
FEATURES

- *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 millimeters

SOD-123S

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	HSM11SPT	HSM12SPT	HSM13SPT	HSM14SPT	HSM15SPT	HSM16SPT	HSM17SPT	HSM18SPT	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current T _L = 110°C	I _O	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30								Amps
Typical Junction Capacitance (Note 1)	C _J	15						12		pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150								°C

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	HSM11RST	HSM12SPT	HSM13SPT	HSM14SPT	HSM15SPT	HSM16SPT	HSM17SPT	HSM18SPT	UNITS	
Maximum Instantaneous Forward Voltage at 1.0 A DC	V _F	1.0			1.3		1.5	1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage at T _A = 25°C	I _R	5.0									uAmps
Maximum Full Load Reverse Current Average, Full Cycle at T _A = 55°C	I _R	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 : $I_F = 0.5 \text{ A}$, $I_R = -1.0 \text{ A}$, $I_{RR} = -0.25 \text{ A}$

2004-07

RATING CHARACTERISTIC CURVES (HSM11SPT THRU HSM18SPT)

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

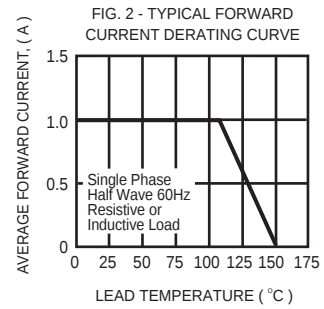
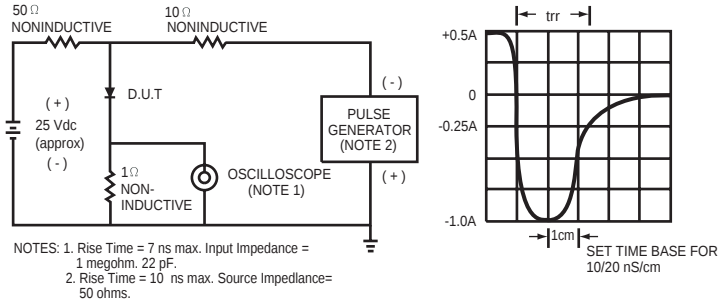


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

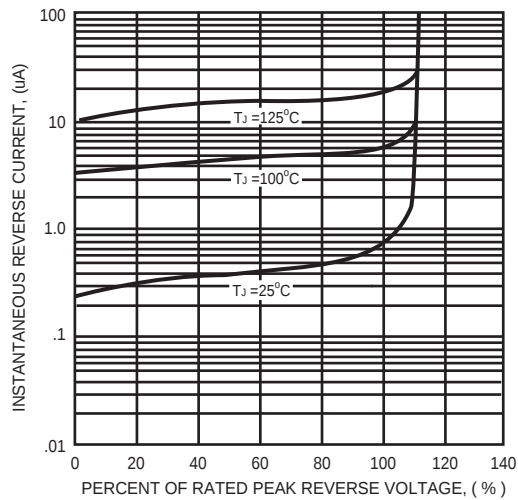


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

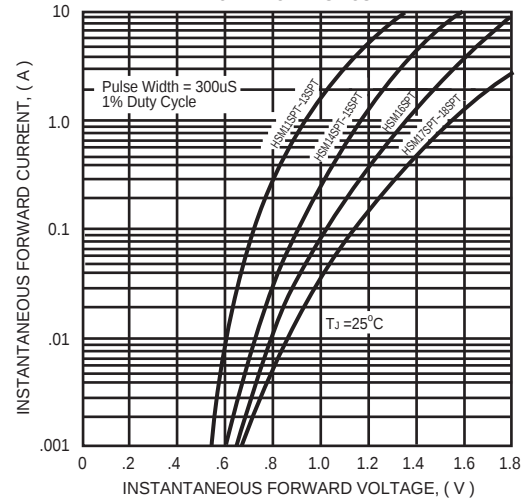


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

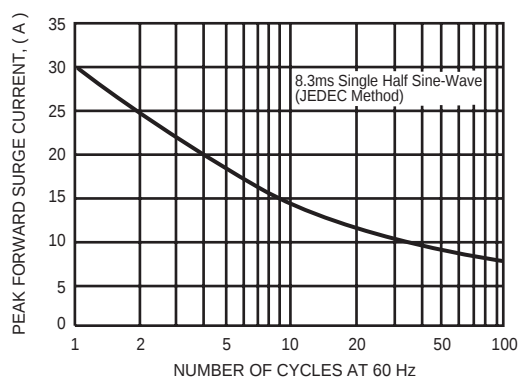


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

