

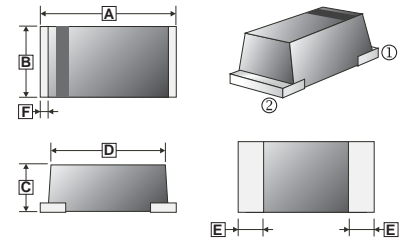
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

## FEATURES

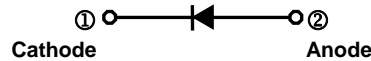
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application. in order to optimize board space.
- Low power loss and low forward voltage drop
- High surge, high current capability, and high efficiency.
- Fast switching for high efficiency.
- Guard-ring for overvoltage protection.
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction.

## SOD-123MH



## PACKAGING INFORMATION

- Small plastic SMD package.
- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.0110 g (Approximately)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.30	3.70	D	3.10 (MAX.)	
B	1.50	1.90	E	0.80 (TYP.)	
C	0.60	1.00	F	0.30 (TYP.)	

## MARKING CODE

Part Number	Marking Code	Part Number	Marking Code
SM120MH	12	SM160MH	16
SM130MH	13	SM180MH	18
SM140MH	14	SM1100MH	10
SM150MH	15		

## MAXIMUM RATINGS (T<sub>a</sub> = 25°C unless otherwise specified.)

PARAMETERS	SYMBOL	PART NUMBERS							UNITS	TESTING CONDITIONS
		SM 120 MH	SM 130 MH	SM 140 MH	SM 150 MH	SM 160 MH	SM 180 MH	SM 1100 MH		
Recurrent Peak Reverse Voltage (Max.)	V <sub>RRM</sub>	20	30	40	50	60	80	100	V	
RMS Voltage (Max.)	V <sub>RMS</sub>	14	21	28	35	42	56	70	V	
Reverse Voltage (Max.)	V <sub>R</sub>	20	30	40	50	60	80	100	V	
Forward Voltage (Max.)	V <sub>F</sub>	0.50		0.70		0.85			V	
Forward Rectified Current (Max.)	I <sub>O</sub>	1.0							A	See Fig.1
Peak Forward Surge Current	I <sub>FSM</sub>	25							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
Reverse Current (Max.)	I <sub>R</sub>	0.5							mA	V <sub>R</sub> =V <sub>RRM</sub> , T <sub>a</sub> =25°C
		10								V <sub>R</sub> =V <sub>RRM</sub> , T <sub>a</sub> =125°C
Thermal Resistance (Typ.)	R <sub>θJA</sub>	98							°C/W	Junction to ambient
Diode Junction Capacitance (Typ.)	C <sub>J</sub>	120							pF	f=1MHz and applied 4V DC reverse voltage
Storage and Operating Temperature Range	T <sub>STG</sub> , T <sub>J</sub>	-65 ~ 175, -55 to 125			-65 ~ 175, -55 to 150				°C	

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

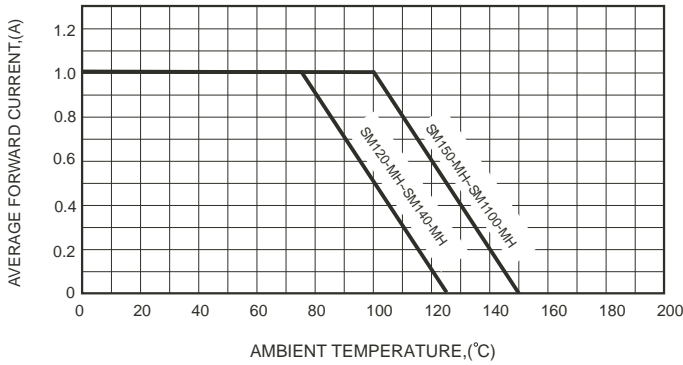


FIG.2-TYPICAL FORWARD CHARACTERISTICS

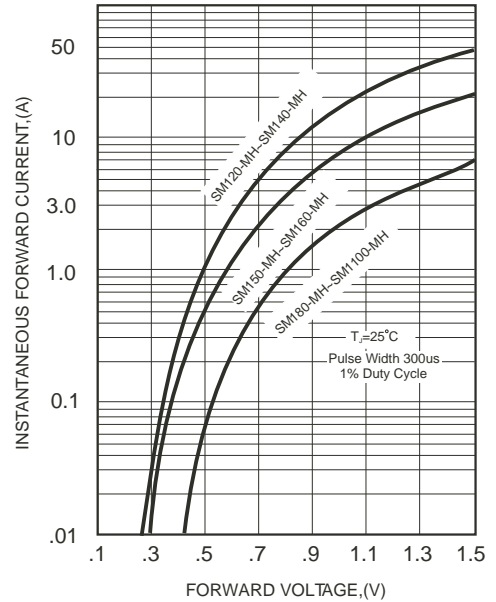


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

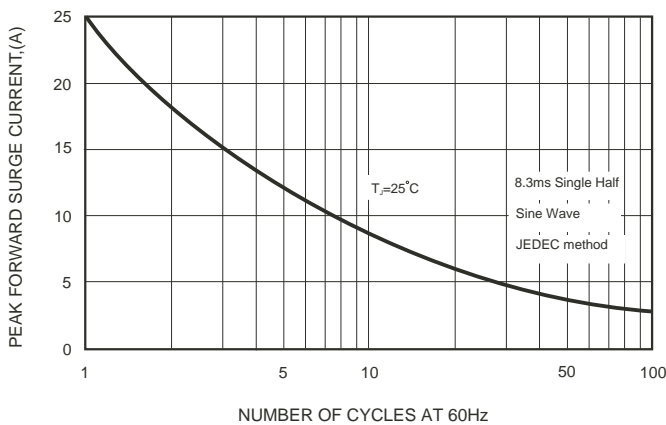


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

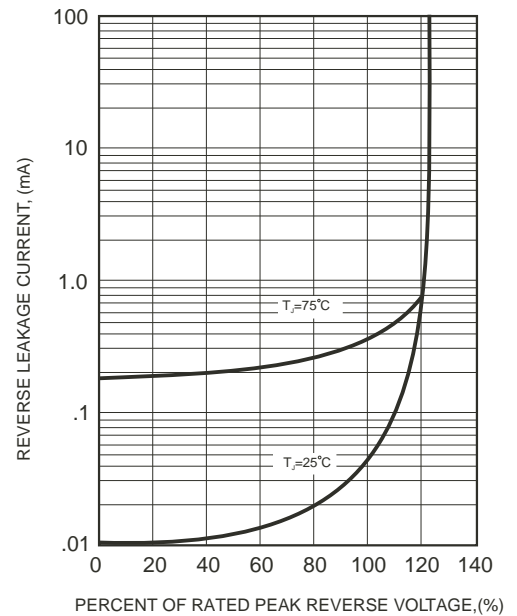


FIG.4-TYPICAL JUNCTION CAPACITANCE

