Elektronische Bauelemente

SEF101MH~SEF107MH

VOLTAGE 50 ~ 1000 V

1.0 Amp High Efficiency Recovery Rectifiers

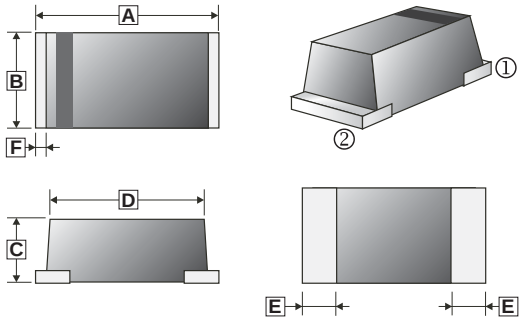
RoHS Compliant Product

A suffix of “-C” specifies halogen-free

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.
- High current capability.
- Ultrafast recovery time for high efficiency.
- Glass passivated chip junction.

SOD-123MH



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.30	3.70	D	3.10 (Max.)	
B	1.40	1.80	E	0.80 (Typ.)	
C	0.60	1.00	F	0.30 (Typ.)	

MECHANICAL DATA

- Case: Molded plastic, SOD-123MH
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Plated terminals, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: 0.011 gram (Approximately)

MARKING CODE

Part Number	Marking Code	Part Number	Marking Code
SEF101MH	H1	SEF105MH	H5
SEF102MH	H2	SEF106MH	H6
SEF103MH	H3	SEF107MH	H7
SEF104MH	H4		

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOD-123MH	3K	7’ inch

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified.)

Parameter	Symbol	Part Number							Unit
		SEF 101MH	SEF 102MH	SEF 103MH	SEF 104MH	SEF 105MH	SEF 106MH	SEF 107MH	
Repetitive Peak Reverse Voltage (Max.)	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Voltage (Max.)	V_{RMS}	35	70	140	280	420	560	700	V
Continuous Reverse Voltage(Max.)	V_R	50	100	200	400	600	800	1000	V

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Part Number							Unit	Testing Condition
		SEF 101 MH	SEF 102 MH	SEF 103 MH	SEF 104 MH	SEF 105 MH	SEF 106 MH	SEF 107 MH		
Forward Voltage (Max.)	V_F	1			1.3	1.7			V	
Average Forward Rectified Current (Max.)	I_O	1							A	Ambient Temperature =50°C
Forward Surge Current	I_{FSM}	25							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
DC Reverse Current at Rated DC Blocking Voltage (Max.)	I_R	5							μA	V_R=V_{RRM}, T_A=25°C
		150								V_R=V_{RRM},T_A=100°C
Thermal Resistance Junction to Ambient (Typ.)	$R_{\theta JA}$	42							°C/W	
Diode Junction Capacitance (Typ.)	C_J	70							pF	f=1MHz and applied 4V DC reverse voltage
Storage and Operating Temperature Range	T_{STG}, T_J	-65 ~ 175, -55 ~ 150							°C	
Reverse recovery time	T_{RR}	50				75			nS	

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

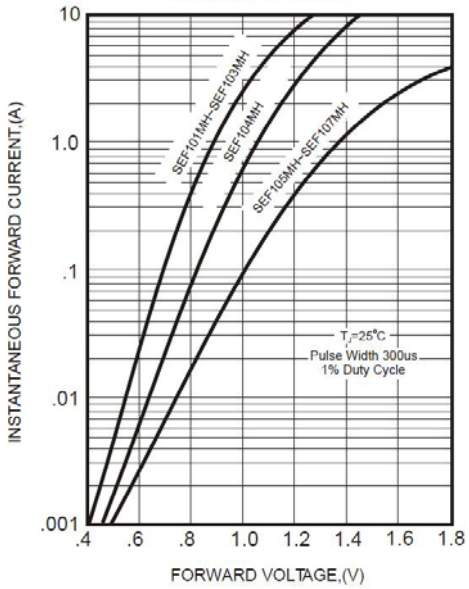


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

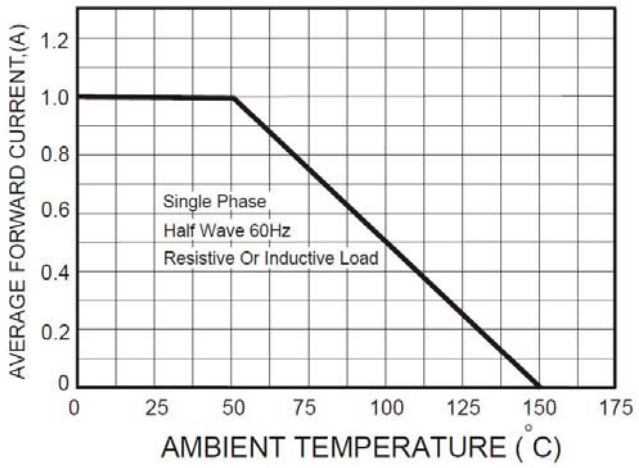
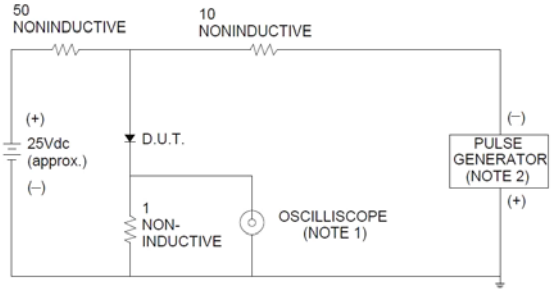
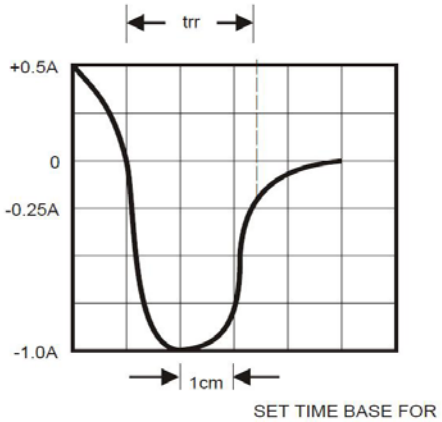


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.



SET TIME BASE FOR

50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

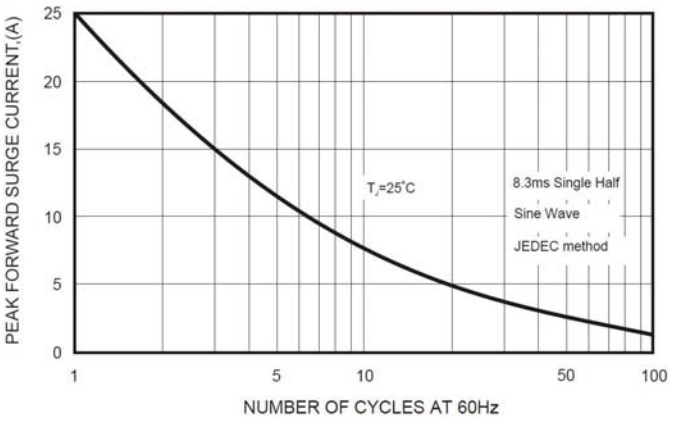


FIG.5-TYPICAL JUNCTION CAPACITANCE

