

Surface Mount Ultra Fast Recovery Rectifiers

(Pb) Lead(Pb)-Free

Features:

- *For Surface Mount Application
- *Low Leakage Current
- *Exceeds Environment Standards of MIL-S-19500/288
- *Plastic Material Has UL Flammability Classification 94V-0

Mechanical Data:

- * Case: Molded Plastic, JEDECDO-214AB
- * Terminals: Solder Plated, Solderable per ML-STD-750 Method 2026
- * Polarity: Indicated by Cathode Band
- *Mounting Position: Any
- *Wight: 0.195gram

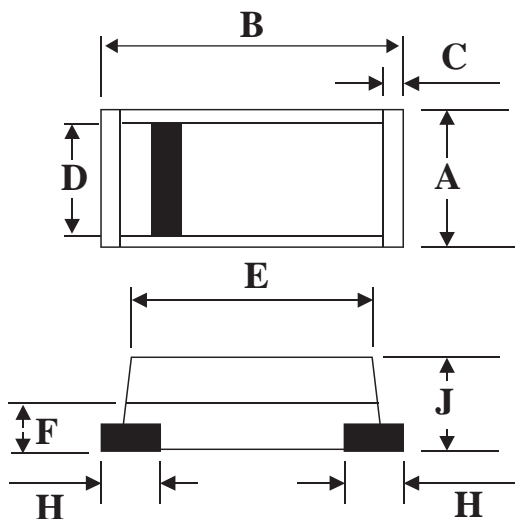
REVERSE VOLTAGE
50 TO 1000 VOLTS
FORWARD CURRENT
3.0 AMPERE



SMC-1

SMC-1 Outline Dimension

unit:mm



SMC-1		
Dim	Min	Max
A	4.40	4.80
B	6.60	7.00
C	0.30(TYP)	-
D	3.60	3.80
E	5.80	6.20
F	0.80(TYP)	-
H	1.00(TYP)	-
J	1.80	2.20

Maximum Ratings and Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.
Single Phase Half Wave, 60Hz , Resistive or Inductive Load.
For Capacitive Load, Derate Current by 20%.

Characteristics	Symbol	HM 301	HM 302	HM 303	HM 304	HM 305	HM 306	HM 307	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T _A =55°C	I _{F(AV)}	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	100							A
Maximum Instantaneous At 3.0A DC	V _F	1.0		1.3		1.7		V	
Maximum DC Reverse Current @T _A =25°C At Rated DC Blocking Voltage @T _A =100°C	I _R	10 300							uA
Maximum Reverse Recovery Time	T _{RR}	50			70			uS	
Typical Junction Capacitance (Note 1)	C _J	70(TYP)							PF
Typical Thermal Resistance (Note 2)	R _{θJA}	15(TYP)							°C/W
Operating Temperature Range	T _J	-55 to+150							°C
Storage Temperature Range	T _{STG}	-55 to+150							°C

NOTES: 1.Measured at 1.0MHz applied reverse voltage of 4.0V DC.

2.Thermal Resistance Junction to Ambient.

Device Marking

Item	Marking	Item	Marking
HM301	H31	HM305	H35
HM302	H32	HM306	H36
HM303	H33	HM307	H37
HM304	H34		

RATING AND CHARACTERISTIC CURVES

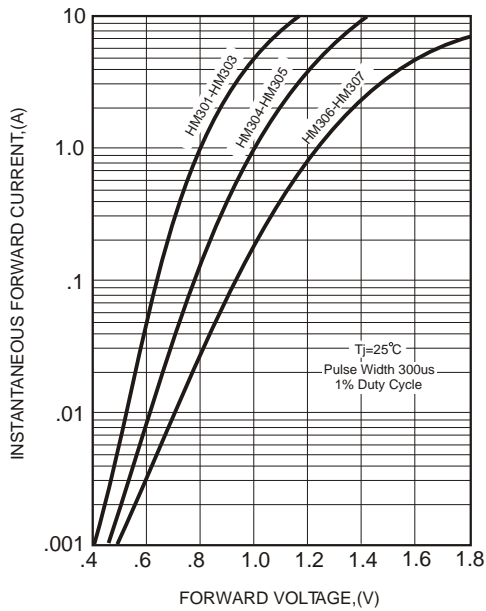
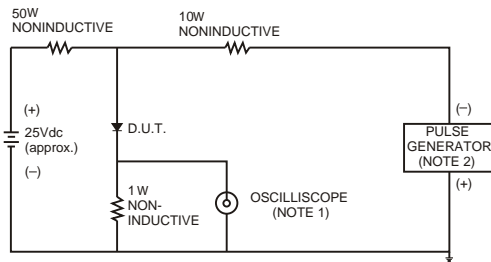


FIG.1-Typical Forward Characteristics



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

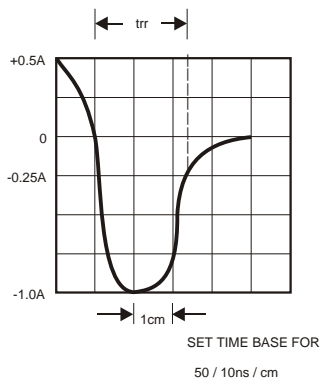


FIG.3- Test Circuit Diagram and Reverse Recovery Time Characteristics

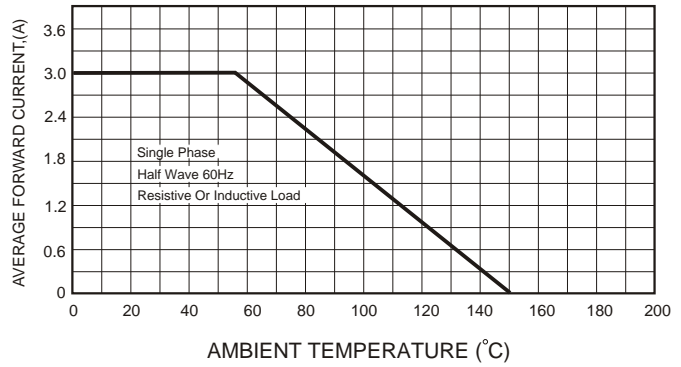


FIG.2-Typical Forward Current Derating Curve

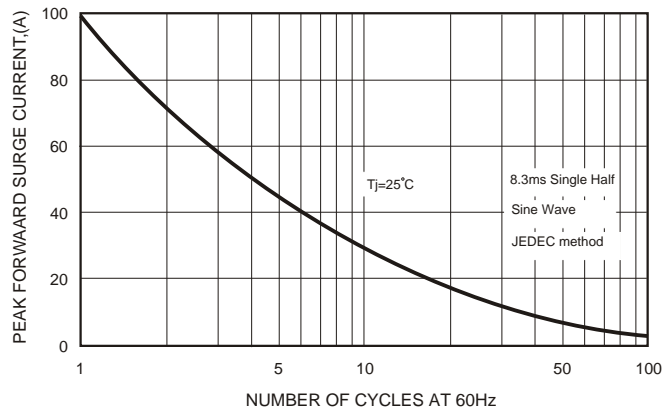


FIG.4-Maximum Non-repetitive Forward Surge Current

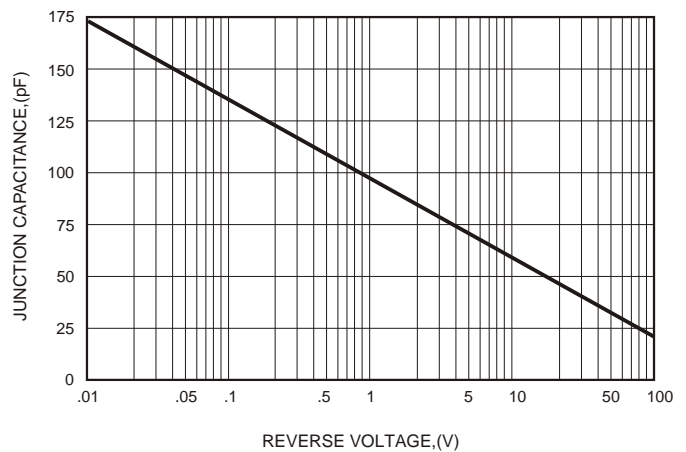


FIG.5-Typical Junction Capacitance