Elektronische Bauelemente

SMF301B-C~SMF307B-C

Voltage 50V~1000V

3.0 Amp High Efficiency Recovery Rectifiers

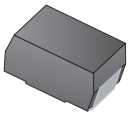
RoHS Compliant Product

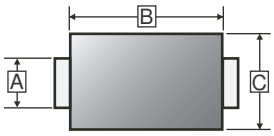
A suffix of "-C" specifies halogen & lead-free

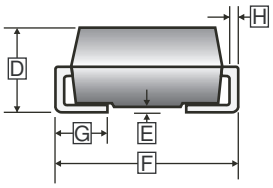
FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief

SMB







REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.85	2.20	E	-	0.203
B	4.00	4.75	F	5.08	5.59
C	3.25	3.94	G	0.75	1.52
D	1.99	2.61	H	0.15	0.31

MECHANICAL DATA

- Case: Molded plastic SMB
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode
- Mounting position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

ORDER INFORMATION

Part Number	Type
SMF301B-C~SMF307B-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25℃ ambient temperature unless otherwise s pecified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Part Number							Unit
		SMF 301B-C	SMF 302B-C	SMF 303B-C	SMF 304B-C	SMF 305B-C	SMF 306B-C	SMF 307B-C	
Maximum Repetitive 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 .375"(9.5mm) Lead Length @T_A=55℃	I_F	3							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80							A
Maximum Instantaneous Forward Voltage @3A	V_F	1.3				1.5	1.7		V
Maximum DC Reverse Current @Rated DC Blocking Voltage T_J=25℃	I_R	5							μA
Maximum DC Reverse Current @Rated DC Blocking Voltage T_J=100℃	I_R	250							μA
Maximum Reverse Recovery Time [1]	T_{RR}	150				250	500		nS
Typical Thermal Resistance from Junction-Lead	$R_{\theta JL}$	25							℃/W
Typical Thermal Resistance from Junction-Case [3]	$R_{\theta JC}$	30							℃/W
Typical Junction Capacitance [2]	C_J	44							pF
Operating & Storage Temperature	T_J,T_{STG}	-55~150							℃

Notes:

1. Reverse Recovery Time test condition: I_F=0.5A, I_R=1A, I_{RR}=0.25A.
2. Measured at 1MHz and applied reverse voltage of 4V D.C.
3. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0mm^2 (0.013mm thick) copper pads as heat sink.

Elektronische Bauelemente

SMF301B-C~SMF307B-C

Voltage 50V~1000V

3.0 Amp High Efficiency Recovery Rectifiers

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

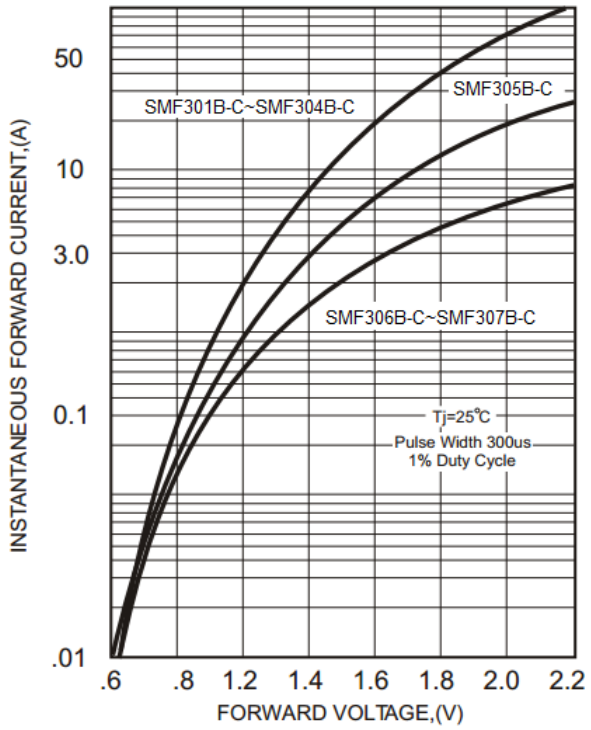


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

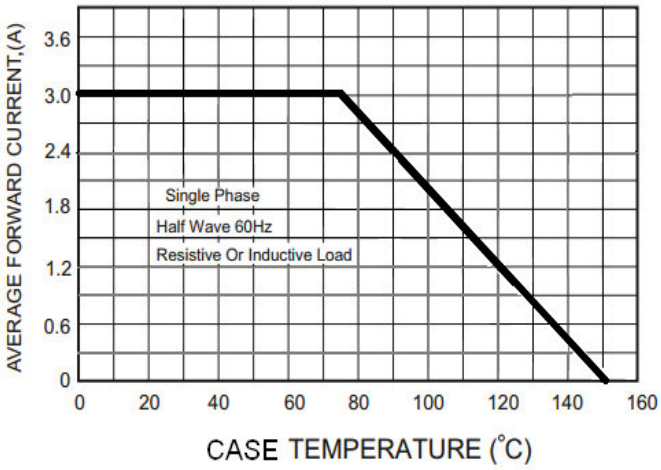
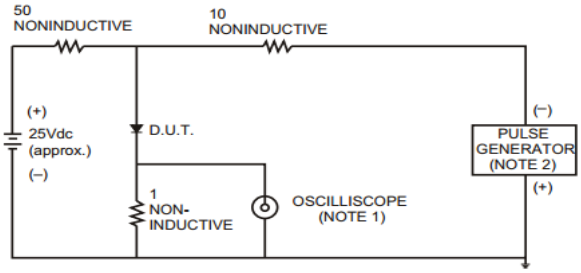


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

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

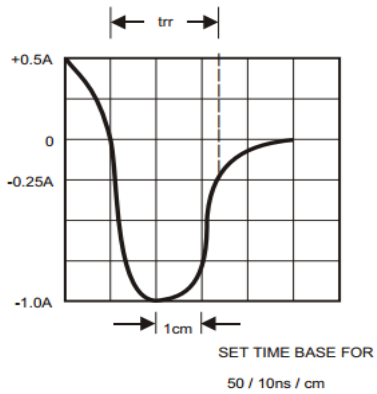


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

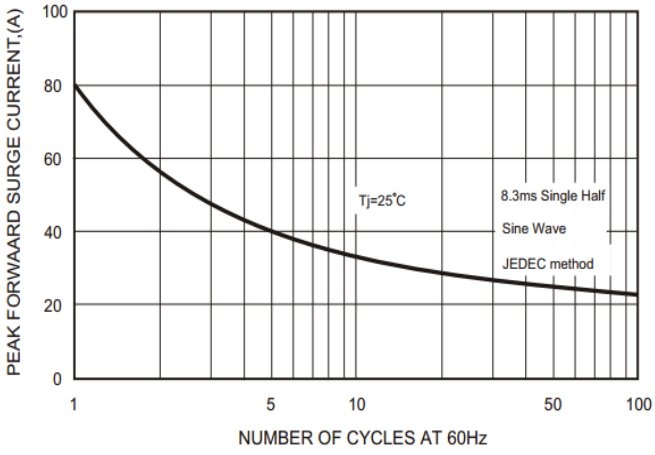


FIG.5-TYPICAL JUNCTION CAPACITANCE