Elektronische Bauelemente

SUF301B~SUF305B

Voltage 50 V ~ 600 V

3.0 Amp High Efficiency Recovery Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

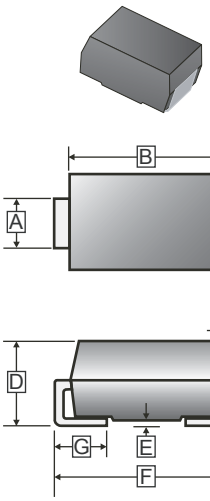
FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Super Fast switching speed under 35ns

MECHANICAL DATA

- Case: Molded plastic SMB
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode
- Mounting position: Any
- Weight: 1.1 gram

SMB



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.91	2.20	E	-	0.203
B	4.06	4.75	F	5.08	5.59
C	3.30	3.94	G	0.76	1.52
D	1.95	2.65	H	0.15	0.31

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13' inch

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, de-rate current by 20%.)

Parameter		Symbol	Part Number					Unit
			SUF301B	SUF302B	SUF303B	SUF304B	SUF305B	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at T_A=55°C		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	0.98			1.25	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25°C	I_R	10					μA
	T_J=125°C		500					
Maximum Reverse Recovery Time [1]		T_{RR}	35					nS
Typical Thermal Resistance		$R_{\theta JC}$	15					°C/W
		$R_{\theta JA}$	50					°C/W
Typical Junction Capacitance [2]		C_J	45					pF
Operating & Storage Temperature		T_J,T_{STG}	-55~150					°C

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 4.0V D.C.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

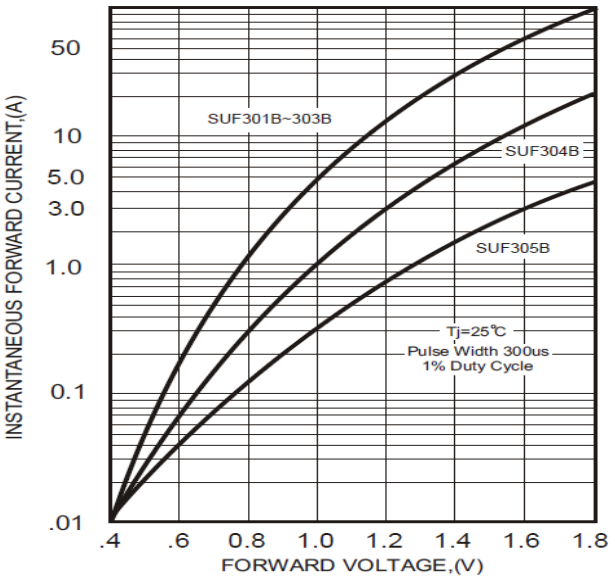


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

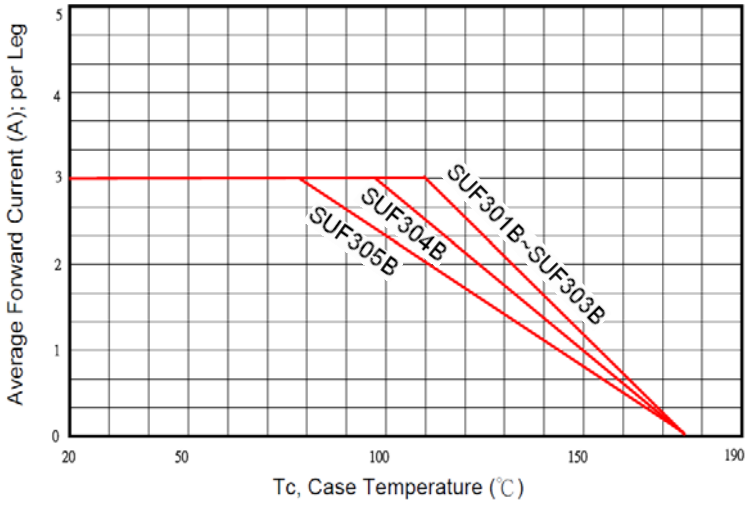
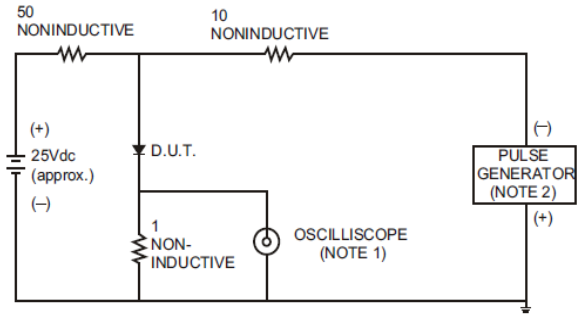
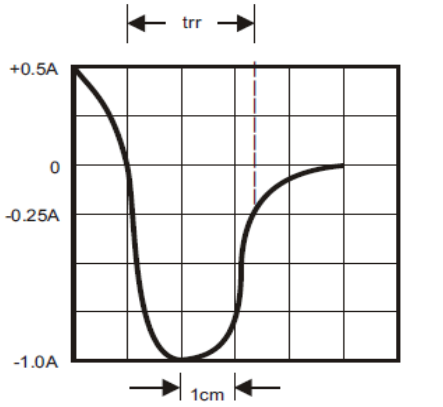


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

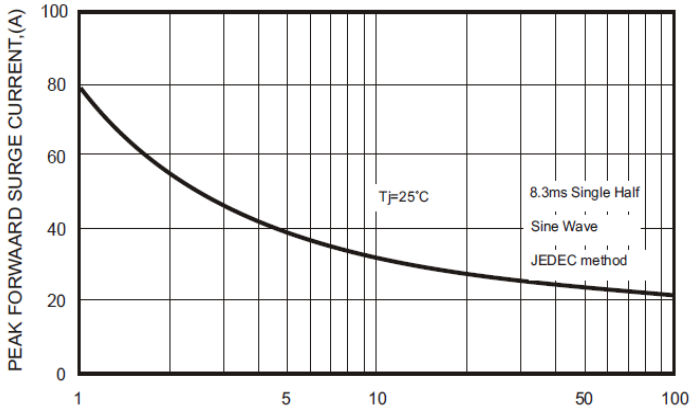


FIG.5-TYPICAL JUNCTION CAPACITANCE