

# SMU21B THRU SMU27B



## 2.0 AMP SURFACE MOUNT SUPER FAST RECTIFIERS



### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Super fast recovery time for high speed switching

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

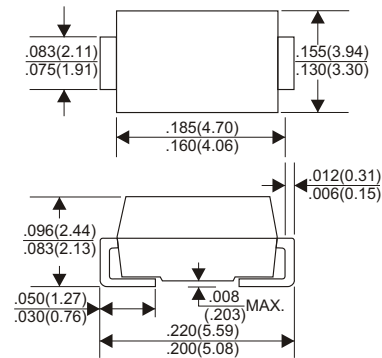
### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

2.0 Amperes

### DO-214AA(SMB)



Dimensions in inches and (millimeters)

## 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%.

| TYPE NUMBER                                                                                           | SMU21B     | SMU22B | SMU23B | SMU24B | SMU25B | SMU26B | SMU27B | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100    | 150    | 200    | 300    | 400    | 600    | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70     | 105    | 140    | 210    | 280    | 420    | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100    | 150    | 200    | 300    | 400    | 600    | V     |
| Maximum Average Forward Rectified Current<br>at T <sub>L</sub> =110°C                                 | 2.0        |        |        |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 50         |        |        |        |        |        |        | A     |
| Maximum Instantaneous Forward Voltage at 2.0A                                                         | 0.95       |        |        |        | 1.3    |        | 1.7    | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 5.0        |        |        |        |        |        |        | μA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 500        |        |        |        |        |        |        | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 35         |        |        |        |        |        |        | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 25         |        |        |        |        |        |        | pF    |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>                             | -65 — +150 |        |        |        |        |        |        | °C    |

#### NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (SMU21B THRU SMU27B)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

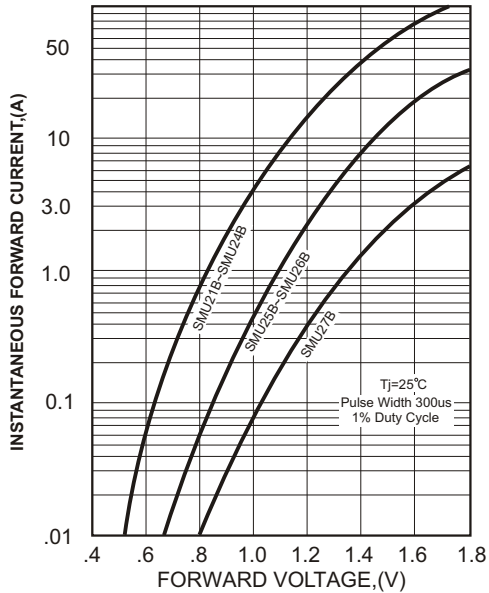


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

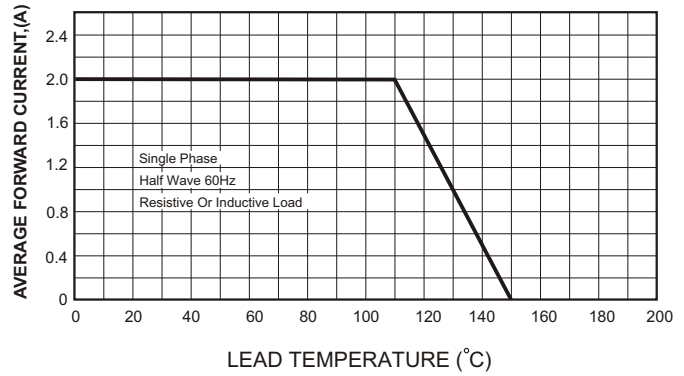


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

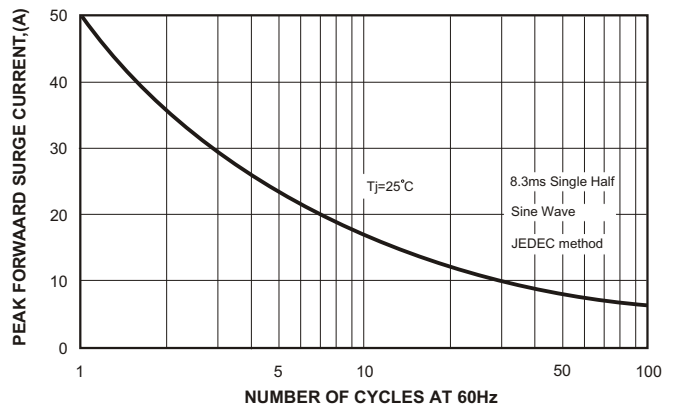
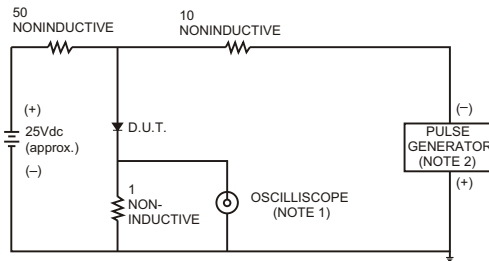


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

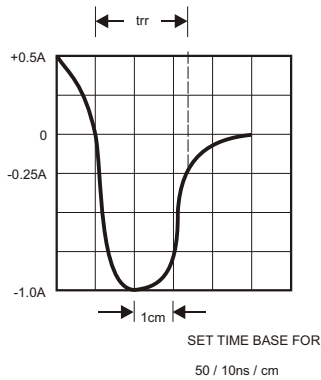


FIG.5-TYPICAL JUNCTION CAPACITANCE

