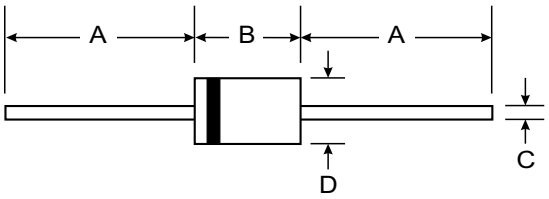
SBYV28-50—SBYV28-200

3.0A Axial Leaded Soft Recovery Ultrafast Plastic Rectifier

Features

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Mechanical Data

- **Case:** DO-201AD
  Epoxy meets UL 94V-0 flammability rating
- **Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
  E3 suffix for consumer grade, meets JESD 201 class 1A whisker test
- **Polarity:** Color band denotes cathode end

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

PARAMETER	SYMBOL	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Minimum reverse breakdown voltage at 100 µA	V_{BR}	55	110	165	220	V
Maximum average forward rectified current 0.375" (9.5 mm) lead lengths at T_L = 85 °C	$I_{F(AV)}$	3.5				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	90				A
Operating and storage temperature range	T_J, T_{STG}	- 55 to + 150				°C

PARAMETER	TEST CONDITIONS		SYMBOL	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNIT
Maximum instantaneous forward voltage (1)	3.5 A	T_J = 25 °C T_J = 150 °C	V_F	1.1 0.89				V
Maximum DC reverse current at rated DC blocking voltage		T_A = 25 °C T_A = 100 °C	I_R	5.0 300				µA
Maximum reverse recovery time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	T_J = 25 °C	t_{rr}	20				ns
Typical junction capacitance	4.0 V, 1 MHz		C_J	20				pF

Note:

(1) Pulse test: t_p = 300 µs, duty cycle ≤ 2 %

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

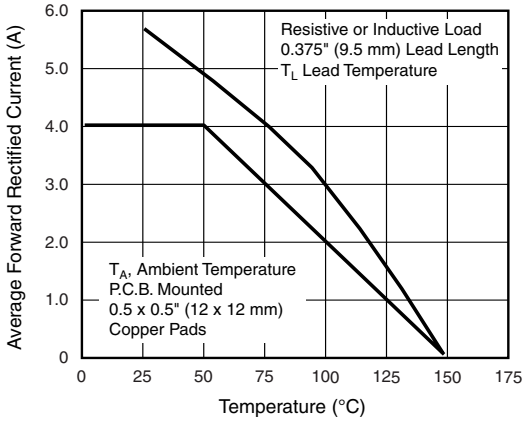


Figure 1. Forward Current Derating Curves

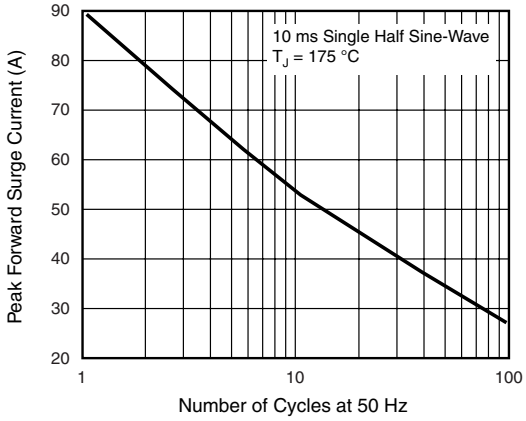


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

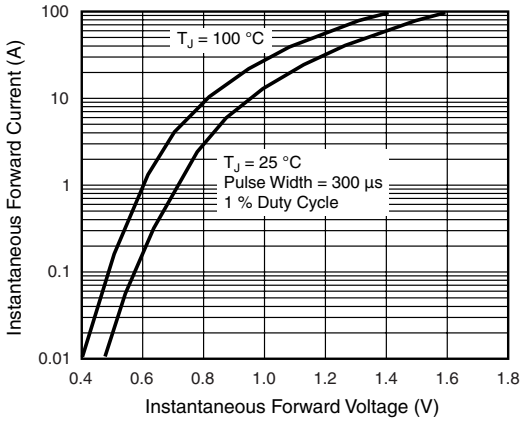


Figure 3. Typical Instantaneous Forward Characteristics

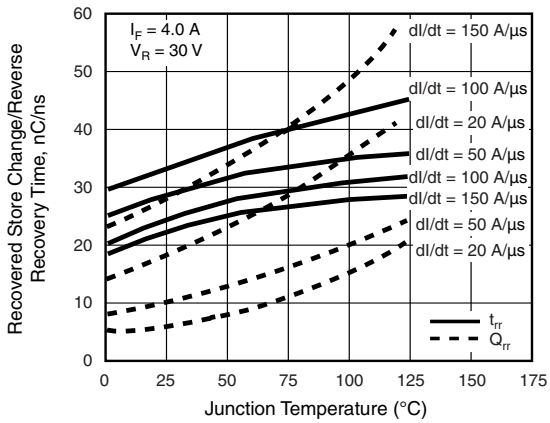


Figure 5. Reverse Switching Characteristics

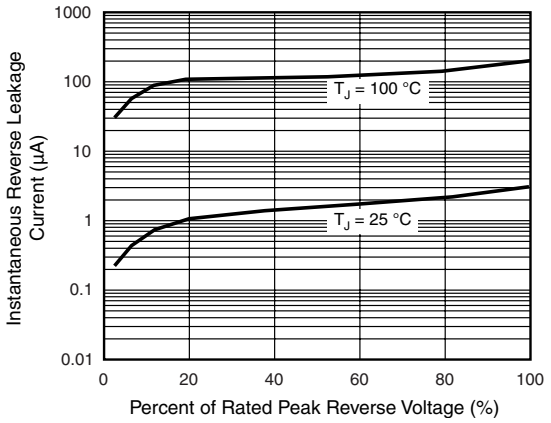


Figure 4. Typical Reverse Leakage Characteristics

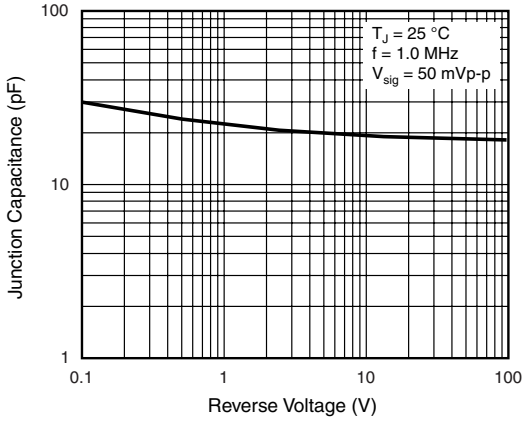


Figure 6. Typical Junction Capacitance