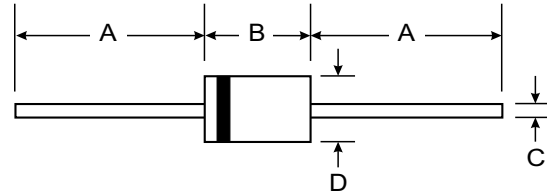


Features

- 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

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

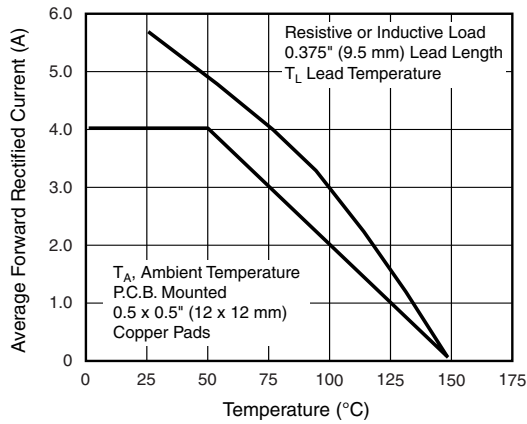


Figure 1. Forward Current Derating Curves

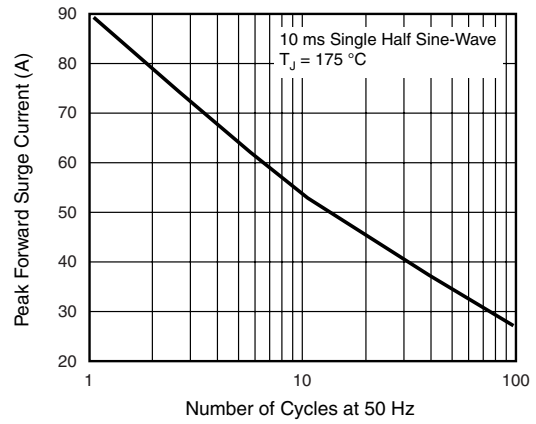


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

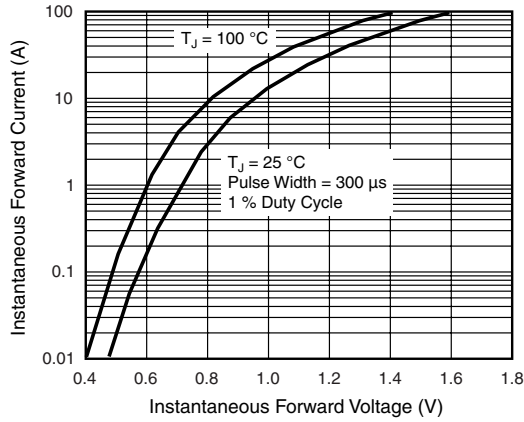


Figure 3. Typical Instantaneous Forward Characteristics

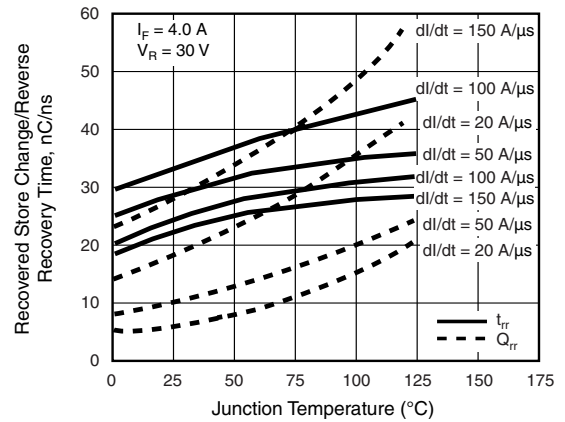


Figure 5. Reverse Switching Characteristics

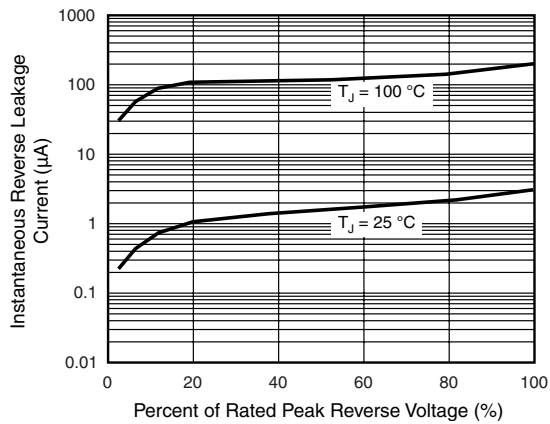


Figure 4. Typical Reverse Leakage Characteristics

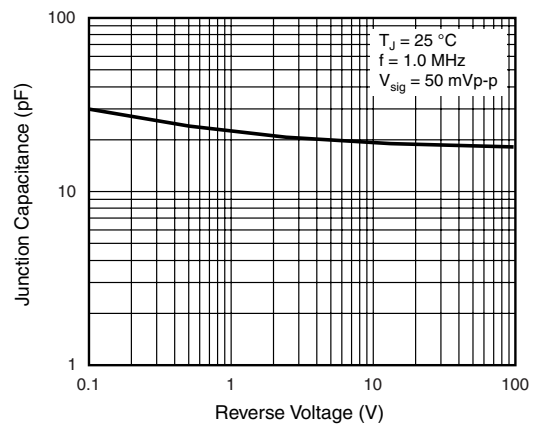


Figure 6. Typical Junction Capacitance