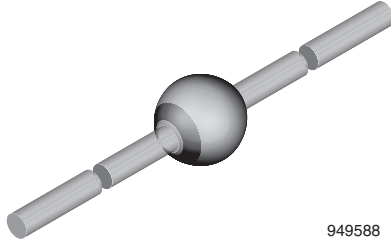


## Ultra-Fast Avalanche Sinterglass Diode



### FEATURES

- Glass passivated
- Hermetically sealed axial-leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### APPLICATIONS

- TV
- SMPS
- Power feedback systems

### MECHANICAL DATA

**Case:** SOD-64

**Terminals:** plated axial leads, solderable per MIL-STD-750, method 2026

**Polarity:** color band denotes cathode end

**Mounting position:** any

**Weight:** approx. 858 mg

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BYV28-600	$V_R = 600\text{ V}$ ; $I_{FAV} = 3.5\text{ A}$	SOD-64

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYV28-600	$V_R = V_{RRM}$	600	V
Peak forward surge current	$t_p = 10\text{ ms}$ , half sine wave		$I_{FSM}$	90	A
Average forward current	$I = 10\text{ mm}$		$I_{FAV}$	3.5	A
Non repetitive reverse avalanche energy	Inductive load, $I_{(BR)R} = 1\text{ A}$		$E_R$	20	mJ
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	$^\circ\text{C}$

MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	Lead length $l = 10\text{ mm}$ , $T_L = \text{constant}$	$R_{thJA}$	25	K/W
	On PC board with spacing 25 mm	$R_{thJA}$	70	K/W

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 3.5 A	V <sub>F</sub>	-	-	1.25	V
	I <sub>F</sub> = 5 A	V <sub>F</sub>	-	-	1.35	V
	I <sub>F</sub> = 3.5 A, T <sub>j</sub> = 175 °C	V <sub>F</sub>	-	-	0.95	V
	I <sub>F</sub> = 5 A, T <sub>j</sub> = 175 °C	V <sub>F</sub>	-	-	1.06	V
Reverse current	V <sub>R</sub> = V <sub>RRM</sub>	I <sub>R</sub>	-	-	5	μA
	V <sub>R</sub> = V <sub>RRM</sub> , T <sub>j</sub> = 150 °C	I <sub>R</sub>	-	-	150	μA
Reverse breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>(BR)R</sub>	600	-	-	V
Reverse recovery time	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1 A, i <sub>R</sub> = 0.25 A	t <sub>rr</sub>	-	-	50	ns
Forward recovery	I <sub>F</sub> = 5 A	V <sub>FP</sub>	-	6.2	-	V
Forward recovery time	I <sub>F</sub> = 5 A	t <sub>fr</sub>	-	210	-	ns

**TYPICAL CHARACTERISTICS** (T<sub>amb</sub> = 25 °C, unless otherwise specified)

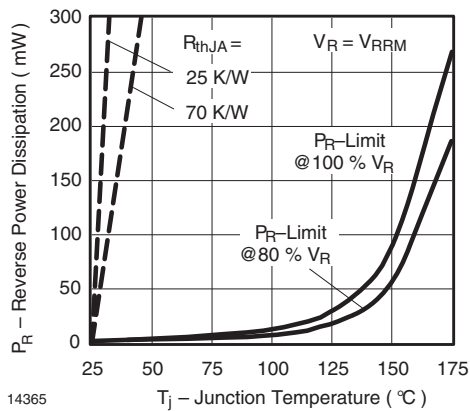


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

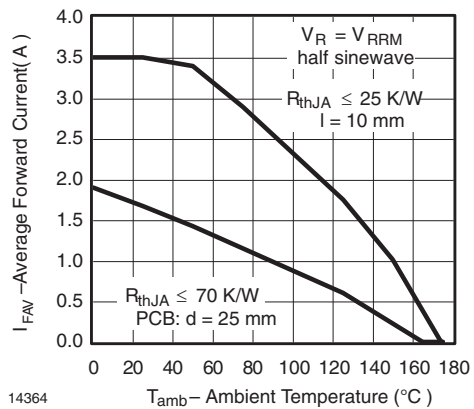


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

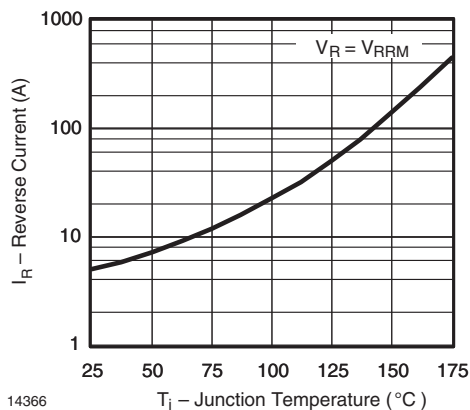


Fig. 2 - Max. Reverse Current vs. Junction Temperature

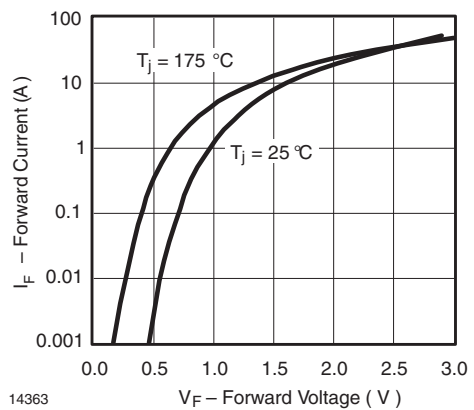


Fig. 4 - Max. Forward Current vs. Forward Voltage

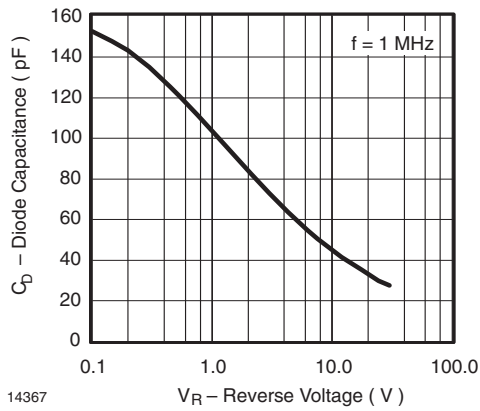
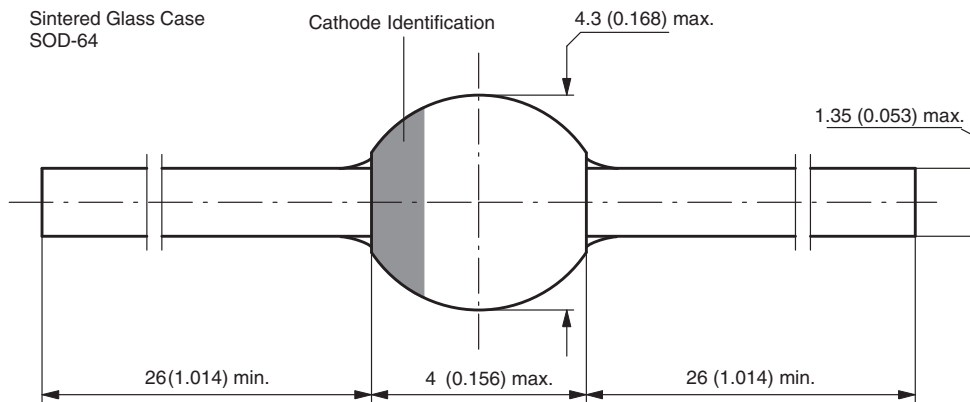


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-64**


Document-No.: 6.563-5006.4-4  
 Rev. 3 - Date: 09.February.2005  
 94 9587



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