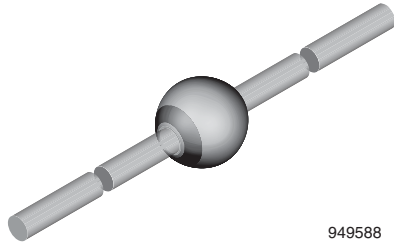




**THE DATASHEET OF  
BYV28-600-TR**



## Ultra-Fast Avalanche Sinterglass Diode



949588

### DESIGN SUPPORT TOOLS

[click logo to get started](#)
**3D**  
Models  
Available

### 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

### FEATURES

- Glass passivated
- Hermetically sealed axial-leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


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

### APPLICATIONS

- TV
- SMPS
- Power feedback systems

### ORDERING INFORMATION (Example)

DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BYV28-600	BYV28-600-TR	2500 per 10" tape and reel	12 500
BYV28-600	BYV28-600-TAP	2500 per ammpack	12 500

### PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYV28-600	$V_R = 600\text{ V}$ ; $I_{F(AV)} = 3.5\text{ A}$	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	$I = 10\text{ mm}$		$I_{F(AV)}$	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

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 3.5\text{ A}$	$V_F$	-	-	1.25	V
	$I_F = 5\text{ A}$	$V_F$	-	-	1.35	V
	$I_F = 3.5\text{ A}, T_j = 175\text{ }^{\circ}\text{C}$	$V_F$	-	-	0.95	V
	$I_F = 5\text{ A}, T_j = 175\text{ }^{\circ}\text{C}$	$V_F$	-	-	1.06	V
Reverse current	$V_R = V_{RRM}$	$I_R$	-	-	5	$\mu\text{A}$
	$V_R = V_{RRM}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$	-	-	150	$\mu\text{A}$
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	600	-	-	V
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$	$t_{rr}$	-	-	50	ns
Forward recovery	$I_F = 5\text{ A}$	$V_{FP}$	-	6.2	-	V
Forward recovery time	$I_F = 5\text{ A}$	$t_{fr}$	-	210	-	ns

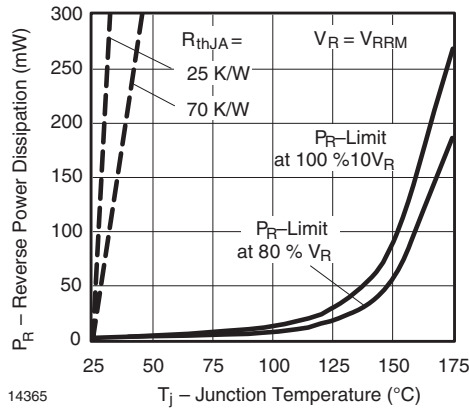
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

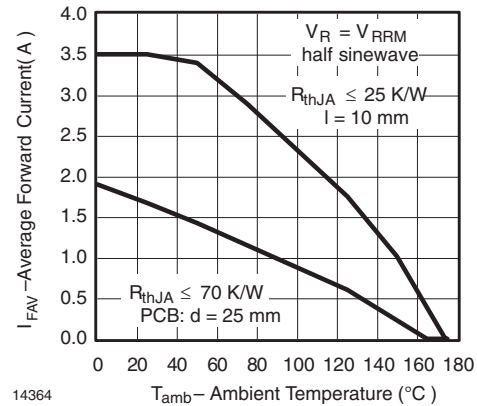


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

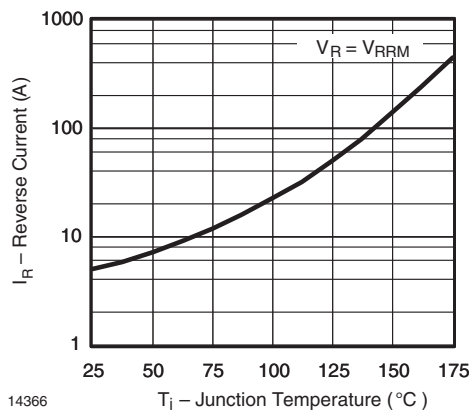


Fig. 2 - Max. Reverse Current vs. Junction Temperature

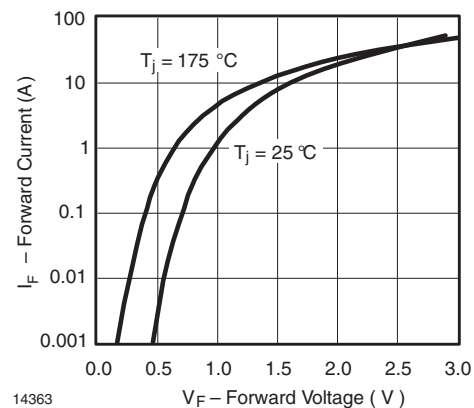


Fig. 4 - Max. Forward Current vs. Forward Voltage

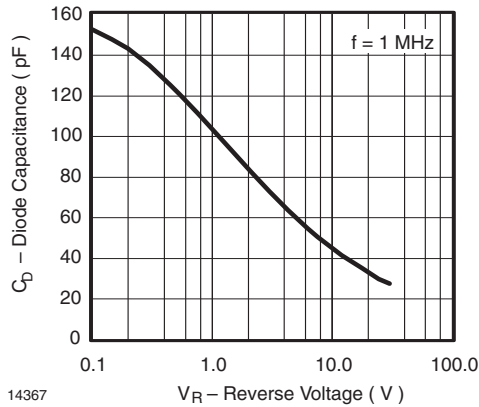
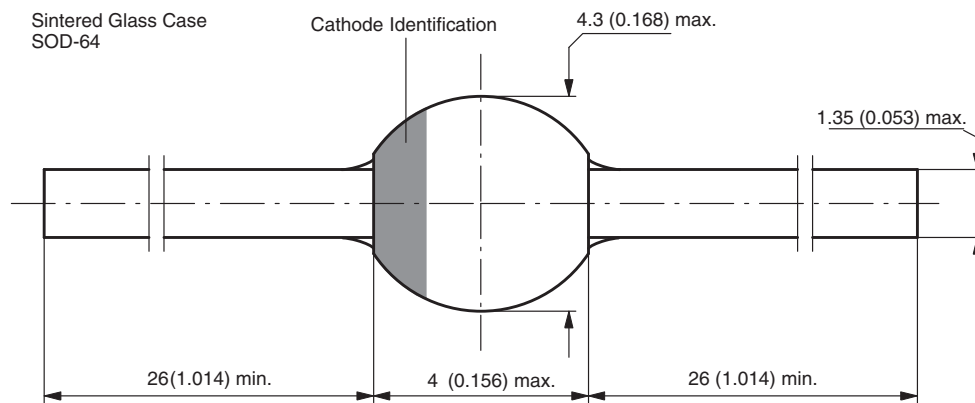


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

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



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 94 9587



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