ROHS COMPLIANT

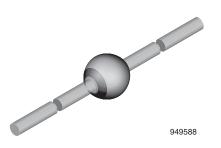
HALOGEN

FREE

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Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



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 <u>www.vishay.com/doc?99912</u>

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 ammopack	12 500		

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYV28-600	$V_{R} = 600 \text{ V}; \text{ I}_{F(AV)} = 3.5 \text{ A}$	SOD-64			

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °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	$t_p = 10$ ms, half sine wave		I _{FSM}	90	А	
Average forward current	l = 10 mm		I _{F(AV)}	3.5	А	
Non repetitive reverse avalanche energy	Inductive load, $I_{(BR)R} = 1 A$		E _R	20	mJ	
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C	

MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Junction ambient	Lead length I = 10 mm, T_L = constant	R _{thJA}	25	K/W	
Sunction ambient	On PC board with spacing 25 mm	R _{thJA}	70	K/W	

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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 3.5 A	VF	-	-	1.25	V
Forward voltage	I _F = 5 A	VF	-	-	1.35	V
Forward voltage	I _F = 3.5, T _j = 175 °C	VF	-	-	0.95	V
	I _F = 5 A, T _j = 175 °C	VF	-	-	1.06	V
Reverse current	$V_{R} = V_{RRM}$	I _R	-	-	5	μA
neverse current	$V_R = V_{RRM}, T_j = 150 \ ^\circ C$	I _R	-	-	150	μA
Reverse breadkdown voltage	I _R = 100 μA	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 A	V _{FP}	-	6.2	-	V
Forward recovery time	I _F = 5 A	t _{fr}	-	210	-	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

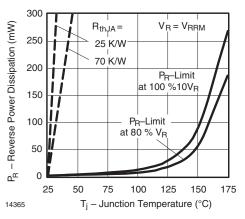


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

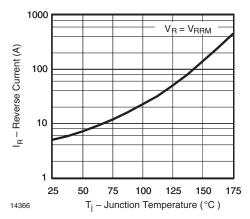


Fig. 2 - Max. Reverse Current vs. Junction Temperature

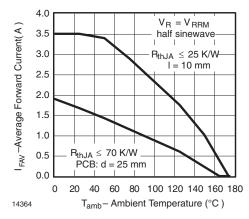


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

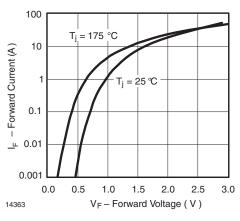


Fig. 4 - Max. Forward Current vs. Forward Voltage

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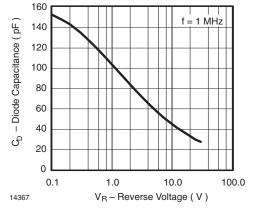
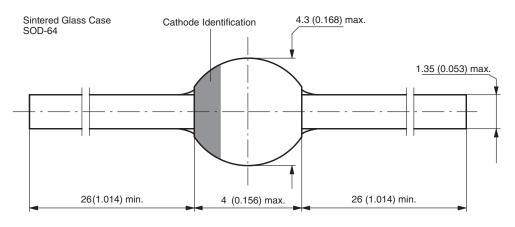


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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