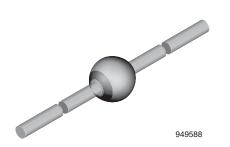


Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



DESIGN SUPPORT TOOLS

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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



RoHS

COMPLIANT HALOGEN

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 V; I _{F(AV)} = 3.5 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	$t_p = 10 \text{ ms}$, half sine wave		I _{FSM}	90	Α	
Average forward current	I = 10 mm		I _{F(AV)}	3.5	Α	
Non repetitive reverse avalanche energy	Inductive load, I _{(BR)R} = 1 A		E _R	20	mJ	
Junction and storage temperature range			$T_i = T_{sta}$	-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	
Junction 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
Converse well-are	I _F = 3.5 A	V _F	-	-	1.25	V
	I _F = 5 A	V _F	-	-	1.35	V
Forward voltage	I _F = 3.5, T _j = 175 °C	V _F	-	-	0.95	V
	I _F = 5 A, T _j = 175 °C	V _F	-	-	1.06	V
Reverse current	$V_R = V_{RRM}$	I _R	-	-	5	μΑ
	$V_R = V_{RRM}, T_j = 150 ^{\circ}C$	I _R	-	-	150	μΑ
Reverse breakdown voltage	I _R = 100 μA	V _{(BR)R}	600	-	-	V
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 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)

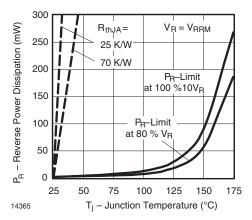


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

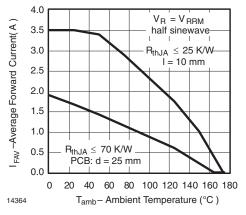


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

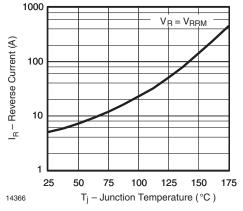


Fig. 2 - Max. Reverse Current vs. Junction Temperature

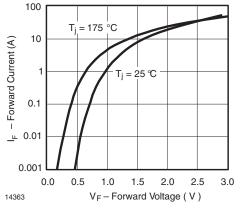


Fig. 4 - Max. Forward Current vs. Forward Voltage



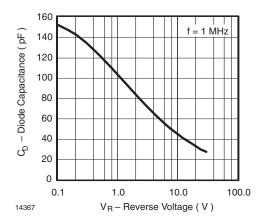
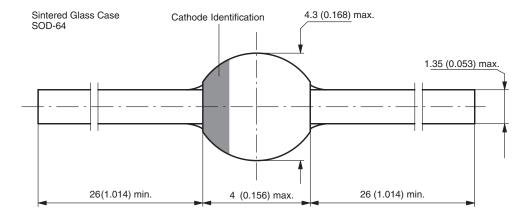


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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