

BYV26A, BYV26B, BYV26C, BYV26D, BYV26E

Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



DESIGN SUPPORT TOOLS



MECHANICAL DATA

Case: SOD-57

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

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 369 mg

949539	

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FEATURES

- Glass passivated junction
- · Hermetically sealed package
- Very low switching losses
- Low reverse current
- High reverse voltage
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

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ORDERING INFORMATION (Example)				
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY	
BYV26E	BYV26E-TR	5000 per 10" tape and reel	25 000	
BYV26E	BYV26E-TAP	5000 per ammopack	25 000	

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BYV26A	$V_{R} = 200 \text{ V}; I_{F(AV)} = 1 \text{ A}$	SOD-57
BYV26B	$V_{R} = 400 \text{ V}; I_{F(AV)} = 1 \text{ A}$	SOD-57
BYV26C	$V_{R} = 600 \text{ V}; I_{F(AV)} = 1 \text{ A}$	SOD-57
BYV26D	$V_{R} = 800 \text{ V}; I_{F(AV)} = 1 \text{ A}$	SOD-57
BYV26E	$V_{R} = 1000 \text{ V}; \text{ I}_{F(AV)} = 1 \text{ A}$	SOD-57

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
Reverse voltage = repetitive peak reverse voltage		BYV26A	$V_{R} = V_{RRM}$	200	V	
		BYV26B	$V_{R} = V_{RRM}$	400	V	
	See electrical characteristics	BYV26C	$V_{R} = V_{RRM}$	600	V	
		BYV26D	$V_{R} = V_{RRM}$	800	V	
		BYV26E	$V_{R} = V_{RRM}$	1000	V	
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	30	А	
Average forward current			I _{F(AV)}	1	А	
Non repetitive reverse avalanche energy	$I_{(BR)R} = 1 A$, inductive load		E _R	10	mJ	
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C	

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MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	l = 10 mm, T _L = constant	R _{thJA}	45	K/W

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 1 A		V _F	-	-	2.5	V
	I _F = 1 A, T _j = 175 °C		V _F	-	-	1.3	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	-	5	μA
	$V_{R} = V_{RRM}, T_{j} = 150 ^{\circ}\text{C}$		I _R	-	-	100	μA
	I _R = 100 μΑ	BYV26A	V _{(BR)R}	300	-	-	V
		BYV26B	V _{(BR)R}	500	-	-	V
Reverse breakdown voltage		BYV26C	V _{(BR)R}	700	-	-	V
		BYV26D	V _{(BR)R}	900	-	-	V
		BYV26E	V _{(BR)R}	1100	-	-	V
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A	BYV26A	t _{rr}	-	-	30	ns
		BYV26B	t _{rr}	-	-	30	ns
		BYV26C	t _{rr}	-	-	30	ns
		BYV26D	t _{rr}	-	-	75	ns
		BYV26E	t _{rr}	-	-	75	ns

TYPICAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)

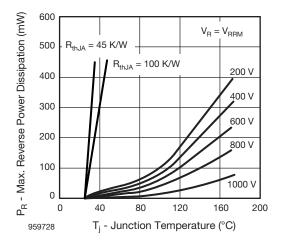


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

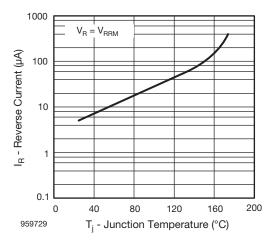


Fig. 2 - Max. Reverse Current vs. Junction Temperature



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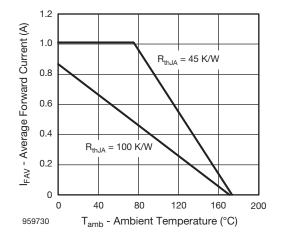


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

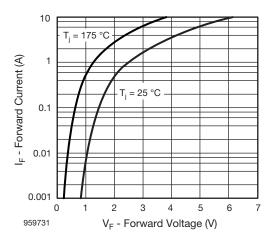


Fig. 4 - Max. Reverse Current vs. Junction Temperature

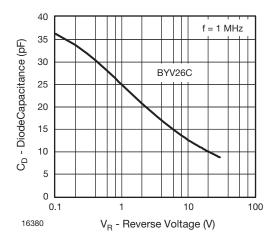


Fig. 5 - Diode Capacitance vs. Reverse Voltage

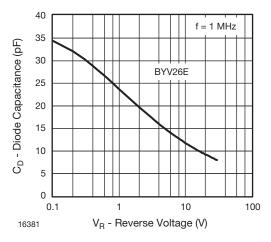
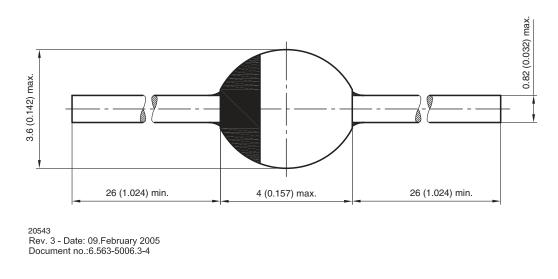


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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