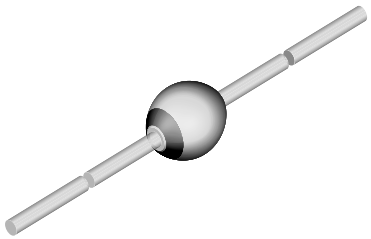
Ultra Fast Avalanche Sinterglass Diode

Features

- Glass passivated junction
- Hermetically sealed package
- Very low switching losses
- Low reverse current
- High reverse voltage
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



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Applications

Switched mode power supplies

High-frequency inverter circuits

Mechanical Data

Case: SOD-57 Sintered glass case

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: approx. 369 mg

Parts Table

Part	Type differentiation	Package
BYV26A	V_R = 200 V; I_{FAV} = 1 A	SOD-57
BYV26B	V_R = 400 V; I_{FAV} = 1 A	SOD-57
BYV26C	V_R = 600 V; I_{FAV} = 1 A	SOD-57
BYV26D	V_R = 800 V; I_{FAV} = 1 A	SOD-57
BYV26E	V_R = 1000 V; I_{FAV} = 1 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	see electrical characteristics	BYV26A	$V_R = V_{RRM}$	200	V
		BYV26B	$V_R = V_{RRM}$	400	V
		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 sinewave		I_{FSM}	30	A
Average forward current			I_{FAV}	1	A
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

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 °C		I_R			100	µA
Reverse breakdown voltage	I_R = 100 µA	BYV26A	$V_{(BR)R}$	300			V
		BYV26B	$V_{(BR)R}$	500			V
		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-BYV26C	t_{rr}			30	ns
		BYV26D-BYV26E	t_{rr}			75	ns

Typical Characteristics (Tamb = 25 °C unless otherwise specified)

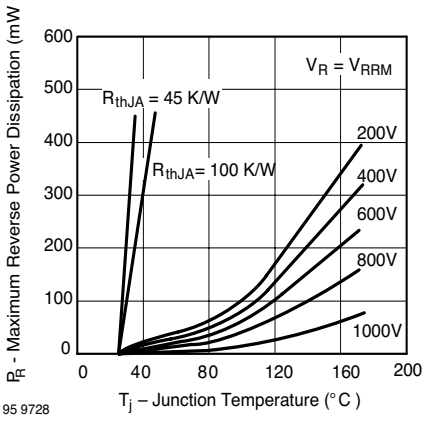

Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

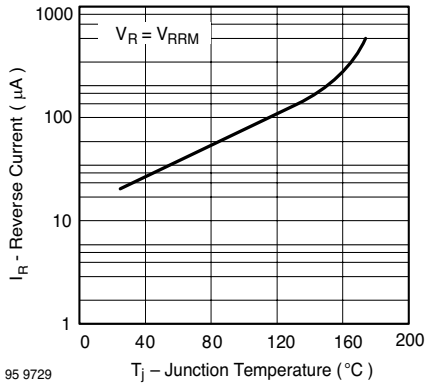

Figure 2. Max. Reverse Current vs. Junction Temperature

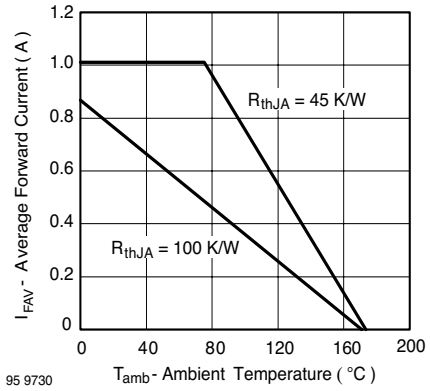

Figure 3. Max. Average Forward Current vs. Ambient Temperature

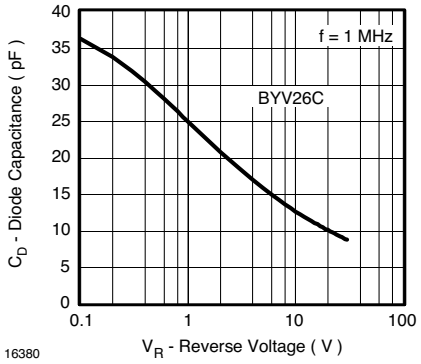

Figure 5. Diode Capacitance vs. Reverse Voltage

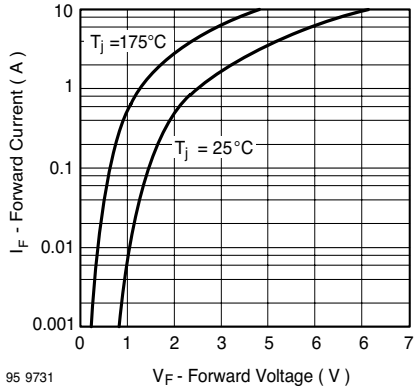

Figure 4. Max. Forward Current vs. Forward Voltage

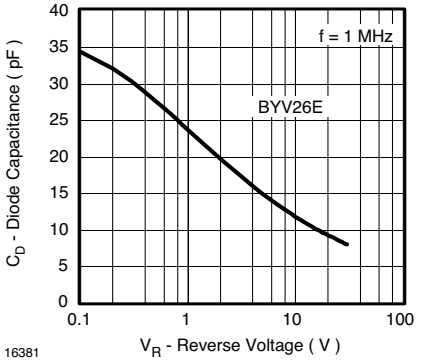

Figure 6. Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm (Inches)