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Low-voltage stabistors

BZV86 series

FEATURES

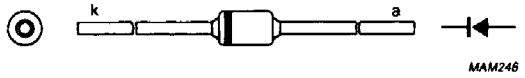
- Low-voltage stabilization
- Forward voltage range: 1.4 to 3.2 V
- Total power dissipation: max. 330 mW
- Differential resistance range: max. 20 to 35 Ω.

APPLICATIONS

- Power clipping
- Level shifting
- Low-voltage regulation
- Temperature stabilization.

DESCRIPTION

Low-voltage stabilization diode in a hermetically-sealed SOD27 (DO-35) glass package. The series consists of four types: BZV86-1V4 to BZV86-3V2.



The diodes are type branded.

Fig.1 Simplified outline (SOD27; DO-35) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	10	V
I_F	continuous forward current				
	BZV86-1V4		–	200	mA
	BZV86-2V0		–	150	mA
	BZV86-2V6		–	125	mA
	BZV86-3V2		–	100	mA
P_{tot}	total power dissipation	T_{amb} = 25 °C	–	330	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C

ELECTRICAL CHARACTERISTICS

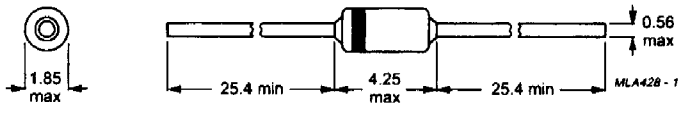
T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_F	forward voltage	I_F = 5 mA; see Fig.2				
	BZV86-1V4		1.30	–	1.50	V
	BZV86-2V0		1.85	–	2.15	V
	BZV86-2V6		2.35	–	2.80	V
	BZV86-3V2		2.85	–	3.45	V
I_R	reverse current	V_R = 5 V	–	–	200	nA
r_{dif}	differential resistance	I_F = 1 mA; f = 1 kHz				
	BZV86-1V4		–	55	–	Ω
	BZV86-2V0		–	80	–	Ω
	BZV86-2V6		–	90	–	Ω
	BZV86-3V2		–	100	–	Ω
r_{dif}	differential resistance	I_F = 5 mA; f = 1 kHz				
	BZV86-1V4		–	10	20	Ω
	BZV86-2V0		–	15	30	Ω
	BZV86-2V6		–	18	32.5	Ω
	BZV86-3V2		–	20	35	Ω
r_{dif}	differential resistance	I_F = 10 mA; f = 1 kHz				
	BZV86-1V4		–	6	10	Ω
	BZV86-2V0		–	8	15	Ω
	BZV86-2V6		–	9	17.5	Ω
	BZV86-3V2		–	10	20	Ω
S_F	temperature coefficient	I_F = 5 mA				
	BZV86-1V4		–	–3.8	–	mV/K
	BZV86-2V0		–	–6.0	–	mV/K
	BZV86-2V6		–	–8.5	–	mV/K
	BZV86-3V2		–	–11.5	–	mV/K
C_d	diode capacitance	V_R = 0 V; f = 1 MHz	–	15	25	pF

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}tp}$	thermal resistance from junction to tie-point	8 mm from the body	300	K/W
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	lead length 10 mm	380	K/W

PACKAGE OUTLINE



Dimensions in mm.

The marking band indicates the cathode.
The diodes are type-branded.

Fig.3 SOD27 (DO-35).