

Low-voltage stabistors

BZV86 series

FEATURES

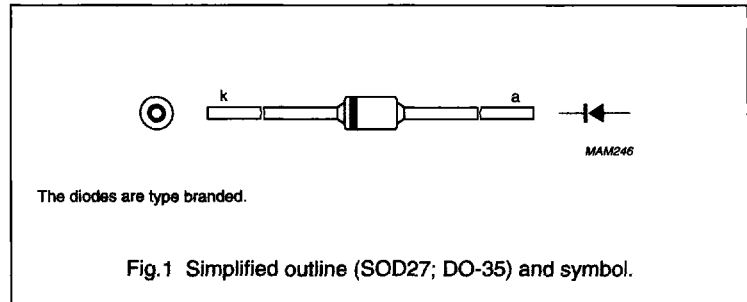
- Low-voltage stabilization
- Forward voltage range: 1.4 to 3.2 V
- Total power dissipation: max. 330 mW
- Differential resistance range: max. 20 to 35 Ω.

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.



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	$T_{amb} = 25\text{ °C}$	-	330	mW
$T_{stg}$	storage temperature		-65	+150	°C
$T_j$	junction temperature		-	150	°C

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**ELECTRICAL CHARACTERISTICS**T<sub>j</sub> = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V <sub>F</sub>	forward voltage	I <sub>F</sub> = 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 <sub>R</sub>	reverse current	V <sub>R</sub> = 5 V	–	–	200	nA
r <sub>diff</sub>	differential resistance	I <sub>F</sub> = 1 mA; f = 1 kHz				
	BZV86-1V4		–	55	–	Ω
	BZV86-2V0		–	80	–	Ω
	BZV86-2V6		–	90	–	Ω
	BZV86-3V2		–	100	–	Ω
r <sub>diff</sub>	differential resistance	I <sub>F</sub> = 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 <sub>diff</sub>	differential resistance	I <sub>F</sub> = 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 <sub>F</sub>	temperature coefficient	I <sub>F</sub> = 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 <sub>d</sub>	diode capacitance	V <sub>R</sub> = 0 V; f = 1 MHz	–	15	25	pF

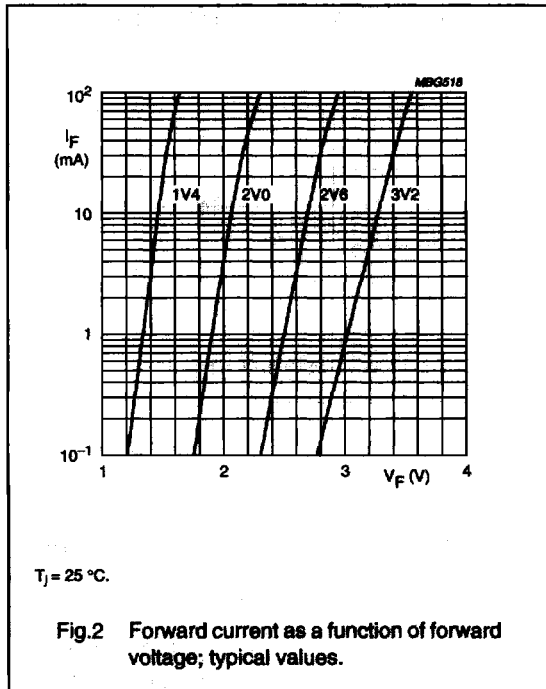
**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R <sub>th j-tp</sub>	thermal resistance from junction to tie-point	8 mm from the body	300	K/W
R <sub>th j-a</sub>	thermal resistance from junction to ambient	lead length 10 mm	380	K/W

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GRAPHICAL DATA



$T_j = 25^\circ\text{C}$ .

Fig.2 Forward current as a function of forward voltage; typical values.