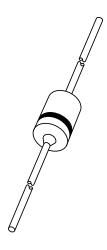
DISCRETE SEMICONDUCTORS

DATA SHEET



BZX79 seriesVoltage regulator diodes

Product specification Supersedes data of April 1992 File under Discrete Semiconductors, SC01 1996 Apr 26





BZX79 series

FEATURES

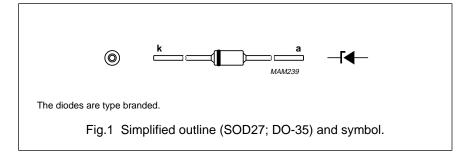
- Total power dissipation: max. 500 mW
- Four tolerance series: ±1%, ±2%, ±3% and ±5%
- Working voltage range: nom. 2.4 to 75 V (E24 range)
- Non-repetitive peak reverse power dissipation: max. 40 W.

APPLICATIONS

Low voltage stabilizers or voltage references.

DESCRIPTION

Low-power voltage regulator diodes in hermetically sealed leaded glass SOD27 (DO-35) packages. The diodes are available in the normalized E24 $\pm 1\%$ (BZX79-A), $\pm 2\%$ (BZX79-B), $\pm 3\%$ (BZX79-F) and $\pm 5\%$ (BZX79-C) tolerance range. The series consists of 37 types with nominal working voltages from 2.4 to 75 V.



LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _F	continuous forward current		_	250	mA
I _{ZSM}	non-repetitive peak reverse current	t_p = 100 μs; square wave; T_j = 25 °C prior to surge		ables and 4	
P _{tot}	total power dissipation	T _{amb} = 50 °C; note 1	_	400	mW
		T _{amb} = 50 °C; note 2	_	500	mW
P _{ZSM}	non-repetitive peak reverse power dissipation	t_p = 100 μs; square wave; T_j = 25 °C prior to surge; see Fig.3	_	40	W
T _{stg}	storage temperature		-65	+200	°C
T _j	junction temperature		-65	+200	°C

Notes

- 1. Device mounted on a printed circuit-board without metallization pad; lead length max.
- 2. Tie-point temperature ≤ 50 °C; max. lead length 8 mm.

Voltage regulator diodes

BZX79 series

ELECTRICAL CHARACTERISTICS

Total BZX79-A and B and F and C series

 $T_i = 25$ °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V _F	forward voltage	I _F = 10 mA; see Fig.4	0.9	V
I _R	reverse current			
	BZX79-A/B/F/C2V4	V _R = 1 V	50	μΑ
	BZX79-A/B/F/C2V7	V _R = 1 V	20	μΑ
	BZX79-A/B/F/C3V0	V _R = 1 V	10	μΑ
	BZX79-A/B/F/C3V3	V _R = 1 V	5	μΑ
	BZX79-A/B/F/C3V6	V _R = 1 V	5	μΑ
	BZX79-A/B/F/C3V9	V _R = 1 V	3	μΑ
	BZX79-A/B/F/C4V3	V _R = 1 V	3	μΑ
	BZX79-A/B/F/C4V7	V _R = 2 V	3	μΑ
	BZX79-A/B/F/C5V1	V _R = 2 V	2	μΑ
	BZX79-A/B/F/C5V6	V _R = 2 V	1	μΑ
	BZX79-A/B/F/C6V2	V _R = 4 V	3	μΑ
	BZX79-A/B/F/C6V8	V _R = 4 V	2	μΑ
	BZX79-A/B/F/C7V5	V _R = 5 V	1	μΑ
	BZX79-A/B/F/C8V2	V _R = 5 V	700	nA
	BZX79-A/B/F/C9V1	V _R = 6 V	500	nA
	BZX79-A/B/F/C10	V _R = 7 V	200	nA
	BZX79-A/B/F/C11	V _R = 8 V	100	nA
	BZX79-A/B/F/C12	V _R = 8 V	100	nA
	BZX79-A/B/F/C13	V _R = 8 V	100	nA
	BZX79-A/B/F/C15 to 75	$V_R = 0.7V_{Znom}$	50	nA

BZX79 series

Table 1 Per type BZX79-**A/B2V4** to **A/B24** $T_j = 25$ °C; unless otherwise specified.

NZ (V) Tall (Ω) at I _{Zuest} Tall (Ω) V _Z (V) Tall (Ω) at I _{Zuest} FERENTIAL RESISTANCE TEMINAL V _Z (V) Tall (Ω) at I _{Zuest} Emale (Ω) 1% (A) Tol. ±2% (B) at I _{Zuest} at I _{Zuest} 1% (A) Tol. ±2% (B) at I _{Zuest} at I _{Zuest} MAX. MIN. MAX. TYP. MAX. MAX. MIN. 2.43 2.35 2.45 2.75 600 70 100 -3.5 3.03 2.94 3.06 600 75 100 -3.5 3.04 3.23 3.67 600 85 90 -3.5 3.34 3.23 3.67 3.60 600 85 90 -3.5 3.34 3.23 3.67 3.60 600 85 90 -3.5 3.34 3.23 3.67 3.60 600 85 90 -3.5 3.44 4.75 4.00 400													
at Izest = 5 mA 1% (A) Tol. ±2% (B) at Izest = 1 mA at Izest = 1 mA at Izest = 1 mA at Izest = 5 mA MAX. MIN. MAX. TYP. TYP. TYP. TYP. TYP. TYP. TYP. TYP	VORK	(ING) V _z (/OLTA(98	DIFFE	RENTIAL r _{dif}	. RESIST. (Ω)	ANCE	TEN	AP. COI z (mV/P	S EFF.	DIODE CAP. C _d (pF)	NON-REPETITIVE PEAK REVERSE CURRENT
1% (A) TOI. ±2% (B) at lztest = 1 mA at lztest = 5 mA MAX. MIN. MAX. TYP. MAX. TYP. MAX. NAX. 2.43 2.35 2.45 275 600 70 100 2.73 2.65 2.75 300 600 75 100 3.03 2.94 3.06 325 600 85 90 3.03 2.94 3.06 325 600 85 90 3.34 3.23 3.37 350 600 85 90 3.34 3.23 3.37 350 600 85 90 4.35 4.21 4.39 400 600 85 90 4.75 4.61 4.79 425 500 80 90 4.75 4.61 4.79 425 500 80 90 5.16 5.00 5.20 400 480 6 15 6.27	at l	Ztest =	: 5 mA						at I _z	test = 5	AA .	at f = 1 MHz;	Izsm (A)
MAX. MIN. MAX. TYP. MAX. TYP. MAX. MAX. MIN. MIN. MIN. MIN. MIN. MIN. MAX. TYP. MAX. TYP. MAX. MAX. <th< th=""><th>.1% (</th><th><u>{</u></th><th>Tol. ±2</th><th>;% (B)</th><th>at I_{Ztest}</th><th>III I</th><th>at Iztest</th><th>III I</th><th>l see</th><th>Figs 5 e</th><th>and 6)</th><th>V_R = 0 V</th><th>at $t_p = 100 \mu s$; $T_{amb} = 25 ^{\circ} C$</th></th<>	.1% (<u>{</u>	Tol. ±2	;% (B)	at I _{Ztest}	III I	at Iztest	III I	l see	Figs 5 e	and 6)	V _R = 0 V	at $t_p = 100 \mu s$; $T_{amb} = 25 ^{\circ} C$
2.43 2.35 2.46 275 600 70 100 -3.5 2.73 2.65 2.75 300 600 75 100 -3.5 3.03 2.94 3.06 325 600 80 95 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.67 375 600 85 90 -3.5 3.94 3.82 3.96 400 600 85 90 -3.5 4.75 4.61 4.79 425 500 80 90 -3.5 5.16 5.00 5.20 400 480 60 90<		X.	Ž Ž	MAX.	TYP.	MAX.	TYP.	MAX.	Ν̈́	TYP.	MAX.	MAX.	MAX.
2.73 2.65 2.75 300 600 75 100 -3.5 3.03 2.94 3.06 325 600 80 95 -3.5 3.34 3.23 3.37 350 600 85 95 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.37 350 600 85 90 -3.5 3.34 3.23 3.67 375 600 85 90 -3.5 4.35 4.21 4.39 410 600 85 90 -3.5 4.75 4.61 4.79 425 500 50 -3.5 5.16 5.00 5.20 400 480 40 60 -3.5 5.16 5.00 5.20 400 480 60 -3.5 6.27 4.01 400 45 1.2 -2.0 6.28 5.2		.43	2.35	2.45	275	009	70	100	-3.5	-1.6	0	450	6.0
3.03 2.94 3.06 325 600 86 95 -3.5 3.34 3.23 3.37 350 600 85 95 -3.5 3.64 3.53 3.67 375 600 85 90 -3.5 3.64 3.53 3.67 375 600 85 90 -3.5 3.64 3.53 3.67 375 600 85 90 -3.5 4.35 4.21 4.39 410 600 80 90 -3.5 4.75 4.61 4.79 425 500 50 80 -3.5 5.16 5.00 5.20 40 480 40 60 -3.5 5.16 5.00 5.20 40 480 40 60 -2.0 6.27 6.08 6.34 30 80 6 15 1.2 6.27 6.08 6.34 30 80 6 15 3.8 7.58 7.35 7.65 30 80 6 15 3.8 10.10 9.80 10.20 50 150 10 4.5 11.11 10.80 11.20 50 <		73	2.65	2.75	300	009	75	100	-3.5	-2.0	0	450	6.0
3.34 3.23 3.37 350 600 85 95 -3.5 3.64 3.53 3.67 375 600 85 90 -3.5 3.64 3.53 3.67 375 600 85 90 -3.5 4.35 4.21 4.39 410 600 80 90 -3.5 4.75 4.61 4.79 425 500 50 80 -3.5 5.16 5.00 5.20 400 480 40 60 -3.5 5.66 5.49 5.71 80 40 60 -2.7 6.27 6.08 6.32 40 40 60 -2.7 6.27 6.08 6.32 40 40 60 -2.7 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 7.58 7.35 7.65 30 80 6 15 3.8 10.10 <td></td> <td>3.03</td> <td>2.94</td> <td>3.06</td> <td>325</td> <td>009</td> <td>80</td> <td>92</td> <td>-3.5</td> <td>-2.1</td> <td>0</td> <td>450</td> <td>6.0</td>		3.03	2.94	3.06	325	009	80	92	-3.5	-2.1	0	450	6.0
3.64 3.53 3.67 375 600 85 90 -3.5 3.94 3.82 3.98 400 600 85 90 -3.5 4.35 4.21 4.39 410 600 85 90 -3.5 4.75 4.21 4.25 500 50 80 -3.5 5.16 5.00 5.20 400 480 40 60 -2.7 5.66 5.49 5.71 80 40 40 -2.0 6.27 6.08 6.32 40 150 6 10 0.4 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 6.27 6.08 6.32 40 150 6 15 1.2 7.58 7.32 7.32 1.50 1.50 1.50 </td <td></td> <td>3.34</td> <td>3.23</td> <td>3.37</td> <td>350</td> <td>009</td> <td>85</td> <td>92</td> <td>-3.5</td> <td>-2.4</td> <td>0</td> <td>450</td> <td>6.0</td>		3.34	3.23	3.37	350	009	85	92	-3.5	-2.4	0	450	6.0
3.94 3.82 3.98 400 600 85 90 -3.5 4.35 4.21 4.39 410 600 80 90 -3.5 4.75 4.61 4.79 425 500 50 80 -3.5 5.16 5.00 5.20 400 480 40 60 -2.7 5.66 5.49 5.71 80 400 15 40 -2.0 6.87 6.08 6.32 40 150 6 15 40 -2.0 6.87 6.08 6.34 30 80 6 15 1.2 6.87 7.35 7.65 30 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 3.2 8.29 9.28 40 100 6 15 3.2 10.10 9.80 10.20 50 150 10 4.5 <		3.64	3.53	3.67	375	009	85	06	-3.5	-2.4	0	450	6.0
4.35 4.21 4.39 410 600 80 -3.5 4.75 4.61 4.79 425 500 50 80 -3.5 5.16 5.00 5.20 400 480 40 60 -3.5 5.66 5.49 5.71 80 400 15 40 -2.0 6.87 6.08 6.32 40 150 6 10 0.4 6.87 6.08 6.32 40 150 6 15 1.2 6.87 6.08 6.32 40 150 6 15 1.2 6.87 6.08 6.32 40 150 6 15 1.2 6.87 6.08 6.09 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 1.2 8.29 8.36 40 150 10 0 4.5 1.2 10.10 <td></td> <td>3.94</td> <td>3.82</td> <td>3.98</td> <td>400</td> <td>009</td> <td>85</td> <td>06</td> <td>-3.5</td> <td>-2.5</td> <td>0</td> <td>450</td> <td>6.0</td>		3.94	3.82	3.98	400	009	85	06	-3.5	-2.5	0	450	6.0
4.75 4.61 4.79 425 500 50 80 -3.5 -27 - 5.66 5.49 5.71 80 400 15 40 -2.7 - 6.27 6.08 6.32 40 150 6 10 0.4 6.27 6.08 6.32 40 150 6 10 0.4 6.87 6.66 6.94 30 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 1.2 8.29 8.92 40 80 6 15 3.2 10.10 9.80 10.20 60 150 6 15 3.2 10.11 9.80 10.20 6 15 3.2 4.5 3.2 10.11 0.80 10.20 50 150 10 4.5 4.2 4.5 11.11 10.80 11.20 50 150 </td <td></td> <td>1.35</td> <td>4.21</td> <td>4.39</td> <td>410</td> <td>009</td> <td>80</td> <td>06</td> <td>-3.5</td> <td>-2.5</td> <td>0</td> <td>450</td> <td>6.0</td>		1.35	4.21	4.39	410	009	80	06	-3.5	-2.5	0	450	6.0
5.16 5.00 5.20 400 480 40 60 -2.7 5.66 5.49 5.71 80 400 15 40 -2.7 6.27 6.08 6.32 40 150 6 10 0.4 6.87 6.66 6.94 30 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 2.5 8.29 8.04 8.36 40 80 6 15 3.2 10.10 9.80 10.20 50 150 6 15 3.2 10.10 9.80 10.20 50 150 8 20 4.5 10.10 9.80 10.20 50 150 10 20 4.5 10.10 9.80 10.20 50 150 10 20 4.5 6.0 10.10 9.80 10.20 50 150 10 1		1.75	4.61	4.79	425	200	50	80	-3.5	-1.4	0.2	300	6.0
5.66 5.49 5.71 80 400 15 40 -2.0 6.87 6.08 6.32 40 150 6 10 0.4 6.87 6.08 6.32 40 150 6 15 1.2 7.58 7.35 7.65 30 80 6 15 2.5 8.29 8.04 8.36 40 80 6 15 3.2 9.20 8.92 9.28 40 100 6 15 3.2 10.10 9.80 10.20 50 150 10 20 4.5 11.11 10.80 11.20 50 150 10 20 4.5 12.12 11.80 11.20 50 150 10 20 4.5 6.0 13.13 12.70 13.30 50 150 10 30 7.0 16.16 15.70 16.30 50 200 10 <		91.1	5.00	5.20	400	480	40	09	-2.7	-0.8	1.2	300	6.0
6.27 6.08 6.32 40 150 6 10 0.4 6.87 6.66 6.94 30 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 2.5 8.29 8.04 8.36 40 80 6 15 3.2 10.10 9.80 10.20 50 150 6 15 3.2 10.10 9.80 10.20 50 150 8 20 4.5 3.8 10.10 9.80 10.20 50 150 8 20 4.5 3.8 10.10 9.80 10.20 50 150 10 20 4.5 3.8 11.11 10.80 11.20 50 150 10 20 4.5 4.5 4.5 12.12 14.70 15.30 50 200 10 40 10.4 10 18.18		99.	5.49	5.71	80	400	15	40	-2.0	1.2	2.5	300	6.0
6.87 6.66 6.94 30 80 6 15 1.2 7.58 7.35 7.65 30 80 6 15 1.2 8.29 8.04 8.36 40 80 6 15 3.2 9.20 8.92 9.28 40 100 6 15 3.8 10.10 9.80 10.20 50 150 10 20 4.5 10.10 9.80 10.20 50 150 10 20 4.5 11.11 10.80 11.20 50 150 10 20 4.5 12.12 11.80 12.20 50 170 10 30 7.0 13.13 12.70 13.30 50 200 10 30 7.0 16.16 15.70 16.30 50 200 10 40 10.4 1 18.18 17.60 18.40 50 225 10		3.27	6.08	6.32	40	150	9	10	0.4	2.3	3.7	200	6.0
7.58 7.35 7.65 30 80 6 15 2.5 8.29 8.04 8.36 40 80 6 15 3.2 9.20 8.92 9.28 40 100 6 15 3.2 10.10 9.80 10.20 50 150 8 20 4.5 10.10 9.80 11.20 50 150 10 20 4.5 11.11 10.80 11.20 50 150 10 20 5.4 12.12 11.80 12.20 50 170 10 25 6.0 13.13 12.70 13.30 50 170 10 30 7.0 16.15 14.70 15.30 50 200 10 40 10.4 1 16.16 15.70 16.30 50 200 10 45 12.4 1 20.20 19.60 22.40 60 250		78.	99.9	6.94	30	80	9	15	1.2	3.0	4.5	200	6.0
8.29 8.04 8.36 40 80 6 15 3.2 9.20 8.92 9.28 40 100 6 15 3.8 10.10 9.80 10.20 50 150 8 20 4.5 11.11 10.80 11.20 50 150 10 20 4.5 12.12 11.80 12.20 50 170 10 25 6.0 13.13 12.70 13.30 50 170 10 30 7.0 16.16 15.70 16.30 50 200 10 40 10.4 1 16.16 15.70 18.40 50 225 10 45 12.4 1 20.20 19.60 20.40 60 255 15 55 16.4 1 22.22 21.60 22.60 26 26 26 26 26 16.4 1		.58	7.35	7.65	30	80	9	15	2.5	4.0	5.3	150	4.0
9.20 8.92 9.28 40 100 6 15 3.8 10.10 9.80 10.20 50 150 8 20 4.5 11.11 10.80 11.20 50 150 10 20 5.4 12.12 11.80 12.20 50 150 10 25 6.0 13.13 12.70 13.30 50 170 10 30 7.0 15.15 14.70 15.30 50 200 10 30 9.2 1 16.16 15.70 16.30 50 200 10 40 10.4 1 18.18 17.60 18.40 50 225 10 45 12.4 1 20.20 19.60 22.40 60 250 20 55 16.4 1 20.22 21.60 22.60 20 20 20 20 20 16.4 1		3.29	8.04	8.36	40	80	9	15	3.2	4.6	6.2	150	4.0
10.10 9.80 10.20 50 150 8 20 4.5 11.11 10.80 11.20 50 150 10 20 4.5 12.12 11.80 12.20 50 170 10 25 6.0 13.13 12.70 13.30 50 200 10 30 7.0 15.15 14.70 15.30 50 200 10 40 10.4 16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 225 15 55 14.4 22.22 21.60 22.60 250 20 20 16.4		1.20	8.92	9.28	40	100	9	15	3.8	2.5	7.0	150	3.0
11.11 10.80 11.20 50 150 10 20 5.4 12.12 11.80 12.20 50 150 10 25 6.0 13.13 12.70 13.30 50 170 10 30 7.0 15.15 14.70 15.30 50 200 10 30 9.2 16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 250 20 55 14.4 22.22 21.60 22.60 250 20 55 16.4		10	9.80	10.20	20	150	8	20	4.5	6.4	8.0	06	3.0
12.12 11.80 12.20 50 150 10 25 6.0 13.13 12.70 13.30 50 170 10 30 7.0 15.15 14.70 15.30 50 200 10 30 9.2 16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 255 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4	10.89 11.		10.80	11.20	20	150	10	20	5.4	7.4	9.0	85	2.5
13.13 12.70 13.30 50 170 10 30 7.0 15.15 14.70 15.30 50 200 10 30 9.2 16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 255 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4			11.80	12.20	20	150	10	25	0.9	8.4	10.0	85	2.5
15.15 14.70 15.30 50 200 10 30 9.2 16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 225 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4			12.70	13.30	20	170	10	30	7.0	9.4	11.0	80	2.5
16.16 15.70 16.30 50 200 10 40 10.4 18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 225 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4 24.24 60 250 26 26 26 36 36 36	14.85 15.		14.70	15.30	20	200	10	30	9.2	11.4	13.0	75	2.0
18.18 17.60 18.40 50 225 10 45 12.4 20.20 19.60 20.40 60 225 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4 24.23 24.60 24.60 260 250 26 <td< td=""><td></td><td></td><td>15.70</td><td>16.30</td><td>20</td><td>200</td><td>10</td><td>40</td><td>10.4</td><td>12.4</td><td>14.0</td><td>75</td><td>1.5</td></td<>			15.70	16.30	20	200	10	40	10.4	12.4	14.0	75	1.5
20.20 19.60 20.40 60 225 15 55 14.4 22.22 21.60 22.40 60 250 20 55 16.4 24.24 60 250 20 35 16.4 16.4			17.60	18.40	20	225	10	45	12.4	14.4	16.0	20	1.5
22.22 21.60 22.40 60 250 20 55 16.4 24.24 23.50 24.50 60 250 25 70 49.4			19.60	20.40	09	225	15	22	14.4	16.4	18.0	60	1.5
34 34 32 EO 34 EO 3EO 3E 7O 18 4			21.60	22.40	09	250	20	22	16.4	18.4	20.0	09	1.25
24.24 25.30 24.30 80 23 70 18.4	23.76 24.	24.24	23.50	24.50	09	250	25	70	18.4	20.4	22.0	55	1.25

BZX79 series

at t_p = 100 μs ; T_{amb} = 25 $^{\circ}C$ **NON-REPETITIVE PEAK** REVERSE CURRENT Izsm (A) MAX. 0.25 9.0 0.5 0.4 0.3 0.3 0.7 at f = 1 MHz; DIODE CAP. $V_R = 0 V$ C_d (pF) MAX. 20 20 45 45 45 40 4 4 35 40 35 35 71.6 79.8 88.6 MAX. 25.3 29.4 33.4 37.4 41.2 46.6 51.8 57.2 63.8 (see Figs 5 and 6) at $I_{Ztest} = 2 mA$ TEMP. COEFF. S_z (mV/K) T ₽. 26.6 33.0 36.4 41.2 51.0 57.0 80.2 23.4 29.7 64.4 46.1 71.7 21.4 24.4 27.4 30.4 33.4 37.6 42.0 46.6 52.2 58.8 65.6 Ζ̈́ 73.4 at Iztest = 2 mA MAX. 215 80 80 80 130 150 170 180 240 90 200 255 **DIFFERENTIAL RESISTANCE** 25 30 35 35 4 45 20 9 20 80 95 at $I_{Ztest} = 0.5 \text{ mA}$ MAX. 300 300 325 350 375 375 400 425 450 475 500 350 75 9 70 85 100 120 150 170 80 80 85 8 27.50 30.60 33.70 36.70 39.80 43.90 47.90 52.00 57.10 63.20 69.40 76.50 MAX. Tol. ±2% (B) **WORKING VOLTAGE** at $I_{Ztest} = 2 mA$ 32.30 26.50 29.40 35.30 38.20 42.10 46.10 50.00 54.90 60.80 09.99 73.50 Ζ̈́ 30.30 33.33 36.36 39.39 43.43 56.56 68.68 75.75 27.27 51.51 62.62 MAX. 47.47 Tol. ±1% (A) 26.73 29.70 32.67 50.49 55.44 74.25 35.64 46.53 61.38 38.61 42.57 67.32 Ζ̈́ A or B 39 39 33 47 62 56 51

1996 Apr 26 5

Per type BZX79-A/B27 to A/B75

Table 2

= 25 °C; unless otherwise specified.

I_{zsm} (A)

BZX79 series

NON-REPETITIVE PEAK $= 100 \mu s$; $T_{amb} = 25$ REVERSE CURRENT 0.9 0.9 6.0 4.0 3.0 2.5 6.0 6.0 4.0 3.0 2.5 2.0 1.5 5. 1.5 6.0 6.0 2 ڻ و DIODE CAP. at f = 1 MHz; C_d (pF) $V_R = 0 V$ MAX. 450 450 450 450 450 450 300 300 300 200 200 150 150 150 450 90 85 80 75 75 2.5 4.5 5.3 6.2 MAX. 0.2 3.7 7.0 8.0 9.0 10.0 11.0 13.0 14.0 16.0 18.0 20.0 22.0 0 0 0 0 0 0 0 at Iztest = 5 mA TEMP. COEFF. (see Figs 5 and S_z (mV/K) -1.6 -2.0-2.4 -2.4 -2.5 -2.5 -0.8 1.2 2.3 4.0 4.6 5.5 12.4 14.4 16.4 18.4 20.4 3.0 6.4 8.4 9.4 -2.1 -3.5-3.5 -3.52.5 14.4 18.4 Ζ̈́ -3.5 -3.5 -3.5-3.5 -3.5 -2.0 0.4 3.8 4.5 5.4 0.9 9.2 10.4 12.4 16.4 1.2 3.2 7.0 -2.7= 5 mA MAX. 100 100 95 92 90 90 90 80 9 4 10 15 5 15 15 20 20 25 30 30 4 45 55 55 70 **DIFFERENTIAL RESISTANCE** at Iztest TYP. 9 9 9 9 40 9 ω 10 9 75 85 85 50 15 9 9 9 9 15 20 25 80 80 = 1 mA MAX. 009 500 150 150 225 225 900 9 009 900 009 400 170 200 200 250 250 480 100 150 150 80 80 80 at Iztest 275 375 300 325 400 410 425 80 49 350 40 50 20 20 400 30 30 40 50 50 50 09 9 2.6 2.9 3.8 10.6 25.6 5.0 9.9 11.6 15.6 21.2 23.3 <u>ග</u> MAX. 3.2 3.5 4.6 5.4 6.0 7.2 7.9 8.7 9.6 12.7 14.1 17.1 19.1 4. 7% (∓ = 25 °C; unless otherwise specified. **WORKING VOLTAGE** at Iztest = 5 mA 5.8 18.8 20.8 22.8 2.8 4.0 4.8 5.2 6.4 8.5 9.4 12.4 13.8 16.8 2.5 3.1 3.4 3.7 4.4 7.0 7.7 10.4 11.4 15.3 Ζ̈́ <u>년</u> 2.78 22.70 24.70 2.47 6.39 7.00 8.45 11.33 12.36 13.39 15.45 16.50 18.50 20.60 3.09 3.40 4.02 4.43 4.84 5.25 10.30 MAX. 3.71 5.77 9.37 Tol. ±3% (F) 19.40 7.28 7.95 9.70 12.61 14.55 15.50 17.50 21.30 23.30 2.33 2.62 2.91 3.20 3.49 3.78 4.56 4.95 5.43 6.01 6.60 8.83 10.67 11.64 Ζ̈́ ForC 5/6 6V2 7\\5 300 3\3 3\6 3/9 4\\3 6/8 8V2 477 5V1 9V1 10 12 5 15 16 7

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Per type BZX79-F/C2V4 to F/C24

Fable 3

BZX79 series

at t_p = 100 μs ; T_{amb} = 25 $^{\circ}C$ **NON-REPETITIVE PEAK** REVERSE CURRENT Izsm (A) MAX. 0.25 9.0 0.5 0.4 0.3 0.3 0.7 at f = 1 MHz; DIODE CAP. C_d (pF) $V_R = 0 V$ MAX. 20 20 45 45 45 40 4 4 35 40 35 35 MAX. 71.6 79.8 88.6 25.3 29.4 33.4 37.4 41.2 46.6 51.8 57.2 63.8 (see Figs 5 and 6) at $I_{Ztest} = 2 mA$ TEMP. COEFF. S_z (mV/K) T ₽. 26.6 33.0 36.4 41.2 51.0 57.0 80.2 23.4 29.7 64.4 46.1 71.7 21.4 24.4 27.4 30.4 33.4 37.6 42.0 46.6 52.2 58.8 65.6 Ζ̈́ 73.4 at Iztest = 2 mA MAX. 215 80 80 80 130 150 170 180 240 90 200 255 **DIFFERENTIAL RESISTANCE** TYP. 25 30 45 20 9 35 20 8 8 35 4 95 at $I_{Ztest} = 0.5 \text{ mA}$ MAX. 300 300 325 350 375 375 400 425 450 475 500 350 75 9 70 85 120 170 100 150 8 8 85 8 MAX. 28.9 32.0 41.0 46.0 54.0 0.99 72.0 35.0 38.0 50.0 0.09 79.0 ±5% (C) **WORKING VOLTAGE** at $I_{Ztest} = 2 mA$ Ζ̈́ 25.1 28.0 31.0 34.0 37.0 40.0 44.0 48.0 52.0 58.0 64.0 70.0 <u>년</u> 27.80 30.90 34.00 37.10 40.20 44.30 52.50 57.70 63.90 70.00 48.40 77.20 MAX. Tol. ±3% (F) 29.10 32.00 34.90 41.70 49.50 54.30 60.10 26.20 37.80 45.60 00.99 72.80 Ż Z ForC 30 33 39 39 89 47 62 56 51

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Per type BZX79-F/C27 to F/C75

Fable 4

= 25 °C; unless otherwise specified.

Voltage regulator diodes

BZX79 series

THERMAL CHARACTERISTICS

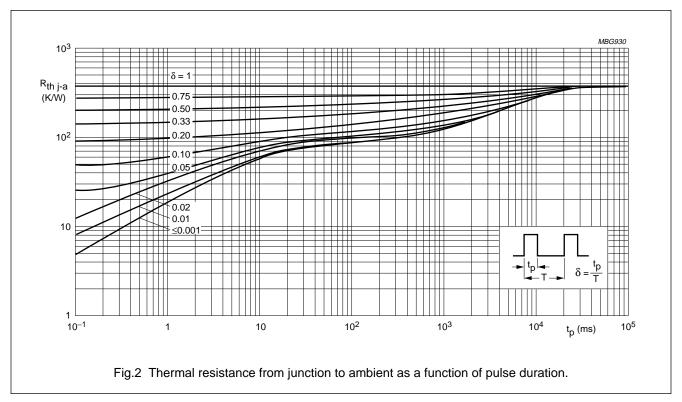
SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-tp}	thermal resistance from junction to tie-point	lead length 8 mm.	300	K/W
R _{th j-a}	thermal resistance from junction to ambient	lead length max.; see Fig.2 and note 1	380	K/W

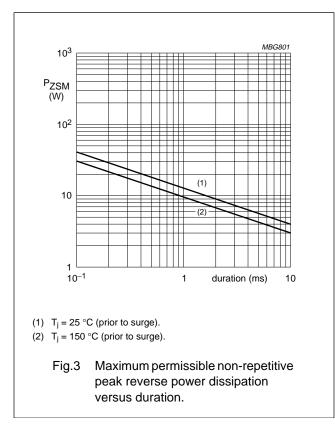
Note

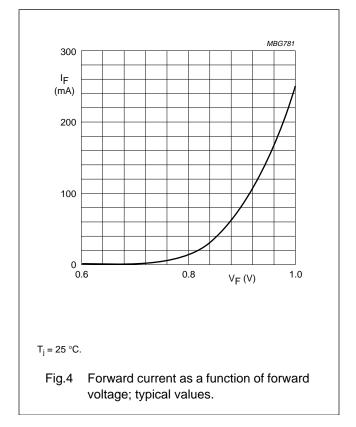
1. Device mounted on a printed circuit-board without metallization pad.

BZX79 series

GRAPHICAL DATA







Voltage regulator diodes

BZX79 series

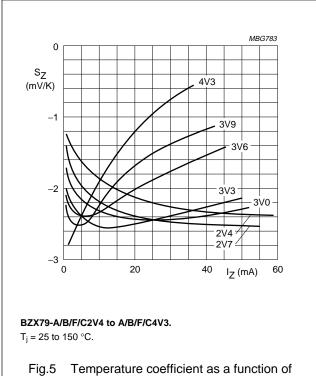


Fig.5 Temperature coefficient as a function of working current; typical values.

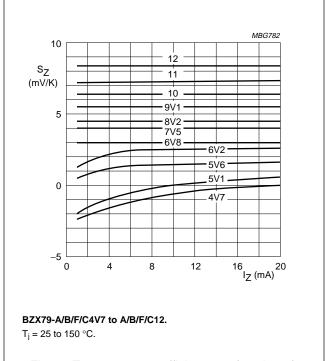
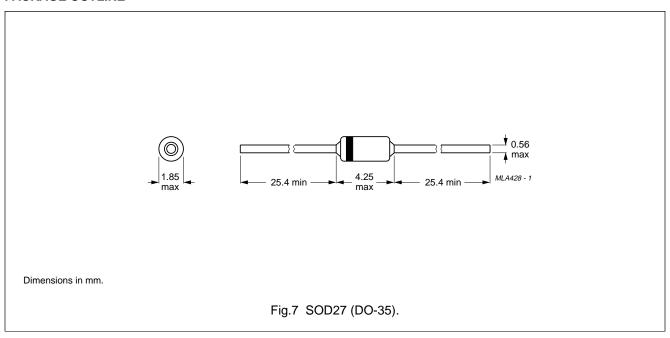


Fig.6 Temperature coefficient as a function of working current; typical values.

Voltage regulator diodes

BZX79 series

PACKAGE OUTLINE



DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limite and a second	

Limiting values

Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

Application information

Where application information is given, it is advisory and does not form part of the specification.

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

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