



F126



CB417



SMA

**GENERAL PURPOSE**

Type	V <sub>ZT</sub> @ I <sub>ZT</sub> *		r <sub>ZT</sub> @ I <sub>ZT</sub> *	I <sub>ZT</sub> *	αV <sub>Z</sub>		I <sub>R</sub> @ ΔV <sub>R</sub>		I <sub>ZM</sub> T <sub>A</sub> = 60°C	I <sub>ZSM</sub> **	Package
	min	max	max	(mA)	min	max	max	(V)	(mA)	(A)	

1.5 W/T<sub>A</sub> = 60°C T<sub>j</sub> max = 150°C

V<sub>F</sub> ≤ 1.2 V (T<sub>A</sub> = 25°C, I<sub>F</sub> = 0.2A)

BZY 97 C 11	10.4	11.6	7	50	5	10	0.5	5	129	1.3	F126 PLASTIC
• BZY 97 C 12	11.4	12.7	7	50	5	10	0.5	7	118	1.2	
• BZY 97 C 13	12.4	14.1	10	50	5	10	0.5	7	106	1.1	
• BZY 97 C 15	13.8	15.6	10	50	5	10	0.5	10	96	1.0	
BZY 97 C 16	15.3	17.1	15	25	6	11	0.5	10	88	0.90	
• BZY 97 C 18	16.8	19.1	15	25	6	11	0.5	10	79	0.81	
• BZY 97 C 20	18.8	21.2	15	25	6	11	0.5	10	71	0.73	
• BZY 97 C 22	20.8	23.3	15	25	6	11	0.5	12	64	0.66	
• BZY 97 C 24	22.8	25.6	15	25	6	11	0.5	12	59	0.60	
• BZY 97 C 27	25.1	28.9	15	25	6	11	0.5	14	52	0.53	
BZY 97 C 30	28	32	15	25	6	11	0.5	14	47	0.48	
• BZY 97 C 33	31	35	15	25	6	11	0.5	17	43	0.44	
BZY 97 C 36	34	38	40	10	6	11	0.5	17	40	0.40	
BZY 97 C 39	37	41	40	10	6	11	0.5	20	37	0.38	
BZY 97 C 43	40	46	45	10	7	12	0.5	20	33	0.33	
BZY 97 C 47	44	50	45	10	7	12	0.5	24	30	0.31	
BZY 97 C 51	48	54	60	10	7	12	0.5	24	28	0.28	
BZY 97 C 56	52	60	60	10	7	12	0.5	28	25	0.26	
BZY 97 C 62	58	66	80	10	7	12	0.5	28	23	0.23	
• BZY 97 C 68	64	72	80	10	7	12	0.5	34	21	0.21	
BZY 97 C 75	70	79	100	10	7	12	0.5	34	19	0.19	
BZY 97 C 82	77	87	100	10	7	12	0.5	41	17	0.18	
BZY 97 C 91	85	96	200	5	8	13	0.5	41	16	0.16	
BZY 97 C 100	94	106	200	5	8	13	0.5	50	14	0.15	
BZY 97 C 110	104	116	250	5	8	13	0.5	50	13	0.13	
BZY 97 C 120	114	127	250	5	8	13	0.5	60	12	0.12	
BZY 97 C 130	124	141	300	5	8	13	0.5	60	11	0.11	
• BZY 97 C 150	138	156	300	5	8	13	0.5	75	10	0.10	
BZY 97 C 160	153	171	350	5	8	13	0.5	75	9	0.09	
BZY 97 C 180	168	191	350	5	8	13	0.5	90	8	0.08	
• BZY 97 C 200	188	212	350	5	8	13	0.5	90	7	0.07	

\* Pulse test t<sub>p</sub> ≤ 50 ms δ < 2%.

\*\* Rectangular waveform (t<sub>p</sub> = 10 ms).

• Preferred voltages.

The regulation voltages are defined according to the E 24 series.

## ZENER DIODES

## GENERAL PURPOSE (cont'd)

Type	V <sub>ZT</sub> @ I <sub>ZT</sub> *		r <sub>ZT</sub> @ I <sub>ZT</sub> *	I <sub>ZT</sub> *	αV <sub>Z</sub>	I <sub>R</sub> @ V <sub>R</sub>	I <sub>ZM</sub> T <sub>A</sub> = 55°C	I <sub>ZSM</sub> **	Package
	min (V)	max	max (Ω)	(mA)	typ (10 <sup>-4</sup> /°C)	max (μA) (V)	(A)	(A)	

2 W/T<sub>A</sub> = 55° T<sub>j</sub> max = 175°CP<sub>S</sub> (10 ms) = 60 W V<sub>F</sub> ≤ 1.2 V (T<sub>A</sub> = 25°C, I<sub>F</sub> = 0.5 A)

BZV 47 C 11	10.4	11.6	7	50	6.0	1	8.3	170	3.6	F126 PLASTIC
• BZV 47 C 12	11.4	12.7	7	50	6.5	1	9.1	155	3.3	
BZV 47 C 13	12.4	14.1	10	50	6.5	1	9.9	140	3.0	
• BZV 47 C 15	13.8	15.6	10	50	7.0	1	11.4	130	2.7	
BZV 47 C 16	15.3	17.1	15	25	7.0	0.5	12.2	115	2.5	
• BZV 47 C 18	16.8	19.1	15	25	7.5	0.5	13.7	105	2.2	
BZV 47 C 20	18.8	21.2	15	25	7.5	0.5	15.2	94	2.0	
• BZV 47 C 22	20.8	23.3	15	25	8.0	0.5	16.7	86	1.8	
• BZV 47 C 24	22.8	25.6	15	25	8.0	0.5	18.2	78	1.7	
• BZV 47 C 27	25.1	28.9	15	25	8.5	0.5	20.5	69	1.5	
• BZV 47 C 30	28	32	15	25	8.5	0.5	22.8	62	1.3	
BZV 47 C 33	31	35	15	25	8.5	0.5	25	57	1.2	
• BZV 47 C 36	34	38	40	10	8.5	0.5	27.4	52	1.1	
BZV 47 C 39	37	41	40	10	9.0	0.5	29.6	48	1.0	
BZV 47 C 43	40	46	45	10	9.0	0.5	32.7	43	0.92	
• BZV 47 C 47	44	50	45	10	9.0	0.5	35.7	40	0.85	
BZV 47 C 51	48	54	60	10	9.0	0.5	38.8	37	0.78	
BZV 47 C 56	52	60	60	10	9.0	0.5	42.5	33	0.71	
• BZV 47 C 62	58	66	80	10	9.0	0.5	47.1	30	0.64	
• BZV 47 C 68	64	72	80	10	9.0	0.5	51.7	27	0.59	
BZV 47 C 75	70	79	100	10	9.0	0.5	57	25	0.53	
BZV 47 C 82	77	87	100	10	9.0	0.5	62.4	23	0.49	
BZV 47 C 91	85	96	200	5	9.0	0.5	69.2	20	0.44	
• BZV 47 C 100	94	106	200	5	9.0	0.5	76	18	0.40	
BZV 47 C 110	104	116	250	5	9.5	0.5	83.5	17	0.36	
BZV 47 C 120	114	127	250	5	9.5	0.5	91.2	15	0.33	
BZV 47 C 130	124	141	300	5	9.5	0.5	98.2	14	0.30	
• BZV 47 C 150	138	156	300	5	9.5	0.5	114	12.8	0.27	
BZV 47 C 160	153	171	350	5	9.5	0.5	122	11.7	0.25	
BZV 47 C 180	168	191	350	5	9.5	0.5	137	10.5	0.22	
BZV 47 C 200	188	212	350	5	9.5	0.5	152	9.4	0.20	

\* Pulse test tp ≤ 50 ms δ &lt; 2%.

\*\* Rectangular waveform (tp = 10 ms).

## • Preferred voltages.

The regulation voltages are defined according to the E 24 series.

**GENERAL PURPOSE (cont'd)**

Type	V <sub>ZT</sub> @ I <sub>ZT</sub> *	I <sub>ZT</sub> *	r <sub>ZT</sub> @ I <sub>ZT</sub> *	r <sub>ZK</sub> @ I <sub>ZK</sub> 1.0 mA	I <sub>R</sub> @ V <sub>R</sub>	αV <sub>Z</sub>	I <sub>ZM</sub> T <sub>A</sub> = 75°C	I <sub>ZSM</sub> **	ΔV <sub>Z</sub> ***	Package	
	nom (V)	(mA)	max. (Ω)	Ω	max. (μA)	(V)	typ. (10 <sup>-4</sup> /°C)	max. (mA)	(A)	max. (V)	

5 W/T<sub>A</sub> = 75°C T<sub>j</sub> max = 200°C

1N 5334 B	3.6	350	2.5	500	150	1.0	- 5.5	1320	20.4	0.80	CB417 PLASTIC
1N 5335 B	3.9	320	2.0	500	50	1.0	- 5	1220	18.8	0.54	
1N 5336 B	4.3	290	2.0	500	10	1.0	- 4	1100	17.0	0.49	
1N 5337 B	4.7	260	2.0	450	5.0	1.0	- 2	1010	15.6	0.44	
• 1N 5338 B	5.1	240	1.5	400	1.0	1.0	1	930	14.4	0.39	
• 1N 5339 B	5.6	220	1.0	400	1.0	2.0	2.5	865	13.1	0.25	
1N 5340 B	6.0	200	1.0	300	1.0	3.0	2.8	790	12.2	0.19	
• 1N 5341 B	6.2	200	1.0	200	1.0	3.0	3.2	765	11.8	0.10	
1N 5342 B	6.8	175	1.0	200	10	5.2	4	700	10.8	0.15	
1N 5343 B	7.5	175	1.5	200	10	5.7	4.5	630	9.8	0.15	
• 1N 5344 B	8.2	150	1.5	200	10	6.2	4.8	580	8.9	0.20	
1N 5345 B	8.7	150	2.0	200	10	6.6	4.9	545	8.4	0.20	
• 1N 5346 B	9.1	150	2.0	150	7.5	6.9	5.1	520	8.1	0.22	
1N 5347 B	10	125	2.0	125	5.0	7.6	5.5	475	7.3	0.22	
1N 5348 B	11	125	2.5	125	5.0	8.4	6	430	11.0	0.25	
• 1N 5349 B	12	100	2.5	125	2.0	9.1	6.5	395	10.1	0.25	
• 1N 5350 B	13	100	2.5	100	1.0	9.9	6.5	365	9.3	0.25	
1N 5351 B	14	100	2.5	75	1.0	10.6	7	340	8.6	0.25	
• 1N 5352 B	15	75	2.5	75	1.0	11.5	7	315	8.1	0.25	
• 1N 5353 B	16	75	2.5	75	1.0	12.2	7	295	7.6	0.30	
1N 5354 B	17	70	2.5	75	0.5	12.9	7	280	7.1	0.35	
• 1N 5355 B	18	65	2.5	75	0.5	13.7	7.5	264	6.7	0.40	
1N 5356 B	19	65	3.0	75	0.5	14.4	7.5	250	6.4	0.40	
1N 5357 B	20	65	3.0	75	0.5	15.2	7.5	237	6.0	0.40	
• 1N 5358 B	22	50	3.5	75	0.5	16.7	8	216	5.5	0.45	
• 1N 5359 B	24	50	3.5	100	0.5	18.2	8	198	5.0	0.55	
1N 5360 B	25	50	4.0	110	0.5	19.0	8	190	4.8	0.55	
• 1N 5361 B	27	50	5.0	120	0.5	20.6	8.5	176	4.5	0.60	
1N 5362 B	28	50	6.0	130	0.5	21.2	8.5	170	4.3	0.60	
• 1N 5363 B	30	40	8.0	140	0.5	22.8	8.5	158	4.0	0.60	
• 1N 5364 B	33	40	10	150	0.5	25.1	8.5	144	3.7	0.60	
• 1N 5365 B	36	30	11	160	0.5	27.4	9	132	3.4	0.65	
• 1N 5366 B	39	30	14	170	0.5	29.7	9	122	3.1	0.65	
1N 5367 B	43	30	20	190	0.5	32.7	9	110	2.8	0.70	
1N 5368 B	47	25	25	210	0.5	35.8	9	100	2.6	0.80	
1N 5369 B	51	25	27	230	0.5	38.8	9	93	2.4	0.90	
• 1N 5370 B	56	20	35	280	0.5	42.6	9	86	2.2	1.00	
1N 5371 B	60	20	40	350	0.5	45.5	9	79	2.0	1.20	
• 1N 5372 B	62	20	42	400	0.5	47.1	9	76	1.9	1.35	
1N 5373 B	68	20	44	500	0.5	51.7	9	70	1.8	1.50	
1N 5374 B	75	20	45	620	0.5	56.0	9	63	1.6	1.60	
1N 5375 B	82	15	65	720	0.5	62.2	9	58	1.5	1.80	
1N 5376 B	87	15	75	760	0.5	66.0	9	54.5	1.4	2.00	
1N 5377 B	91	15	75	760	0.5	69.2	9	52.5	1.3	2.20	
1N 5378 B	100	12	90	800	0.5	76.0	9.5	47.5	1.2	2.50	
1N 5379 B	110	12	125	1000	0.5	83.6	9.5	43	1.1	2.50	

\* Pulse test tp ≤ 50 ms δ &lt; 2%

\*\* Rectangular waveform (tp = 10 ms).

\*\*\* Measured between 10% and 50% of I<sub>ZM</sub>.

## • Preferred voltages.

Tolerance on nominal V<sub>ZT</sub> value: ± 5%.

## ZENER DIODES

## GENERAL PURPOSE (cont'd)

Type	V <sub>ZT</sub> @ I <sub>ZT</sub> *	I <sub>ZT</sub> *	r <sub>ZT</sub> @ I <sub>ZT</sub> *	r <sub>ZK</sub> @ I <sub>ZK</sub> 1.0 mA	I <sub>R</sub> @ V <sub>R</sub>		αV <sub>Z</sub>	I <sub>ZM</sub> T <sub>A</sub> = 75°C	I <sub>ZSM</sub> **	ΔV <sub>Z</sub> ***	Package
	nom (V)	(mA)	max. (Ω)	Ω	max. (μA)	(V)	typ. (10 <sup>-4</sup> /°C)	max. (mA)	(A)	max. (V)	

5 W/T<sub>A</sub> = 75°C T<sub>j</sub> max = 200°C

1N 5380 B	120	10	170	1150	0.5	91.2	9.5	39.5	1.0	2.50	CB417 PLASTIC
1N 5381 B	130	10	190	1250	0.5	98.8	9.5	36.5	0.93	2.50	
1N 5382 B	140	8.0	230	1500	0.5	106	9.5	34	0.86	2.50	
• 1N 5383 B	<b>150</b>	<b>8.0</b>	<b>330</b>	<b>1500</b>	<b>0.5</b>	<b>114</b>	<b>9.5</b>	<b>31.6</b>	<b>0.81</b>	<b>3.00</b>	
1N 5384 B	160	8.0	350	1650	0.5	122	9.5	29.4	0.76	3.00	
1N 5385 B	170	8.0	380	1750	0.5	129	9.5	28	0.71	3.00	
1N 5386 B	<b>180</b>	5.0	430	1750	0.5	137	9.5	26.4	0.67	4.00	
1N 5387 B	190	5.0	450	1850	0.5	144	9.5	25	0.64	5.00	
• 1N 5388 B	<b>200</b>	<b>5.0</b>	<b>480</b>	<b>1850</b>	<b>0.5</b>	<b>152</b>	<b>10</b>	<b>23.6</b>	<b>0.60</b>	<b>5.00</b>	

\* Pulse test t<sub>p</sub> ≤ 50 ms δ < 2%\*\* Rectangular waveform (t<sub>p</sub> = 10 ms).\*\*\* Measured between 10% and 50% of I<sub>ZM</sub>.

## • Preferred voltages.

Tolerance on nominal V<sub>ZT</sub> value: ± 5%.

**GENERAL PURPOSE – NEW SERIES**

Types	Marking	V <sub>ZT</sub> @ I <sub>ZT</sub>		r <sub>ZT</sub> @ I <sub>ZTm</sub>	I <sub>ZT</sub>	R <sub>ZK</sub> @ I <sub>ZK</sub>		αV <sub>Z</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>	I <sub>ZSM</sub>	Package	
		min.	max	ax.	mA	max.	mA	typ.	max.	V	max.	max. A		
		V		Ω	(1)	Ω	mA	10 <sup>-4</sup> /°C	μA	V	T <sub>j</sub> = 115°C	(2)		

2W/T<sub>lead</sub> = 115°C T<sub>j</sub> max = 175°CV<sub>F</sub> ≤ 1.2V (T<sub>A</sub> = 25°C, I<sub>F</sub> = 500mA)

<a href="#">SM2Z5V1</a>	ZHK	4.8	5.4	5	100	350	2	1	5	1	370	7.8	SMA
SM2Z5V6	ZHL	5.2	6	2	100	250	2	2.5	5	1	330	7.1	
SM2Z12	ZHW	11.4	12.7	7	50	150	1	6.5	1	9.1	155	3.3	
SM2Z15	ZHZ	13.8	15.6	10	50	150	1	7	1	11.4	130	2.7	
SM2Z18	ZJF	16.8	19.1	15	25	150	1	7.5	0.5	13.7	105	2.2	
SM2Z24	ZJL	22.8	25.6	15	25	180	1	8	0.5	18.2	78	1.6	
SM2Z27	ZJN	25.1	28.9	15	25	200	1	8.5	0.5	20.5	69	1.4	
SM2Z30	ZJQ	28	32	15	25	250	1	8.5	0.5	22.8	62	1.1	
SM2Z36	ZJS	34	38	40	10	350	1	8.5	0.5	27.4	52	0.9	
SM2Z47	ZJV	44	50	45	10	600	1	9	0.5	35.7	40	0.7	
SM2Z150	ZKR	138	156	300	5	4000	0.5	9.5	0.5	114	12.8	0.15	
SM2Z200	ZKW	188	212	350	5	6000	0.5	9.5	0.5	152	9.4	0.12	

(1) Pulse test: t<sub>p</sub> ≤ 50ms δ < 2%.(2) Rectangular wave form (t<sub>p</sub> = 10ms).