

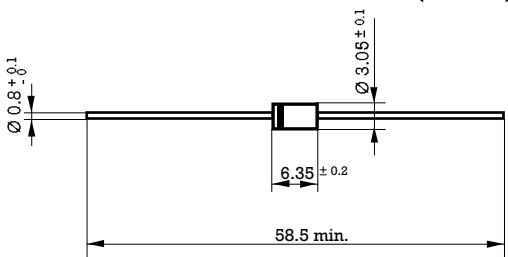

**Product: Transient Voltage Suppressor (TVS)**

These devices able to absorb high levels of energy in short time pulses without damage, having a very fast response time (<1ps) and an excellent clamping factor are specially suited for protection purposes in application of Automotive, Consumer and Computer sectors.

FAGOR ELECTRONICA offers unidirectional and bidirectional TVS products covering the range from 400W to 5000W, assembled in both leaded and SMD packages.

Product	Family	I <sub>pp</sub> (A)	V <sub>CL</sub> (V)	V <sub>Z</sub> (V)	P <sub>pp</sub> (W)	DIREC	OUTLINE
<a href="#">BZW04-171B (200v)</a>	BZW04-B	1.5	274	200	400W	BIDIREC.	DO-15

## 400W Unidirectional and Bidirectional Transient Voltage Suppressor Diodes

<p>Dimensions in mm.</p> <p style="text-align: right;">DO-15 (Plastic)</p>  <p><b>Mounting instructions</b></p> <ol style="list-style-type: none"> <li>1. Min. distance from body to soldering point, 4 mm.</li> <li>2. Max. solder temperature, 350 °C.</li> <li>3. Max. soldering time, 3.5 sec.</li> <li>4. Do not bend lead at a point closer than 2 mm. to the body.</li> </ol>	<p>Peak Pulse Power Rating At 1 ms. Exp. 400 W</p> <p>Reverse stand-off Voltage 5.8 ÷ 256 V</p>  <ul style="list-style-type: none"> <li>• Glass passivated junction</li> <li>• Low Capacitance AC signal protection</li> <li>• Response time typically &lt; 1 ns.</li> <li>• Molded case</li> <li>• The plastic material carries U/L recognition 94 V-0</li> <li>• Terminals: Axial leads</li> <li>• Polarity: Color band denotes Cathode except bidirectional types</li> </ul>
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### Maximum Ratings, according to IEC publication No. 134

$P_{PP}$	Peak pulse power with 10/1000 $\mu$ s exponential pulse	400 W
$I_{FSM}$	Non repetitive surge peak forward current (t = 10 ms) (Note 1)	50 A
$T_j$	Operating temperature range	- 65 to + 175 °C
$T_{stg}$	Storage temperature range	- 65 to + 175 °C
$P_{M(AV)}$	Steady state Power Dissipation (l = 10mm)	1 W

### Electrical Characteristics at Tamb = 25 °C

$V_F$	Max. forward voltage drop at $I_F = 50$ A (Note 1)	$V_{BR} \leq 220$ V $V_{BR} > 220$ V	3.5 V 5.0 V
$R_{thj-l}$	Max. thermal resistance (l = 10 mm.)		45 °C/W

Note 1: Valid only for Unidirectional.

Type	Maximum Reverse Leakage Current		(1) Breakdown Voltage				Max. Clamping Voltage	
	$I_{RM}$ at $V_{RM}$	$V_{RM}$	$V_{BR}$ at $I_R$			$V_{CL}$ at $I_{PP}$	$I_{PP}$	
	( $\mu A$ )	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
Bidirectional								
BZW04-6V4B	500	6.4	7.13	7.5	8.25	10	11.3	35.4
BZW04-7V0B	200	7.02	7.79	8.2	9.02	10	12.1	33
BZW04-7V8B	50	7.78	8.65	9.1	10	1	13.4	30
BZW04-8V5B	10	8.55	9.5	10	11	1	14.5	27.6
BZW04-9V4B	5	9.4	10.5	11	12.1	1	15.6	25.7
BZW04-10B	5	10.2	11.4	12	13.2	1	16.7	24
BZW04-11B	5	11.1	12.4	13	14.3	1	18.2	22
BZW04-13B	5	12.8	14.3	15	16.5	1	21.2	19
BZW04-14B	5	13.6	15.2	16	17.6	1	22.5	17.8
BZW04-15B	5	15.3	17.1	18	19.8	1	25.2	16
BZW04-17B	5	17.1	19	20	22	1	27.7	14.5
BZW04-19B	5	18.8	20.9	22	24.2	1	30.6	13
BZW04-20B	5	20.5	22.8	24	26.4	1	33.2	12
BZW04-23B	5	23.1	25.7	27	29.7	1	37.5	10.7
BZW04-26B	5	25.6	28.5	30	33	1	41.5	9.6
BZW04-28B	5	28.2	31.4	33	36.3	1	45.7	8.8
BZW04-31B	5	30.8	34.2	36	39.6	1	49.9	8
BZW04-33B	5	33.3	37.1	39	42.9	1	53.9	7.4
BZW04-37B	5	36.8	40.9	43	47.3	1	59.3	6.7
BZW04-40B	5	40.2	44.7	47	51.7	1	64.8	6.2
BZW04-44B	5	43.6	48.5	51	56.1	1	70.1	5.7
BZW04-48B	5	47.8	53.2	56	61.6	1	77	5.2
BZW04-53B	5	53	58.9	62	68.2	1	85	4.7
BZW04-58B	5	58.1	64.6	68	74.8	1	92	4.3
BZW04-64B	5	64.1	71.3	75	82.5	1	103	3.9
BZW04-70B	5	70.1	77.9	82	92.2	1	113	3.5
BZW04-78B	5	77.8	86.5	91	100	1	125	3.2
BZW04-85B	5	85.8	95	100	110	1	137	2.9
BZW04-94B	5	94	105	110	121	1	152	2.6
BZW04-102B	5	102	114	120	132	1	165	2.4
BZW04-111B	5	111	124	130	143	1	179	2.2
BZW04-128B	5	128	143	150	165	1	207	2.0
BZW04-136B	5	136	152	160	176	1	219	1.8
BZW04-145B	5	145	161	170	187	1	234	1.7
BZW04-154B	5	154	171	180	198	1	246	1.6
BZW04-171B	5	171	190	200	220	1	274	1.5
BZW04-188B	5	188	209	220	242	1	301	1.4
BZW04-213B	5	213	237	250	275	1	344	1.3
BZW04-239B	5	239	266	280	308	1	384	1.2
BZW04-256B	5	256	285	300	330	1	414	1.2

(1) Tested with pulses.  
Pulse test:  $t_p = 50 \text{ ms}$ ;  $\delta < 2\%$