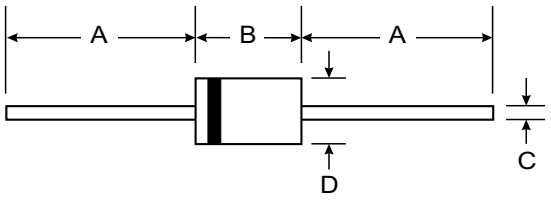
BZW06-5V8—BZW06-376

600 Watts Axial Leaded Transient Voltage Suppressors

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 600W peak pulse power capability with a 10/1000μs waveform, repetition rate (duty cycle): 0.01%
- Excellent clamping capability
- Fast response time: typically less than 1.0ps from 0 Volts to $V_{(BR)}$ for uni-directional and 5.0ns for bi-directional types
- Devices with $V_{(BR)} \geq 10V$ I_D are typically I_D less than 1.0 μA
- High temperature soldering guaranteed:265 °C/ 10 seconds, 0.375"(9.5mm) lead length, 5lbs. (2.3kg) tension



DO-15		
Dim	**Min**	**Max**
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Mechanical Data

- Case:JEDEC DO--15, molded plastic body over passivated junction
- Terminals: Axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Foruni-directional types the color band denotes the cathode, which is postitive with respect to the anode under normal TVS operation
- Weight: 0.014 ounces, 0.39 grams
- Mounting position: Any

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

	SYMBOL	VALUE	UNIT
Peak power sissipation with a 10/1000μs waveform (NOTE 1, FIG.1)	P_{PPM}	Minimum 600	W
Peak pulse current with a 10/1000μs waveform (NOTE 1)	I_{PPM}	SEE TABLE 1	A
Steady state power dissipation at T_L=75°C Lead lengths 0.375"(9.5mm) (NOTE 2)	$P_{M(AV)}$	3.0	W
Peak forward surge current, 8.3ms single half Sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0	A
Thermal resistance junction to lead junction to ambient lead = 10mm	$R_{\theta JL}$ $R_{\theta JA}$	60 100	°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55---+175	°C

NOTES: (1) Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25°C per Fig. 2
Rating is 500W between 40V and 188V types. For a surge greater than the maximum values, the diode will short circuit.
(2) Mounted on copper pad area of 1.6 x 1.6" (40 x 40mm) per Fig. 5

Device Type	I_D @ V_{MW} (max)		$V_{(BR)}$ @ I_T (min)(1)		V_C @ I_{PP} (max) 10/1000μs		V_C @ I_{PP} (max) 8/20μs		Max. Temp. Coefficient of $V_{(BR)}$(2)	Typical Capacitance C(3)
	μA	V	V	mA	V	A	V	A	%/C	pF
BZW06-5V8CA	1000	5.8	6.45	10	10.5	57.0	13.4	298	0.057	4000
BZW06-5V8 A	1000	5.8	6.45	10	10.5	57.0	13.4	298	0.057	4000
BZW06-6V4CA	500	6.4	7.13	10	11.3	53.0	14.5	276	0.061	3700
BZW06-6V4 A	500	6.4	7.13	10	11.3	53.0	14.5	276	0.061	3700
BZW06-8V5CA	10	8.50	9.50	1	14.5	41.0	18.6	215	0.073	2800
BZW06-8V5A	10	8.50	9.50	1	14.5	41.0	18.6	215	0.073	2800
BZW06-10 CA	5	10.2	11.4	1	16.7	36.0	21.7	184	0.078	2300
BZW06-10 A	5	10.2	11.4	1	16.7	36.0	21.7	184	0.078	2300
BZW06-13CA	5	12.8	14.3	1	21.2	28.0	27.2	147	0.084	1900
BZW06-13 A	5	12.8	14.3	1	21.2	28.0	27.2	147	0.084	1900
BZW06-15CA	1	15.3	17.1	1	25.2	24.0	32.5	123	0.088	1600
BZW06-15 A	1	15.3	17.1	1	25.2	24.0	32.5	123	0.088	1600
BZW06-19CA	1	18.8	20.9	1	30.6	19.6	39.3	102	0.092	1350
BZW06-19A	1	18.8	20.9	1	30.6	19.6	39.3	102	0.092	1350
BZW06-20CA	1	20.5	22.8	1	33.2	18.0	42.8	93.0	0.094	1250
BZW06-20 A	1	20.5	22.8	1	33.2	18.0	42.8	93.0	0.094	1250
BZW06-23CA	1	23.1	25.7	1	37.5	16.0	48.3	83.0	0.096	1150
BZW06-23 A	1	23.1	25.7	1	37.5	16.0	48.3	83.0	0.096	1150
BZW06-26 CA	1	25.6	28.5	1	41.5	14.5	53.5	75.0	0.097	1075
BZW06-26 A	1	25.6	28.5	1	41.5	14.5	53.5	75.0	0.097	1075
BZW06-28CA	1	28.2	31.4	1	45.7	13.1	59.0	68.0	0.098	1000
BZW06-28 A	1	28.2	31.4	1	45.7	13.1	59.0	68.0	0.098	1000
BZW06-31CA	1	30.8	34.2	1	49.9	12.0	64.3	62.0	0.099	950
BZW06-31A	1	30.8	34.2	1	49.9	12.0	64.3	62.0	0.099	950
BZW06-33CA	1	33.3	37.1	1	53.9	11.1	69.7	57.0	0.100	900
BZW06-33A	1	33.3	37.1	1	53.9	11.1	69.7	57.0	0.100	900
BZW06-40CA	1	40.2	44.7	1	64.8	9.3	84.0	48.0	0.101	800
BZW06-40 A	1	40.2	44.7	1	64.8	9.3	84.0	48.0	0.101	800
BZW06-48CA	1	47.8	53.2	1	77.0	6.5	100	40.0	0.103	700
BZW06-48A	1	47.8	53.2	1	77.0	6.5	100	40.0	0.103	700

NOTE: (1) Pulse test: tp$\leq$50ms.

(2) $\Delta V_{(BR)} = \alpha T^* (T_A - 25) * V_{(BR)}(25°C)$

(3) V_R = 0 V, f = 1 MHZ. For Bidirectional types, capacitance value is divided by 2

Device Type	I_D @ V_{MW} (max)		$V_{(BR)}$ @ I_T (min)(1)		V_C @ I_{PP} (max) 10/1000μs		V_C @ I_{PP} (max) 8/20μs		Max. Temp. Coefficient of $V_{(BR)}$(2)	Typical Capacitance C(3)
	μA	V	V	mA	V	A	V	A	%/C	pF
BZW06-58CA	1	58.1	64.6	1	92.0	5.4	121	33.0	0.104	625
BZW06-58 A	1	58.1	64.6	1	92.0	5.4	121	33.0	0.104	625
BZW06-70CA	1	70.1	77.9	1	113	4.4	146	27.0	0.105	550
BZW06-70 A	1	70.1	77.9	1	113	4.4	146	27.0	0.105	550
BZW06-85CA	1	85.5	95.0	1	137	3.6	178	22.5	0.106	500
BZW06-85 A	1	85.5	95.0	1	137	3.6	178	22.5	0.106	500
BZW06-102CA	1	102	114	1	165	3.0	212	19.0	0.107	450
BZW06-102 A	1	102	114	1	165	3.0	212	19.0	0.107	450
BZW06-128CA	1	128	143	1	207	2.4	265	15.0	0.108	400
BZW06-128 A	1	128	143	1	207	2.4	265	15.0	0.108	400
BZW06-154CA	1	154	171	1	246	2.0	317	12.6	0.108	360
BZW06-154 A	1	154	171	1	246	2.0	317	12.6	0.108	360
BZW06-171CA	1	171	190	1	274	1.8	353	11.3	0.108	350
BZW06-171 A	1	171	190	1	274	1.8	353	11.3	0.108	350
BZW06-188CA	1	188	209	1	328	1.5	388	10.3	0.108	330
BZW06-188 A	1	188	209	1	328	1.5	388	10.3	0.108	330
BZW06-213CA	1	213	237	1	344	1.7	442	9.0	0.110	310
BZW06-213 A	1	213	237	1	344	1.7	442	9.0	0.110	310
BZW06-256CA	1	256	285	1	414	1.4	529	7.6	0.110	290
BZW06-256 A	1	256	285	1	414	1.4	529	7.6	0.110	290
BZW06-273CA	1	273	304	1	438	1.4	564	7.1	0.110	280
BZW06-273 A	1	273	304	1	438	1.4	564	7.1	0.110	280
BZW06-299CA	1	299	33.2	1	482	1.2	618	6.5	0.110	270
BZW06-299 A	1	299	33.2	1	482	1.2	618	6.5	0.110	270
BZW06-342CA	1	342	380	1	548	1.1	706	5.7	0.110	360
BZW06-342 A	1	342	380	1	548	1.1	706	5.7	0.110	360
BZW06-376CA	1	376	418	1	603	1.0	776	5.7	0.100	350
BZW06-376 A	1	376	418	1	603	1.0	776	5.7	0.100	350

NOTE: (1) Pulse test: tp≤50ms.

(2) $\triangle V_{(BR)} = \alpha T^* (T_A - 25)^* V_{(BR)}(25°C)$

(3) V_R = 0 V, f = 1 MHZ. For Bidirectional types, capacitance value is divided by 2