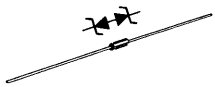
SGS-THOMSON MICROELECTRONICS

BZV 37

SYMMETRICAL ZENER DIODE (PROTECTION)



DO 35
(Glass)

DESCRIPTION

BZV 37 is a dual diode, specially designed for ESD protection.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation**	T_{amb} = 50°C	0.5	W
P_P	Non Repetitive Surge Peak Power	T_p = 100µs Rectangular Waveform	40	W
I_{PP}	Peak Pulse Current*	8–20µs expo 10–1000µs expo	7 2	A
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 200	°C
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230	°C

THERMAL RESISTANCE

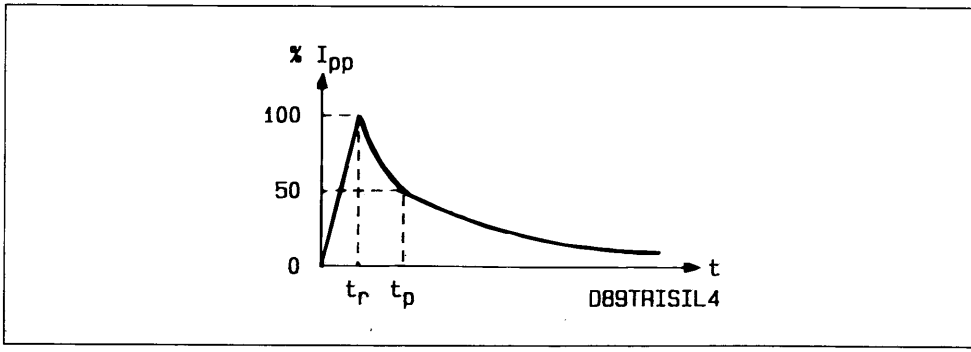
Symbol	Parameter	Value	Unit
$R_{th\ (j-a)}$	Junction–ambient**	300	°C/W

* Exponential pulse (see figure 1).
** On infinite heatsink with 4mm lead length.

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V_{ZT}	T_{amb} = 25°C	I_{ZT} = 5mA	6.2		6.8	V
V_{CL}	T_{amb} = 25°C	I_{PP} = 7A (pulse 8 – 20µs expo) See Fig.1			25	V
	T_{amb} = 25°C	I_{PP} = 2A (pulse 10–1000µs expo) See Fig.1			15	
I_R	T_{amb} = 25°C	V_R = 2V			1	µA
	T_{amb} = 25°C	V_R = 4V			10	
	T_{amb} = 150°C	V_R = 4V			20	
r_{ZT}	T_j = 25°C	I_{ZT} = 5mA			20	Ω
C	T_j = 25°C	V_R = 0V f = 1MHz		90		pF

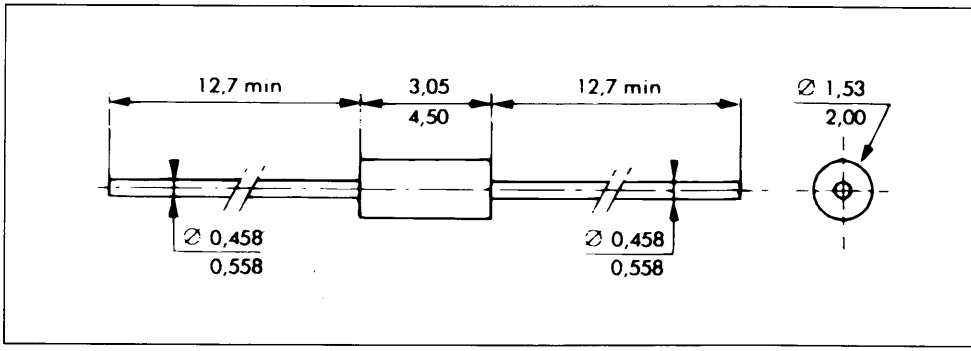
Figure 1 : Pulse Waveform.



The clamping voltage V_{CL} specified in the data-sheet is the maximum value for the "standard" pulse with a peak of I_{PP} specified.
Minimum duration between two surges : 30s.

PACKAGE MECHANICAL DATA

DO 35 (Glass)



Cooling method : by convection and conduction.
Marking : clear, ring at cathode end.
Weight : 0.15g

SGS-THOMSON MICROELECTRONICS

BZV 47 C 3V3 → 200

ZENER DIODES

- VOLTAGE RANGE : 3.3V TO 200V
- HERMETICALLY SEALED PLASTIC CASE
- PACKAGE ACCORDING TO NORMALIZATION CCTU : F 126
- PRO ELECTRON REGISTRATION
- HIGH SURGE CAPABILITY (55W @ 10ms)

F 126
(Plastic)

DESCRIPTION

2W silicon Zener diodes.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation*	T_{amb} = 55°C	2	W
I_{ZM}	Continuous Reverse Current*	T_{amb} = 55°C	See page 2	mA
I_{ZSM}	Peak Reverse Current	T_{amb} = 25°C	See page 2	A
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 175	°C
T_L	Maximum Lead Temperature for Soldering during 3s at 5mm from case		300	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j\text{-}a)}$	Junction–ambient*	60	°C/W

* On infinite heatsink with 10mm lead length.

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

Types	V_{ZT}/I_{ZT} min	V_{ZT}/I_{ZT} max	r_{ZT}/I_{ZT} max	I_{ZT}	$\propto V_Z$ typ	I_R/V_R max	V_R	I_{ZM} T_{amb} = 55°C	I_{ZSM}
	(V) (1)		(Ω) (1)	(mA) (1)	(10^{-4}/°C)	(μA)	(V)	(mA) (2)	(A) (3)
BZV 47 C 3V3	3.1	3.5	10	100	− 6.0			570	12.1
BZV 47 C 3V6	3.4	3.8	10	100	− 5.5			525	11.1
BZV 47 C 3V9	3.7	4.1	7	100	− 5.0			485	10.3
BZV 47 C 4V3	4.0	4.6	7	100	− 4.0			435	9.2
BZV 47 C 4V7	4.4	5.0	7	100	− 2.0			400	8.5
P BZV 47 C 5V1	4.8	5.4	5	100	1.0			370	7.8
P BZV 47 C 5V6	5.2	6.0	2	100	2.5	5	1	330	7.1
P BZV 47 C 6V2	5.8	6.6	2	100	3.2	5	1	300	6.4
P BZV 47 C 6V8	6.4	7.2	2	100	4.0	5	1	275	5.9
BZV 47 C 7V5	7.0	7.9	2	100	4.5	5	2	250	5.4
BZV 47 C 8V2	7.7	8.7	2	100	4.8	5	3.5	230	4.9
BZV 47 C 9V1	8.5	9.6	4	50	5.1	5	3.5	205	4.4
BZV 47 C 10	9.4	10.6	4	50	5.5	5	7.6	185	4.0
BZV 47 C 11	10.4	11.6	7	50	6.0	1	8.3	170	3.6
P 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
P 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
P BZV 47 C 18	16.8	19.1	15	25	7.5	0.5	13.7	105	2.2
P BZV 47 C 20	18.8	21.2	15	25	7.5	0.5	15.2	94	2.0
P BZV 47 C 22	20.8	23.3	15	25	8.0	0.5	16.7	86	1.8
P BZV 47 C 24	22.8	25.6	15	25	8.0	0.5	18.2	78	1.7
P BZV 47 C 27	25.1	28.9	15	25	8.5	0.5	20.5	69	1.5
P 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
P 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
P 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
BZC 47 C 56	52	60	60	10	9.0	0.5	42.5	33	0.71
P BZV 47 C 62	58	66	80	10	9.0	0.5	47.1	30	0.64
P 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
P 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
P BZV 47 C 130	124	141	300	5	9.5	0.5	98.2	14	0.30
P 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
P BZV 47 C 200	188	212	350	5	9.5	0.5	152	9.4	0.20

(1) Pulse test : $t_p \leq 50ms$ $\delta<2\%$.
(2) On infinite heatsink : d = 10mm.
(3) Rectangular waveform (t_p = 10ms)
The regulation voltages are defined according to the E24 series.
P : Preferred voltages.
Forward voltage drop : $V_F \leq 1.2V$ (T_{amb} = 25°C, I_F = 500mA).

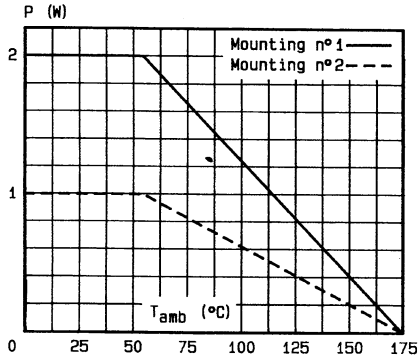


Fig.1 - Power dissipation versus ambient temperature.

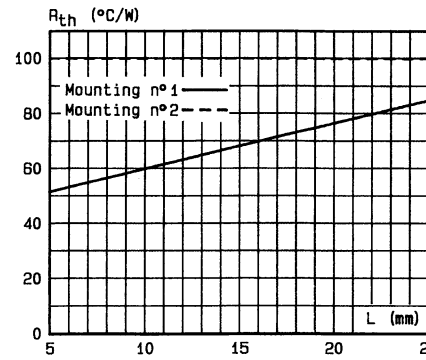


Fig.2 - Thermal resistance versus lead length.

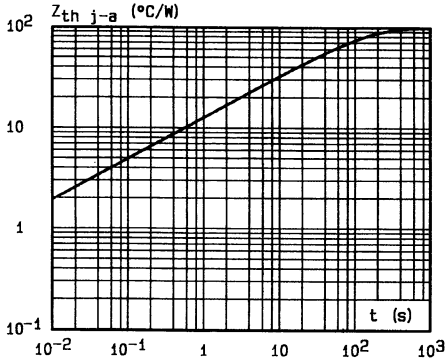


Fig.3 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

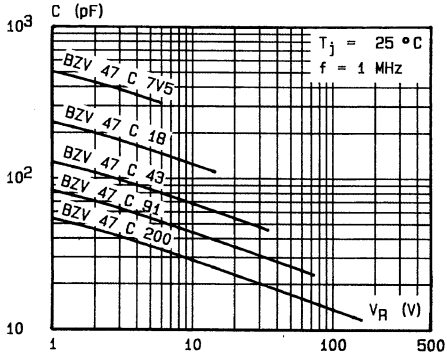
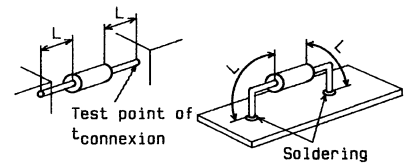


Fig.4 - Capacitance versus reverse applied voltage.



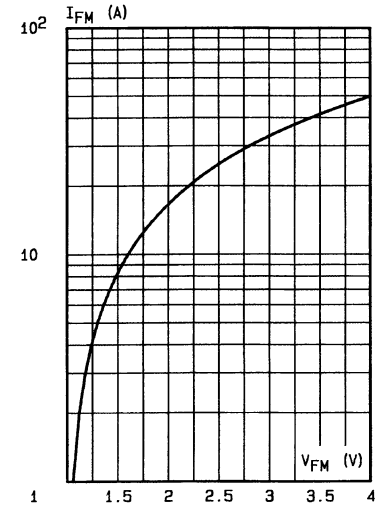


Fig.5 - Peak forward current versus peak forward voltage drop (typical values).

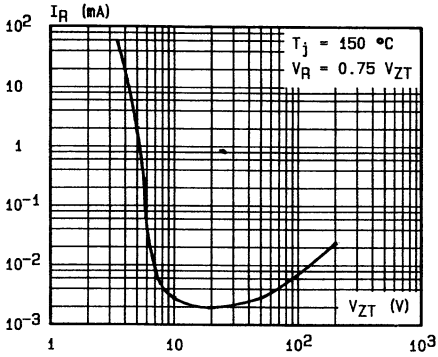


Fig.6 - Reverse current versus regulation voltage (typical values).

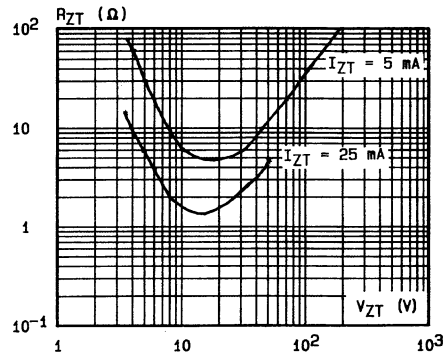


Fig.7 - Differential resistance versus regulation voltage (typical values).

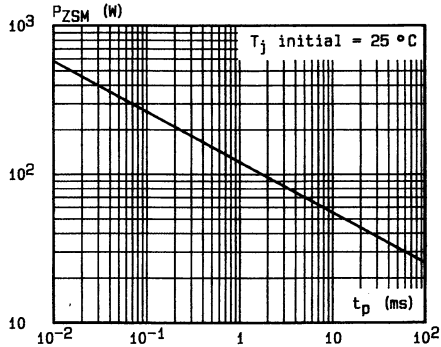
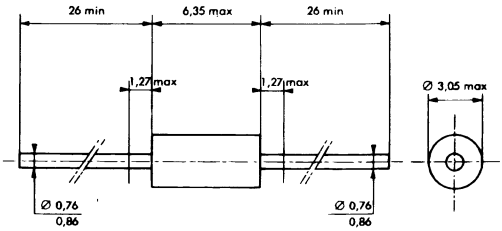


Fig.8 - Peak pulse power versus pulse duration (rectangular wave form) (maximum values).

PACKAGE MECHANICAL DATA

F 126 (Plastic)

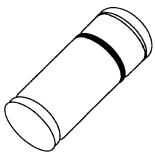


Cooling method : by convection (method A).
Marking : clear, ring at cathode end.
Weight : 0.4g

BZV 55C 2V4 → 100

ZENER DIODES

- VOLTAGE RANGE : 2.4V TO 100V



MINIMELF
(Glass)

DESCRIPTION

500mW hermetically sealed glass silicon Zener diodes.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation	T_{lead} = 25°C	0.5	W
I_{ZM}	Continuous Reverse Current	T_{lead} = 25°C	See page 2	mA
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 175 – 55 to 175	°C
T_L	Maximum Temperature for Soldering during 15s		260	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j\text{-}l)}$	Junction–leads	300	°C/W

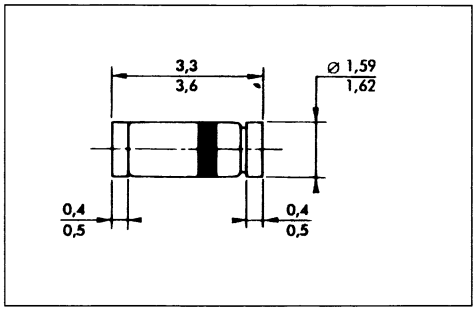
ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

	Types	V_{ZT}/I_{ZT}* min (V)	V_{ZT}/I_{ZT}* max (V)	r_{ZT}/I_{ZT}* max (Ω)	I_{ZT}* (mA)	r_{ZK}/I_{ZK} max (Ω)	I_{ZK} (mA)	$\propto V_Z$ min (10^{-4}/°C)	$\propto V_Z$ max (10^{-4}/°C)	I_R/V_R T_{amb} 25°C max (μA)	I_R/V_R T_{amb} 150°C max (μA)	V_R (V)	I_{ZM} (mA)
	BZV 55 C 2V4	2.28	2.56	85	5	600	1	− 8	− 6	50	100	1	155
	BZV 55 C 2V7	2.5	2.9	85	5	600	1	− 8	− 6	10	50	1	135
	BZV 55 C 3V0	2.8	3.2	85	5	600	1	− 8	− 6	4	40	1	125
P	BZV 55 C 3V3	3.1	3.5	85	5	600	1	− 8	− 5	2	40	1	115
P	BZV 55 C 3V6	3.4	3.8	85	5	600	1	− 8	− 4	2	40	1	105
P	BZV 55 C 3V9	3.7	4.1	85	5	600	1	− 7	− 3	2	40	1	95
P	BZV 55 C 4V3	4.0	4.6	75	5	600	1	− 4	− 1	1	20	1	90
P	BZV 55 C 4V7	4.4	5.0	60	5	600	1	− 3	1	0.5	10	1	85
P	BZV 55 C 5V1	4.8	5.4	35	5	550	1	− 2	5	0.1	2	1	80
P	BZV 55 C 5V6	5.2	6.0	25	5	450	1	− 1	6	0.1	2	1	70
P	BZV 55 C 6V2	5.8	6.6	10	5	200	1	0	7	0.1	2	2	64
P	BZV 55 C 6V8	6.4	7.2	8	5	150	1	1	8	0.1	2	3	58
P	BZV 55 C 7V5	7.0	7.9	7	5	50	1	1	9	0.1	2	5	53
P	BZV 55 C 8V2	7.7	8.7	7	5	50	1	1	9	0.1	2	6.2	47
P	BZV 55 C 9V1	8.5	9.6	10	5	50	1	2	10	0.1	2	6.8	43
P	BZV 55 C 10	9.4	10.6	15	5	70	1	3	11	0.1	2	7.5	40
	BZV 55 C 11	10.4	11.6	20	5	70	1	3	11	0.1	2	8.2	36
P	BZV 55 C 12	11.4	12.7	20	5	90	1	3	11	0.1	2	9.1	32
	BZV 55 C 13	12.4	14.1	26	5	110	1	3	11	0.1	2	10	29
P	BZV 55 C 15	13.8	15.6	30	5	110	1	3	11	0.1	2	11	27
	BZV 55 C 16	15.3	17.1	40	5	170	1	3	11	0.1	2	12	24
	BZV 55 C 18	16.8	19.1	50	5	170	1	3	11	0.1	2	13	21
	BZV 55 C 20	18.8	21.2	55	5	220	1	3	11	0.1	2	15	20
	BZV 55 C 22	20.8	23.3	55	5	220	1	3	11	0.1	2	16	18
	BZV 55 C 24	22.8	25.6	80	5	220	1	4	12	0.1	2	18	16
	BZV 55 C 27	25.1	28.9	80	5	220	1	4	12	0.1	2	20	14
	BZV 55 C 30	28	32	80	5	220	1	4	12	0.1	2	22	13
	BZV 55 C 33	31	35	80	5	220	1	4	12	0.1	2	24	12
	BZV 55 C 36	34	38	80	5	220	1	4	12	0.1	2	27	11
	BZV 55 C 39	37	41	90	2.5	500	0.5	4	12	0.1	5	30	10
	BZV 55 C 43	40	46	90	2.5	600	0.5	4	12	0.1	5	33	9.2
	BZV 55 C 47	44	50	110	2.5	700	0.5	4	12	0.1	5	36	8.5
	BZV 55 C 51	48	54	125	2.5	700	0.5	4	12	0.1	10	39	7.8
	BZV 55 C 56	52	60	135	2.5	1000	0.5	4	12	0.1	10	43	7.0
	BZV 55 C 62	58	66	150	2.5	1000	0.5	4	12	0.1	10	47	6.4
	BZV 55 C 68	64	72	200	2.5	1000	0.5	4	12	0.1	10	51	5.9
	BZV 55 C 75	70	80	250	2.5	1500	0.5	4	12	0.1	10	56	5.3
	BZV 55 C 82	77	87	300	2.5	2000	0.5	4	12	0.1	10	62	4.8
	BZV 55 C 91	85	96	450	1	5000	0.1	4	12	0.1	10	68	4.4
	BZV 55 C 100	94	106	450	1	5000	0.1	4	12	0.1	10	75	4.0

* Pulse test : 20ms ≤ tp ≤ 50ms δ < 2%.
The regulation voltages are defined according to the E24 series.
Voltage > 100V on request.
P : Preferred voltages.
Tight tolerances available on preferred voltages : BZV 55 E : ± 3% – BZV 55 B : ± 2%.
Forward voltage drop : $V_F \leq 1.5V$ (T_{amb} = 25°C, I_F = 200mA).

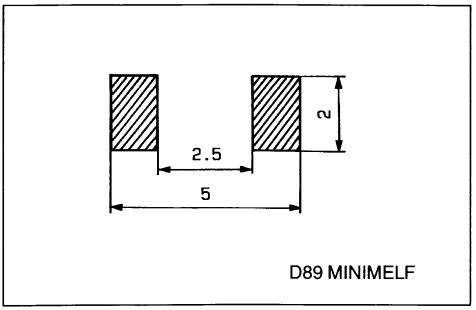
PACKAGE MECHANICAL DATA

MINIMELF (Glass)



Marking : ring at cathode end.
Weight : 0.05g

FOOT PRINTER DIMENSIONS (millimeters)

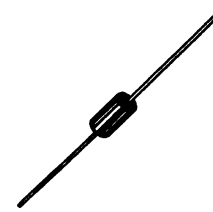


SGS-THOMSON MICROELECTRONICS

BZV 58 C 3V3 → 200

ZENER DIODES

- VOLTAGE RANGE : 3.3V TO 200V
- HERMETICALLY SEALED PLASTIC CASE
- PRO ELECTRON REGISTRATION
- HIGH SURGE CAPABILITY (up to 110W @ 10ms)



CB-417
(Plastic)

DESCRIPTION

5W silicon Zener diodes.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation*	T_{amb} = 50°C	5	W
I_{ZM}	Continuous Reverse Current*	T_{amb} = 50°C	See page 2	mA
I_{ZSM}	Peak Reverse Current	T_{amb} = 25°C	See page 2	A
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 175	°C
T_L	Maximum Temperature for Soldering during 3s at 5mm from Case		300	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j\text{-}a)}$	Junction–ambient*	25	°C/W

* On infinite heatsink with 10mm lead length.

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

	Types	V_{ZT}/I_{ZT}* min (V) (1)	V_{ZT}/I_{ZT}* max (V) (1)	r_{ZT}/I_{ZT} max (Ω) (1)	I_{ZT} (mA) (1)	∝ V_Z typ (10^{-4}/°C)	I_R/V_R max (μA)	V_R (V)	I_{ZM} T_{amb} = 50°C (mA) (2)	I_{ZSM} max (A) (3)
	BZV 58 C 3V3	3.1	3.5	3	380	− 6.0			1430	15.4
	BZV 58 C 3V6	3.4	3.8	2.5	350	− 5.5			1310	14.2
	BZV 58 C 3V9	3.7	4.1	2	320	− 5.0			1220	13.1
	BZV 58 C 4V3	4.0	4.6	2	290	− 4.0			1090	11.7
	BZV 58 C 4V7	4.4	5.0	2	260	− 2.0			1000	10.8
P	BZV 58 C 5V1	4.8	5.4	1.5	240	1.0			925	10.0
P	BZV 58 C 5V6	5.2	6.0	1	220	2.5	20	1	830	9.0
P	BZV 58 C 6V2	5.8	6.6	1	200	3.2	10	1	750	8.2
P	BZV 58 C 6V8	6.4	7.2	1	175	4.0	10	2	690	7.5
	BZV 58 C 7V5	7.0	7.9	1.5	175	4.5	10	2	630	6.8
	BZV 58 C 8V2	7.7	8.7	1.5	150	4.8	10	3	570	6.2
	BZV 58 C 9V1	8.5	9.6	2	150	5.1	10	6.6	520	5.6
	BZV 58 C 10	9.4	10.6	2	125	5.5	10	7.6	470	5.1
	BZV 58 C 11	10.4	11.6	2.5	125	6.0	5	8.3	430	8.0
P	BZV 58 C 12	11.4	12.7	2.5	100	6.5	2	9.1	390	7.3
	BZV 58 C 13	12.4	14.1	2.5	100	6.5	1	9.9	350	6.5
P	BZV 58 C 15	13.8	15.6	2.5	75	7.0	1	11.4	320	5.9
P	BZV 58 C 16	15.3	17.1	2.5	75	7.0	0.5	12.2	290	5.4
P	BZV 58 C 18	16.8	19.1	2.5	65	7.5	0.5	13.7	260	4.8
	BZV 58 C 20	18.8	21.2	3	65	7.5	0.5	15.2	235	4.4
P	BZV 58 C 22	20.8	23.3	3.5	50	8.0	0.5	16.7	215	4.0
P	BZV 58 C 24	22.8	25.6	3.5	50	8.0	0.5	18.2	195	3.6
P	BZV 58 C 27	25.1	28.9	5	50	8.5	0.5	20.5	170	3.2
P	BZV 58 C 30	28	32	8	40	8.5	0.5	22.8	155	2.9
	BZV 58 C 33	31	35	10	40	8.5	0.5	25	140	2.6
P	BZV 58 C 36	34	38	11	30	8.5	0.5	27.4	130	2.4
	BZV 58 C 39	37	41	14	30	9.0	0.5	29.6	120	2.3
	BZV 58 C 43	40	46	20	30	9.0	0.5	32.7	110	2.0
	BZV 58 C 47	44	50	25	25	9.0	0.5	35.7	100	1.8
	BZV 58 C 51	48	54	27	25	9.0	0.5	38.8	92	1.7
	BZV 58 C 56	52	60	35	20	9.0	0.5	42.5	83	1.5
P	BZV 58 C 62	58	66	42	20	9.0	0.5	47.1	75	1.4
	BZV 58 C 68	64	72	44	20	9.0	0.5	51.7	69	1.3
	BZV 58 C 75	70	79	45	20	9.0	0.5	57	63	1.2
	BZV 58 C 82	77	87	65	15	9.0	0.5	62.4	57	1.1
	BZV 58 C 91	85	96	75	15	9.0	0.5	69.2	52	1.0
P	BZV 58 C 100	94	106	90	12	9.0	0.5	76	47	0.87
	BZV 58 C 110	104	116	125	12	9.5	0.5	83.5	43	0.80
	BZV 58 C 120	114	127	170	10	9.5	0.5	91.2	39	0.73
	BZV 58 C 130	124	141	190	10	9.5	0.5	98.8	35	0.65
P	BZV 58 C 150	138	156	330	8	9.5	0.5	114	32	0.59
	BZV 58 C 160	153	171	350	8	9.5	0.5	122	29	0.54
P	BZV 58 C 180	168	191	430	5	9.5	0.5	137	26	0.48
P	BZV 58 C 200	188	212	480	5	10	0.5	152	23	0.44

(1) Pulse test : $t_p \leq 50ms$ $\delta < 2\%$.
(2) On infinite heatsink : d = 10mm.
(3) Rectangular waveform (t_p = 10ms).
The regulation voltages are defined according to the E24 series.
P : Preferred voltages.
Forward voltage drop : $V_F \leq 1.2V$ (T_{amb} = 25°C, I_F = 1A).

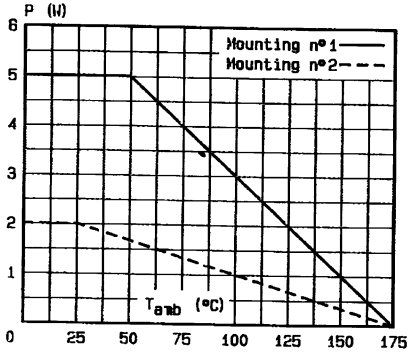


Fig.1 - Power dissipation versus ambient temperature.

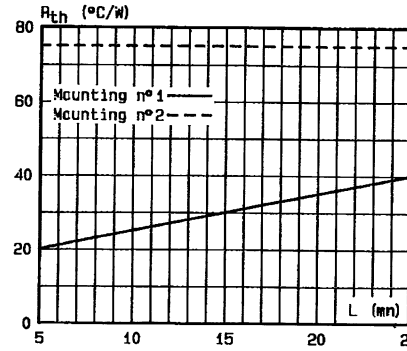


Fig.2 - Thermal resistance versus lead length.

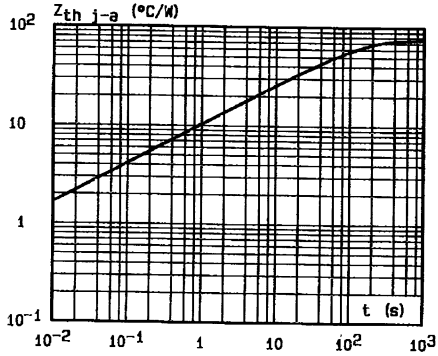
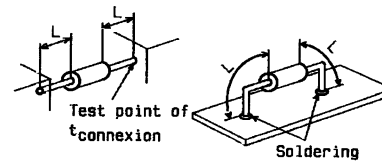


Fig.3 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

Mounting n°1
INFINITE HEATSINK

Mounting n°2
PRINTED CIRCUIT



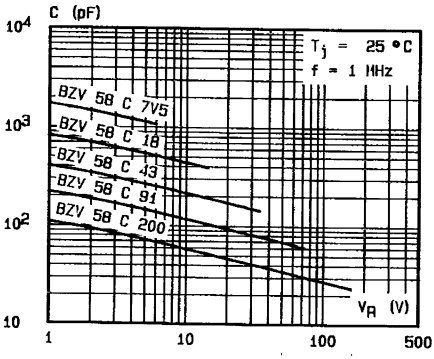


Fig.4 - Capacitance versus reverse applied voltage.

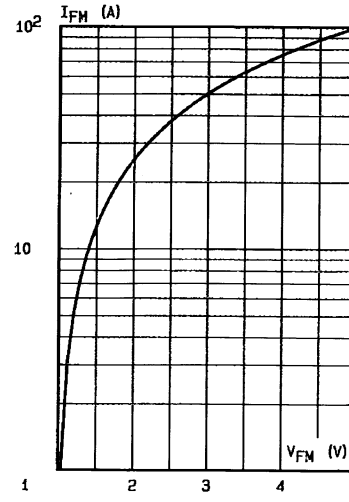


Fig.5 - Peak forward current versus peak forward voltage drop (typical values).

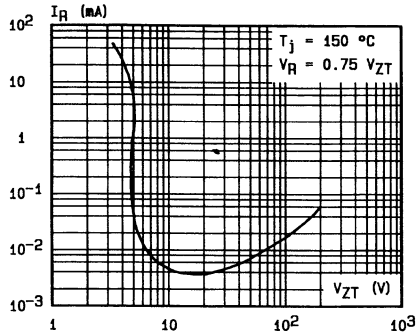


Fig.6 - Reverse current versus regulation voltage (typical values).

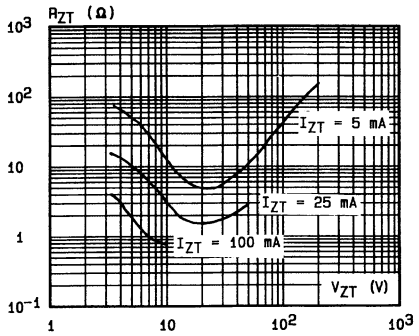


Fig.7 - Differential resistance versus regulation voltage (typical values).

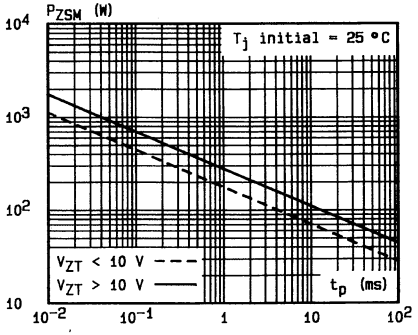
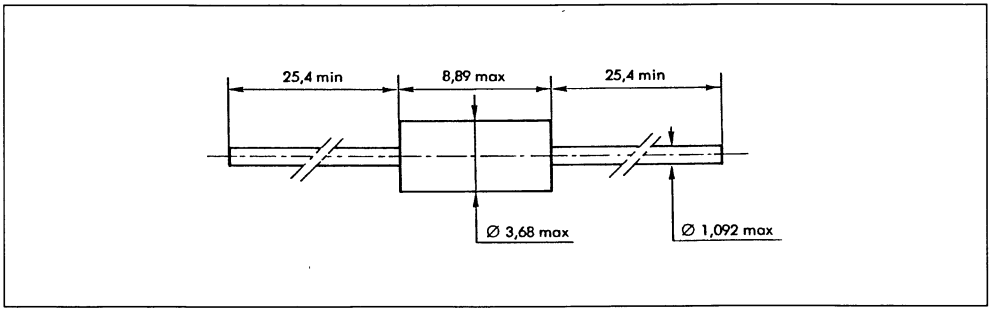


Fig.8 - Peak pulse power versus pulse duration (rectangular wave form) (maximum values).

PACKAGE MECHANICAL DATA

CB-417 Plastic

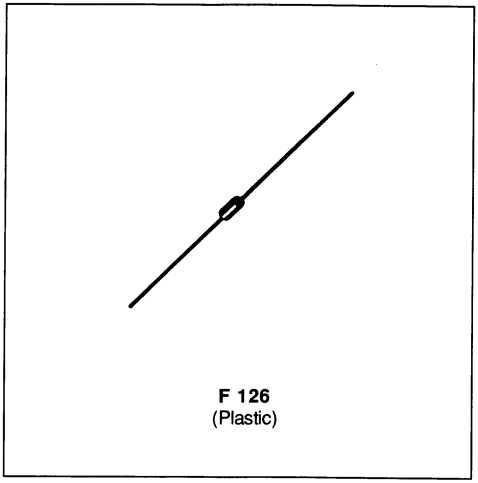


Cooling method : by convection (method A).
Marking : clear, ring at cathode end.
Weight : 0.6g

BZW04-5V8, B → 376, B
BZW04P5V8, B → 376, B

UNI-AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

- HIGH SURGE CAPABILITY :
  400 W / 1 ms EXPO
- VERY FAST CLAMPING TIME :
  1 ps FOR UNIDIRECTIONAL TYPES
  5 ns FOR BIDIRECTIONAL TYPES
- LARGE VOLTAGE RANGE :
  5.8 V → 376 V
- ORDER CODE :
  TYPE NUMBER FOR UNIDIRECTIONAL TYPES, TYPE NUMBER + SUFFIX B FOR BIDIRECTIONAL TYPES



F 126
(Plastic)

DESCRIPTION

Transient voltage suppressor diodes especially useful in protecting integrated circuits, MOS, hybrids and other voltage-sensitive semiconductors and components.

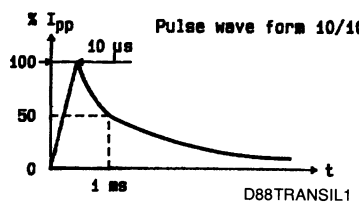
ABSOLUTE MAXIMUM RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_p	Peak Pulse Power for 1 ms Exponential Pulse	T_j Initial = 25 °C See note 1	400	W
P	Power Dissipation on Infinite Heatsink	T_{amb} = 50 °C	1.7	W
I_{FSM}	Non Repetitive Surge Peak Forward Current for Unidirectional Types	T_j Initial = 25 °C t = 10 ms	50	A
T_{stg} T_j	Storage and Operating Junction Temperature Range		– 55 to 150 150	°C °C
T_L	Maximum Lead Temperature for Soldering During 10 s at 4 mm from Case		230	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-l)}$	Junction-leads on Infinite Heatsink for L_{lead} = 10 mm	60	°C/W

Note : 1. For surges upper than the maximum values, the diode will present a short-circuit anode-cathode.



ELECTRICAL CHARACTERISTICS (T_j = 25 °C)

Symbol	Parameter		Value
V_{RM}	Stand-off Voltage		See tables
$V_{(BR)}$	Breakdown Voltage		
$V_{(CL)}$	Clamping Voltage		
I_{pp}	Peak Pulse Current		
α_T	Temperature Coefficient of $V_{(BR)}$		
C	Capacitance		
$t_{clamping}$	Clamping Time (0 volt to $V_{(BR)}$)	Unidirectional Types	1 ps max.
		Bidirectional Types	5 ns max.

Types		I_{RM} @ V_{RM} max.		$V_{(BR)}$* @ I_R (V)				$V_{(CL)}$ @ I_{pp} max. 1ms expo		$V_{(CL)}$ @ I_{pp} max. 8-20µs expo		α_T max.	C** typ. V_R=0 f=1MHz
Unidirectional	Bidirectional	(µA)	(V)	min.	nom.	max.	(mA)	(V)	(A)	(V)	(A)	(10^{-4}/°C)	(pF)
P BZW04P5V8	P BZW04P5V8B	1000	5.8	6.45	6.8	7.48	10	10.5	38	13.4	174	5.7	3500
BZW04-5V8	BZW04-5V8B	1000	5.8	6.45	6.8	7.14	10	10.5	38	13.4	174	5.7	3500
BZW04P6V4	P BZW04P6V4B	500	6.4	7.13	7.5	8.25	10	11.3	35.4	14.5	160	6.1	3100
BZW04-6V4	BZW04-6V4B	500	6.4	7.13	7.5	7.88	10	11.3	35.4	14.5	160	6.1	3100
BZW04P7V0	P BZW04P7V0B	200	7.02	7.79	8.2	9.02	10	12.1	33	15.5	148	6.5	2700
BZW04-7V0	BZW04-7V0B	200	7.02	7.79	8.2	8.61	10	12.1	33	15.5	148	6.5	2700
BZW04P7V8	BZW04P7V8B	50	7.78	8.65	9.1	10.0	1	13.4	30	17.1	134	6.8	2300
BZW04-7V8	BZW04-7V8B	50	7.78	8.65	9.1	9.55	1	13.4	30	17.1	134	6.8	2300
BZW04P8V5	BZW04P8V5B	10	8.55	9.50	10	11.0	1	14.5	27.6	18.6	258	7.3	2000
BZW04-8V5	BZW04-8V5B	10	8.55	9.50	10	10.50	1	14.5	27.6	18.6	258	7.3	2000
P BZW04P9V4	P BZW04P9V4B	5	9.4	10.5	11	12.1	1	15.6	25.7	20.3	236	7.5	1750
BZW04-9V4	BZW04-9V4B	5	9.4	10.5	11	11.6	1	15.6	25.7	20.3	236	7.5	1750
BZW04P10	BZW04P10B	5	10.2	11.4	12	13.2	1	16.7	24	21.7	221	7.8	1550
BZW04-10	BZW04-10B	5	10.2	11.4	12	12.6	1	16.7	24	21.7	221	7.8	1550
P BZW04P11	P BZW04P11B	5	11.1	12.4	13	14.3	1	18.2	22	23.6	203	8.1	1450
BZW04-11	BZW04-11B	5	11.1	12.4	13	13.7	1	18.2	22	23.6	203	8.1	1450
P BZW04P13	P BZW04P13B	5	12.8	14.3	15	16.5	1	21.2	19	27.2	176	8.4	1200
BZW04-13	BZW04-13B	5	12.8	14.3	15	15.8	1	21.2	19	27.2	176	8.4	1200
P BZW04P14	P BZW04P14B	5	13.6	15.2	16	17.6	1	22.5	17.8	28.9	166	8.6	1100
BZW04-14	BZW04-14B	5	13.6	15.2	16	16.8	1	22.5	17.8	28.9	166	8.6	1100
P BZW04P15	P BZW04P15B	5	15.3	17.1	18	19.8	1	25.2	16	32.5	148	8.8	975
BZW04-15	BZW04-15B	5	15.3	17.1	18	18.9	1	25.2	16	32.5	148	8.8	975
BZW04P17	BZW04P17B	5	17.1	19	20	22	1	27.7	14.5	36.1	133	9.0	850
BZW04-17	BZW04-17B	5	17.1	19	20	21	1	27.7	14.5	36.1	133	9.0	850
BZW04P19	BZW04P19B	5	18.8	20.9	22	24.2	1	30.6	13	39.3	122	9.2	800
BZW04-19	BZW04-19B	5	18.8	20.9	22	23.1	1	30.6	13	39.3	122	9.2	800
BZW04P20	P BZW04P20B	5	20.5	22.8	24	26.4	1	33.2	12	42.8	112	9.4	725
BZW04-20	BZW04-20B	5	20.5	22.8	24	25.2	1	33.2	12	42.8	112	9.4	725
P BZW04P23	BZW04P23B	5	23.1	25.7	27	29.7	1	37.5	10.7	48.3	99	9.6	625
BZW04-23	BZW04-23B	5	23.1	25.7	27	28.4	1	37.5	10.7	48.3	99	9.6	625
P BZW04P26	P BZW04P26B	5	25.6	28.5	30	33	1	41.5	9.6	53.5	90	9.7	575
BZW04-26	BZW04-26B	5	25.6	28.5	30	31.5	1	41.5	9.6	53.5	90	9.7	575
BZW04P28	P BZW04P28B	5	28.2	31.4	33	36.3	1	45.7	8.8	59	81.5	9.8	510
BZW04-28	BZW04-28B	5	28.2	31.4	33	34.7	1	45.7	8.8	59	81.5	9.8	510
P BZW04P31	P BZW04P31B	5	30.8	34.2	36	39.6	1	49.9	8	64.3	74.5	9.9	480
BZW04-31	BZW04-31B	5	30.8	34.2	36	37.8	1	49.9	8	64.3	74.5	9.9	480
P BZW04P33	BZW04P33B	5	33.3	37.1	39	42.9	1	53.9	7.4	69.7	69	10.0	450

* Pulse test $t_p \leq 50$ ms $\delta < 2$ %.
** Divide these values by 2 for bidirectional types.
For bidirectional types, electrical characteristics apply in both directions.
P : Preferred device.

Types			I_{RM} @ V_{RM} max.		$V_{(BR)}$* @ I_R (V)				$V_{(CL)}$ @ I_{pp} max. 1ms expo		$V_{(CL)}$ @ I_{pp} max. 8-20µs expo		α_T max.	C** typ. V_R=0 f=1MHz
Unidirectional	Bidirectional		(µA)	(V)	min.	nom.	max.	(mA)	(V)	(A)	(V)	(A)	(10^{-4}/°C)	(pF)
BZW04-33	BZW04-33B		5	33.3	37.1	39	41	1	53.9	7.4	69.7	69	10.0	450
BZW04P37	BZW04P37B	P	5	36.8	40.9	43	47.3	1	59.3	6.7	76.8	62.5	10.1	400
BZW04-37	BZW04-37B		5	36.8	40.9	43	45.2	1	59.3	6.7	76.8	62.5	10.1	400
BZW04P40	BZW04P40B		5	40.2	44.7	47	51.7	1	64.8	6.2	84	57	10.1	370
BZW04-40	BZW04-40B		5	40.2	44.7	47	49.4	1	64.8	6.2	84	57	10.1	370
BZW04P44	BZW04P44B		5	43.6	48.5	51	56.1	1	70.1	5.7	91	52.5	10.2	350
BZW04-44	BZW04-44B		5	43.6	48.5	51	53.6	1	70.1	5.7	91	52.5	10.2	350
BZW04P48	BZW04P48B		5	47.8	53.2	56	61.6	1	77	5.2	100	48	10.3	320
BZW04-48	BZW04-48B		5	47.8	53.2	56	58.8	1	77	5.2	100	48	10.3	320
BZW04P53	BZW04P53B		5	53	58.9	62	68.2	1	85	4.7	111	43	10.4	290
BZW04-53	BZW04-53B		5	53	58.9	62	65.1	1	85	4.7	111	43	10.4	290
BZW04P58	BZW04P58B		5	58.1	64.6	68	74.8	1	92	4.3	121	39.5	10.4	270
BZW04-58	BZW04-58B		5	58.1	64.6	68	71.4	1	92	4.3	121	39.5	10.4	270
BZW04P64	BZW04P64B		5	64.1	71.3	75	82.5	1	103	3.9	134	36	10.5	250
BZW04-64	BZW04-64B		5	64.1	71.3	75	78.8	1	103	3.9	134	36	10.5	250
BZW04P70	BZW04P70B	P	5	70.1	77.9	82	90.2	1	113	3.5	146	33	10.5	230
BZW04-70	BZW04-70B		5	70.1	77.9	82	86.1	1	113	3.5	146	33	10.5	230
BZW04P78	BZW04P78B		5	77.8	86.5	91	100	1	125	3.2	162	29.5	10.6	210
BZW04-78	BZW04-78B		5	77.8	86.5	91	95.5	1	125	3.2	162	29.5	10.6	210
BZW04P85	BZW04P85B	P	5	85.5	95	100	110	1	137	2.9	178	27	10.6	200
BZW04-85	BZW04-85B		5	85.5	95	100	105	1	137	2.9	178	27	10.6	200
BZW04P94	BZW04P94B		5	94	105	110	121	1	152	2.6	195	24.5	10.7	185
BZW04-94	BZW04-94B		5	94	105	110	116	1	152	2.6	195	24.5	10.7	185
BZW04P102	BZW04P102B		5	102	114	120	132	1	165	2.4	212	22.5	10.7	170
BZW04-102	BZW04-102B		5	102	114	120	126	1	165	2.4	212	22.5	10.7	170
BZW04P111	BZW04P111B	P	5	111	124	130	143	1	179	2.2	230	20.8	10.7	165
BZW04-111	BZW04-111B		5	111	124	130	137	1	179	2.2	230	20.8	10.7	165
BZW04P128	BZW04P128B	P	5	128	143	150	165	1	207	2.0	265	18.1	10.8	145
BZW04-128	BZW04-128B		5	128	143	150	158	1	207	2.0	265	18.1	10.8	145
BZW04P136	BZW04P136B	P	5	136	152	160	176	1	219	1.8	282	17	10.8	140
BZW04-136	BZW04-136B		5	136	152	160	168	1	219	1.8	282	17	10.8	140
BZW04P145	BZW04P145B	P	5	145	161	170	187	1	234	1.7	301	16	10.8	135
BZW04-145	BZW04-145B		5	145	161	170	179	1	234	1.7	301	16	10.8	135
BZW04P154	BZW04P154B		5	154	171	180	198	1	246	1.6	317	15.1	10.8	125
BZW04-154	BZW04-154B		5	154	171	180	189	1	246	1.6	317	15.1	10.8	125
BZW04P171	BZW04P171B		5	171	190	200	220	1	274	1.5	353	13.6	10.8	120
BZW04-171	BZW04-171B		5	171	190	200	210	1	274	1.5	353	13.6	10.8	120
BZW04P188	BZW04P188B	P	5	188	209	220	242	1	301	1.4	388	12.4	10.8	110
BZW04-188	BZW04-188B		5	188	209	220	231	1	301	1.4	388	12.4	10.8	110
BZW04P213	BZW04P213B		5	213	237	250	275	1	344	1.5	442	12	11	100
BZW04-213	BZW04-213B		5	213	237	250	263	1	344	1.5	442	12	11	100
BZW04P239	BZW04P239B		5	239	266	280	308	1	384	1.5	494	12	11	95
BZW04-239	BZW04-239B		5	239	266	280	294	1	384	1.5	494	12	11	95
BZW04P256	BZW04P256B		5	256	285	300	330	1	414	1.2	529	10	11	90
BZW04-256	BZW04-256B		5	256	285	300	315	1	414	1.2	529	10	11	90
BZW04P273	BZW04P273B		5	273	304	320	352	1	438	1.2	564	10	11	85
BZW04-273	BZW04-273B		5	273	304	320	336	1	438	1.2	564	10	11	85
BZW04P299	BZW04P299B	P	5	299	332	350	385	1	482	0.9	618	9	11	80
BZW04-299	BZW04-299B		5	299	332	350	368	1	482	0.9	618	9	11	80
BZW04P342	BZW04P342B		5	342	380	400	440	1	548	0.9	706	8	11	75
BZW04-342	BZW04-342B		5	342	380	400	420	1	548	0.9	706	8	11	75
BZW04P376	BZW04P376B		5	376	418	440	484	1	603	0.8	776	8	11	70
BZW04-376	BZW04-376B		5	376	418	440	462	1	603	0.8	776	8	11	70

* Pulse test $t_p \leq 50$ ms $\delta < 2$ %.

** Divide these values by 2 for bidirectional types.

For bidirectional types, electrical characteristics apply in both directions.

P : Preferred device.

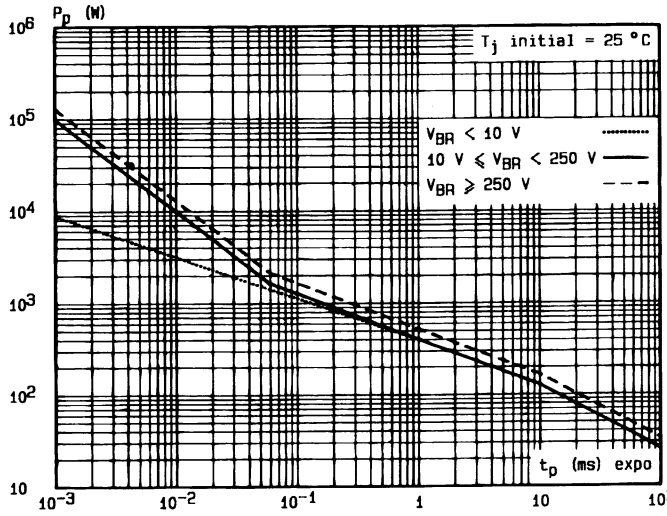


Fig.1 - Peak pulse power versus exponential pulse duration.

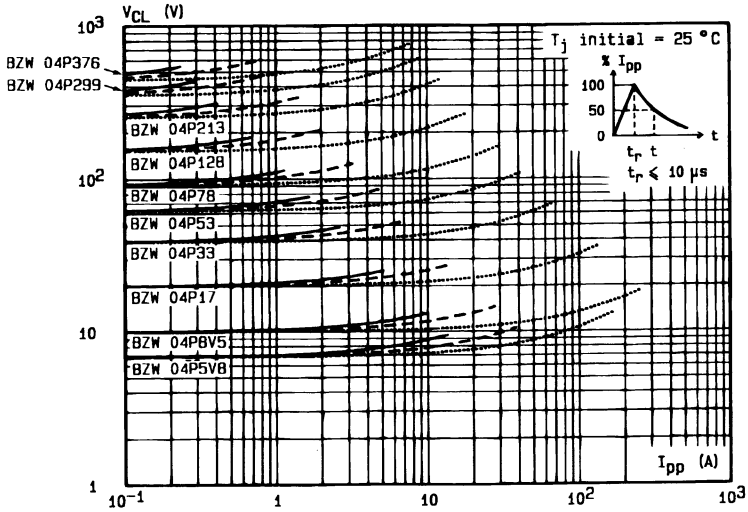


Fig.2 - Clamping voltage versus peak pulse current.
exponential waveform t = 20 µs ·····
t = 1 ms – – –
t = 10 ms ——

Note : The curves of the figure 2 are specified for a junction temperature of 25 °C before surge. The given results may be extrapolated for other junction temperatures by using the following formula : $\Delta V_{(BR)} = \alpha_{T(V(BR))} \times [T_j - 25] \times V_{(BR)}$
For intermediate voltages, extrapolate the given results.

D88BZW04P4

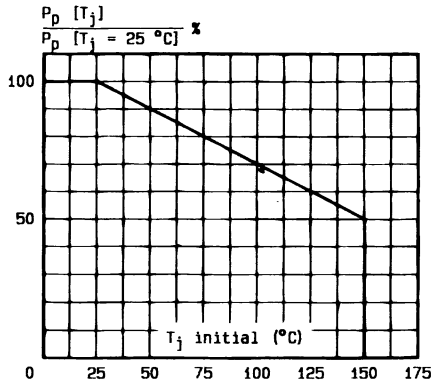


Fig.3 - Allowable power dissipation versus junction temperature.

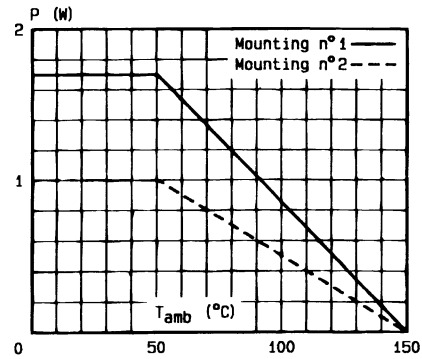


Fig.4 - Power dissipation versus ambient temperature.

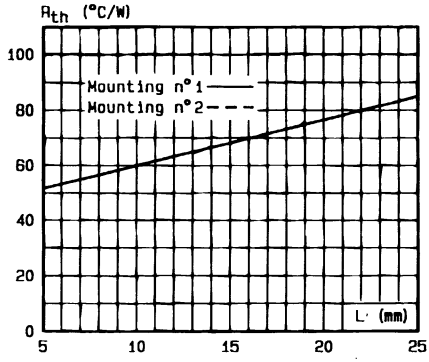
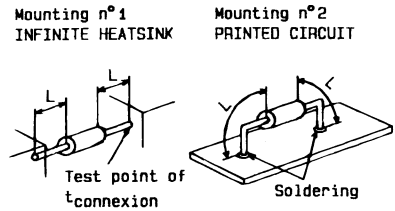


Fig.5 - Thermal resistance versus lead length.



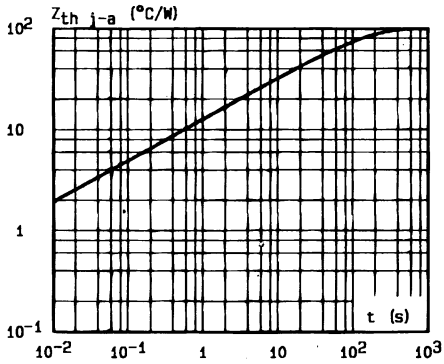


Fig.6 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

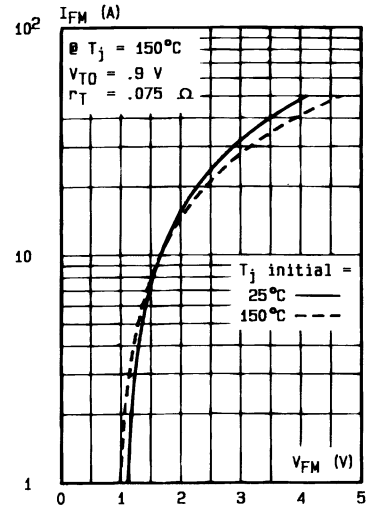


Fig.7 - Peak forward current versus peak forward voltage drop (typical values for unidirectional types).

D88BZW04P5

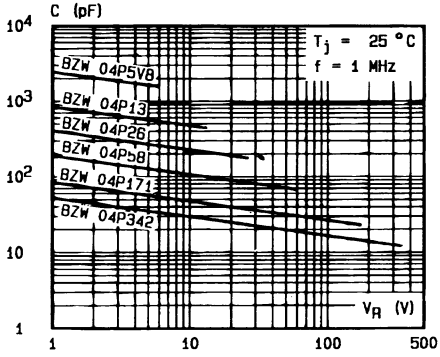


Fig.8a - Capacitance versus reverse applied voltage for unidirectional types (typical values).

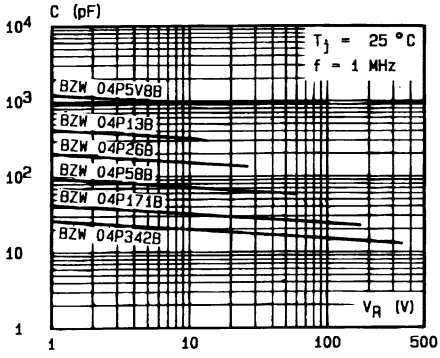
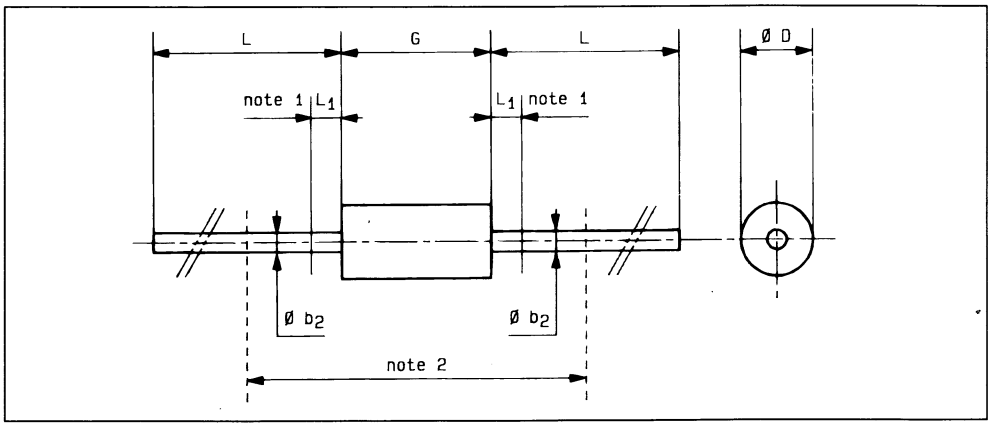


Fig.8b - Capacitance versus reverse applied voltage for bidirectional types (typical values).

D88BZW04P6

PACKAGE MECHANICAL DATA

F 126 Plastic



Ref.	Millimeters		Inches		Notes
	Min.	Max.	Min.	Max.	
Ø b_2	0.76	0.86	0.029	0.034	1 - The lead diameter Ø b_2 is not controlled over zone L_1. 2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.59" (15 mm).
Ø D	2.95	3.05	0.116	0.120	
G	6.05	6.35	0.238	0.250	
L	26	–	1.024	–	
L_1	–	1.27	–	0.050	

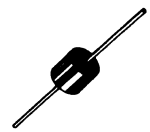
Cooling method : by convection (method A).
Marking : type number ; white band indicates cathode for unidirectional types.
Weight : 0.4 g.

SGS-THOMSON MICROELECTRONICS

BZW50-10,B → 180, B

UNI-AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

- HIGH SURGE CAPABILITY :
  5 kW / 1 ms EXPO
- VERY FAST CLAMPING TIME :
  1 ps FOR UNIDIRECTIONAL TYPES
  5 ns FOR BIDIRECTIONAL TYPES
- LARGE VOLTAGE RANGE :
  10 V → 180 V
- ORDER CODE :
  TYPE NUMBER FOR UNIDIRECTIONAL TYPES, TYPE NUMBER + SUFFIX B FOR BIDIRECTIONAL TYPES



AG
(Plastic)

DESCRIPTION

Transient voltage suppressor diodes especially useful in protecting integrated circuits, MOS, hybrids and other voltage-sensitive semiconductors and components.

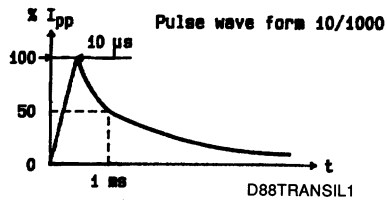
ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_p	Peak Pulse Power for 1 ms Exponential Pulse	T_j Initial = 25 °C See note 1	5	kW
P	Power Dissipation on Infinite Heatsink	T_{amb} = 75 °C	5	W
I_{FSM}	Non Repetitive Surge Peak Forward Current for Unidirectional Types	T_j Initial = 25 °C t = 10 ms	500	A
T_{stg} T_j	Storage and Operating Junction Temperature Range		– 65 to 150 150	°C °C
T_L	Maximum Lead Temperature for Soldering During 10 s at 4 mm from Case		230	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-l)}$	Junction-leads on Infinite Heatsink for L_{lead} = 10 mm	15	°C/W

Note : 1. For surges upper than the maximum values, the diode will present a short-circuit anode-cathode.



D88TRANSIL1

ELECTRICAL CHARACTERISTICS (T_j = 25 °C)

Symbol	Parameter		Value
V_{RM}	Stand-off Voltage		See tables
$V_{(BR)}$	Breakdown Voltage		
$V_{(CL)}$	Clamping Voltage		
I_{pp}	Peak Pulse Current		
α_T	Temperature Coefficient of $V_{(BR)}$		
C	Capacitance		
$t_{clamping}$	Clamping Time (0 volt to $V_{(BR)}$)	Unidirectional Types	1 ps max.
		Bidirectional Types	5 ns max.

Types		I_{RM} @ V_{RM} max.		$V_{(BR)}$* @ I_R (V)				$V_{(CL)}$ @ I_{pp} max. 1 ms expo		$V_{(CL)}$ @ I_{pp} max. 8-20 µs expo		α_T max.	C** typ. V_R=0 f=1 MHz
Unidirectional	Bidirectional	(µA)	(V)	min.	nom.	max.	(mA)	(V)	(A)	(V)	(A)	(10^{-4}/°C)	(pF)
BZW50-10	BZW50-10B	5	10	11.1	12.4	13.6	1	18.8	266	23.4	2564	7.8	24000
BZW50-12	BZW50-12B	5	12	13.3	14.8	16.3	1	22	227	28	2143	8.4	18500
BZW50-15	BZW50-15B	5	15	16.6	18.5	20.4	1	26.9	186	35	1714	8.8	13500
BZW50-18	BZW50-18B	5	18	20	22.2	24.4	1	32.2	155	41.5	1446	9.2	11500
BZW50-22	BZW50-22B	5	22	24.4	27.1	29.8	1	39.4	127	51	1177	9.6	8500
BZW50-27	BZW50-27B	5	27	30	33.3	36.6	1	48.3	103	62	968	9.8	7000
BZW50-33	BZW50-33B	5	33	36.6	40.7	44.7	1	59	85	76	789	10	5750
BZW50-39	BZW50-39B	5	39	43.3	48.1	53	1	69.4	72	90	667	10.1	4800
BZW50-47	BZW50-47B	5	47	52	57.8	63.6	1	83.2	60.1	108	556	10.3	4100
BZW50-56	BZW50-56B	5	56	62.2	69.1	76	1	99.6	50	129	465	10.4	3400
BZW50-68	BZW50-68B	5	68	75.6	84	92.4	1	121	41	157	382	10.5	3000
BZW50-82	BZW50-82B	5	82	91	101.2	111	1	145	34	189	317	10.6	2600
BZW50-100	BZW50-100B	5	100	111	123.5	136	1	179	28	228	263	10.7	2300
BZW50-120	BZW50-120B	5	120	133	148.1	163	1	215	23	274	219	10.8	1900
BZW50-150	BZW50-150B	5	150	166	185.2	204	1	269	19	343	175	10.8	1700
BZW50-180	BZW50-180B	5	180	200	222	244	1	322	16	410	146	10.8	1500

* Pulse test $t_p \leq 50$ ms $\delta < 2$ %.
** Divide these values by 2 for bidirectional types.
For bidirectional types, electrical characteristics apply in both directions.

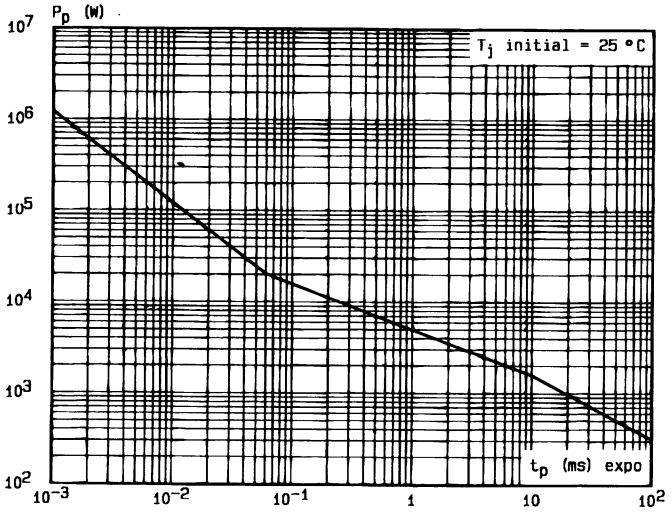


Fig.1 - Peak pulse power versus exponential pulse duration.

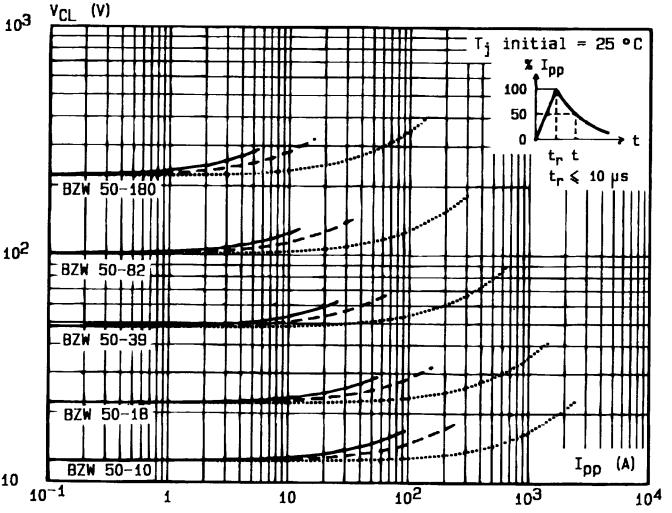


Fig.2 - Clamping voltage versus peak pulse current.
exponential waveform t = 20 µs ·
t = 1 ms - - - -
t = 10 ms ———

Note : The curves of the figure 2 are specified for a junction temperature of 25 °C before surge. The given results may be extrapolated for other junction temperatures by using the following formula : $\Delta V_{(BR)} = \alpha_{T(V(BR))} \times [T_j - 25] \times V_{(BR)}$
For intermediate voltages, extrapolate the given results.

D88BZW50P3

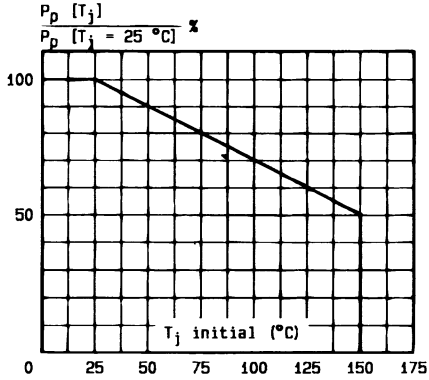


Fig.3 - Allowable power dissipation versus junction temperature.

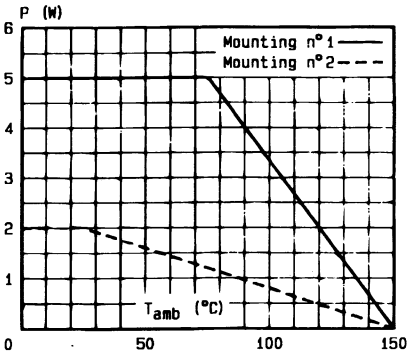


Fig.4 - Power dissipation versus ambient temperature.

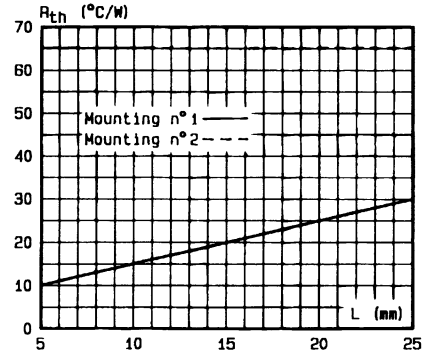
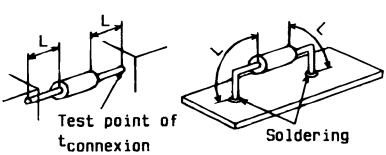


Fig.5 - Thermal resistance versus lead length.



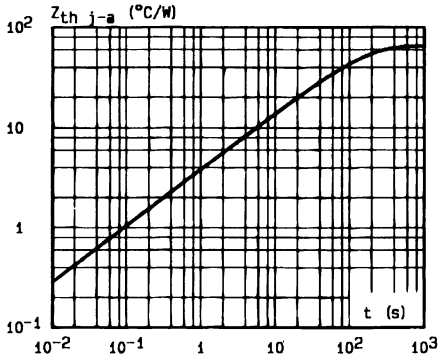


Fig.6 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

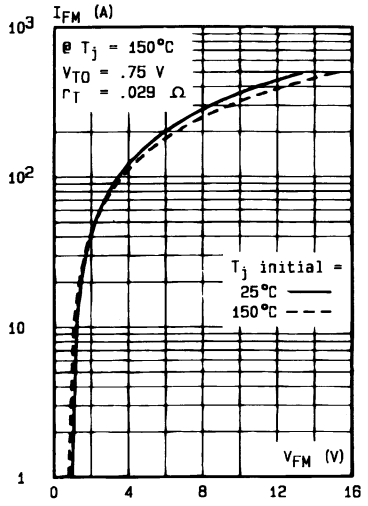


Fig.7 - Peak forward current versus peak forward voltage drop (typical values for unidirectional types).

D88BZW50P4

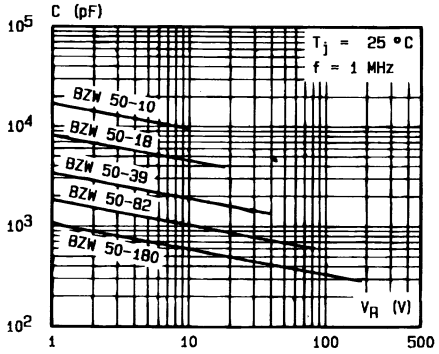


Fig.8a - Capacitance versus reverse applied voltage for unidirectional types (typical values).

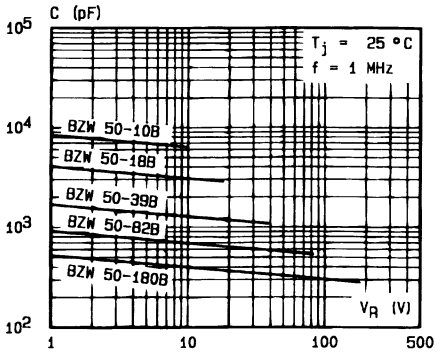
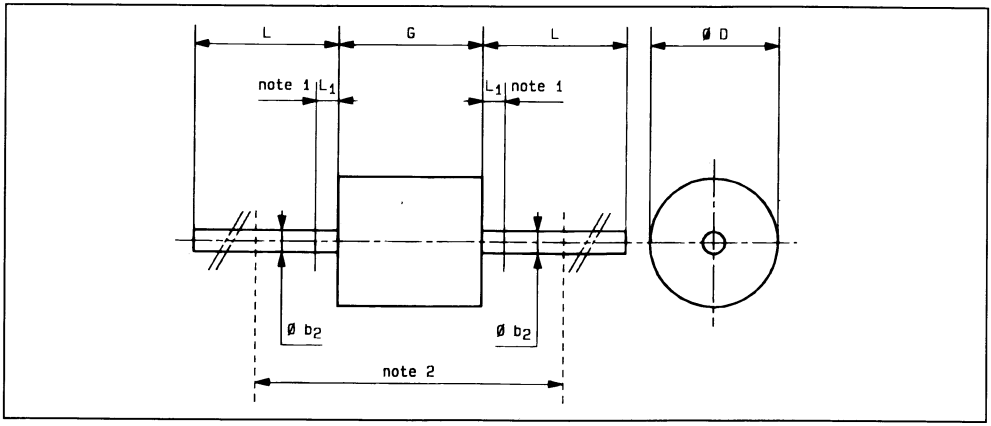


Fig.8b - Capacitance versus reverse applied voltage for bidirectional types (typical values).

D88BZW50P5

PACKAGE MECHANICAL DATA

AG Plastic



Ref.	Millimeters		Inches		Notes
	Min.	Max.	Min.	Max.	
Ø b_2	1.35	1.45	0.053	0.057	1 - The lead diameter Ø b_2 is not controlled over zone L_1. 2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.79" (20 mm).
Ø D	–	8	–	0.315	
G	–	9	–	0.354	
L	20	–	0.787	–	
L_1	–	1.27	–	0.050	

Cooling method : by convection (method A).
Marking : type number ; white band indicates cathode for unidirectional types.
Weight : 1 g.

BZW 100-20
BZW 100-24

UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

- HIGH SURGE CAPABILITY : 1.8 kW / 15 ms EXPO
- VERY FAST CLAMPING TIME : 1 ps

AG
(Plastic)

DESCRIPTION

Transient voltage suppressor diodes especially designed for load dump effect protection.

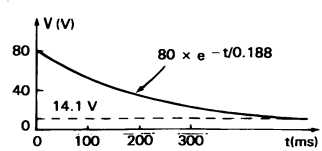
ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_p	Peak Pulse Power for 15 ms Exponential Pulse	T_j Initial = 25 °C See note 1	1800	W
P	Power Dissipation on Infinite Heatsink	T_{amb} = 75 °C	5	W
I_{FSM}	Non Repetitive Surge Peak Forward Current	T_j Initial = 25 °C t = 10 ms	200	A
T_{stg} T_j	Storage and Operating Junction Temperature Range		– 65 to 150 150	°C °C
T_L	Maximum Lead Temperature for Soldering During 10 s at 4 mm from Case		230	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-l)}$	Junction-leads on Infinite Heatsink for L_{lead} = 10 mm	15	°C/W

Note : 1. For surges upper than the maximum values, the diode will present a short-circuit anode-cathode.



LOAD DUMP TRANSIENT (standard SAE J1113A).

D88TRANSIL2

ELECTRICAL CHARACTERISTICS (T_j = 25°C)

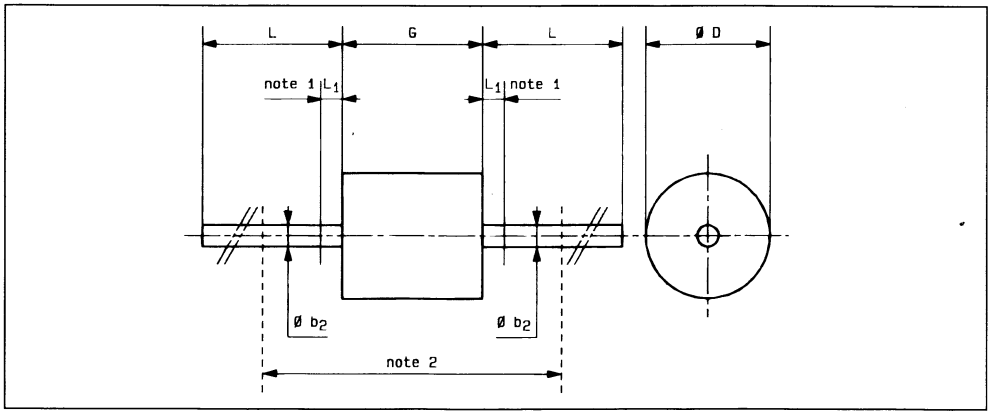
Symbol	Parameter	Value
V_{RM}	Stand-off Voltage	See table
$V_{(BR)}$	Breakdown Voltage	
$V_{(CL)}$	Clamping Voltage	
I_{pp}	Peak Pulse Current	
α_T	Temperature Coefficient of $V_{(BR)}$	
C	Capacitance	
$t_{clamping}$	Clamping Time (0 volt to $V_{(BR)}$)	1 ps max.
V_F	Peak Forward Voltage Drop (I_{FM} = 10 A)	1.9 V max.

Unidirectional Types	I_{RM} @ V_{RM} max.		$V_{(BR)}$* @ I_R (V)		V_{CL} @ I_{pp} max. 15 ms expo.		α_T max.	C typ. V_R = 0 f = 1 MHz
	(μA)	(V)	min.	(mA)	(V)	(A)	(10^{-4}/°C)	(pF)
BZW100-20	50	20	24	1	36	50	9.6	4250
BZW100-24	50	24	29	1	40	45	9.8	3500

* Pulse test $t_p \leq 50$ ms $\delta < 2$ %.

PACKAGE MECHANICAL DATA

AG Plastic



Ref.	Millimeters		Inches		Notes
	Min.	Max.	Min.	Max.	
ø b_2	1.35	1.45	0.053	0.057	1 - The lead diameter ø b_2 is not controlled over zone L_1. 2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.79" (20 mm).
ø D	–	8	–	0.315	
G	–	9	–	0.354	
L	20	–	0.787	–	
L_1	–	1.27	–	0.050	

Cooling method : by convection (method A).
Marking : type number ; white band indicates cathode.
Weight : 1 g.

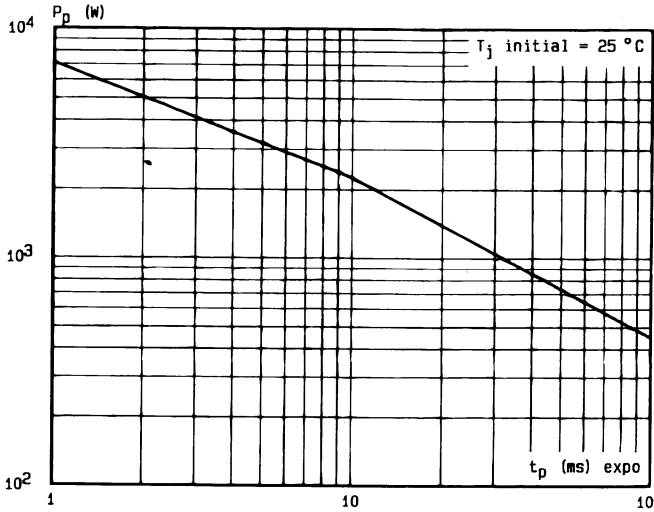


Fig.1 - Peak pulse power versus exponential pulse duration.

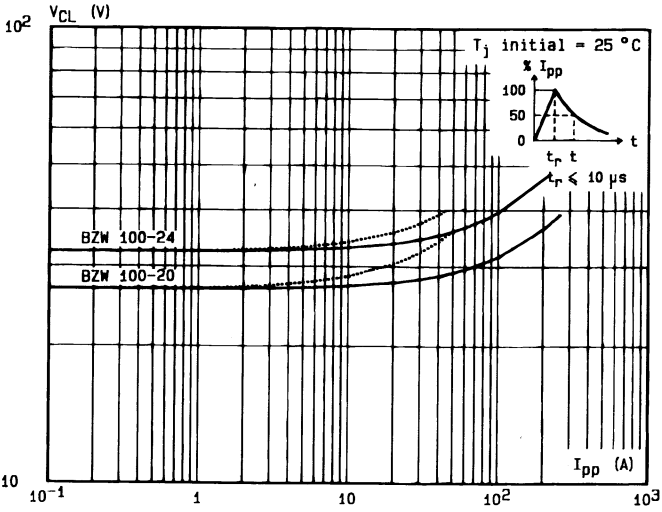


Fig.2 - Clamping voltage versus peak pulse current
exponential waveform t = 15 ms ·····
t = 1 ms ——

Note : The curves of the figure 2 are specified for a junction temperature of 25 °C before surge. The given results may be extrapolated for other junction temperatures by using the following formula : $\Delta V_{(BR)} = \alpha_{T(V(BR))} \times [T_j - 25] \times V_{(BR)}$
For intermediate voltages, extrapolate the given results.

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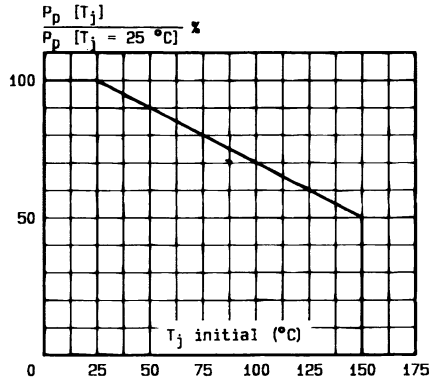


Fig.3 - Allowable power dissipation versus junction temperature.

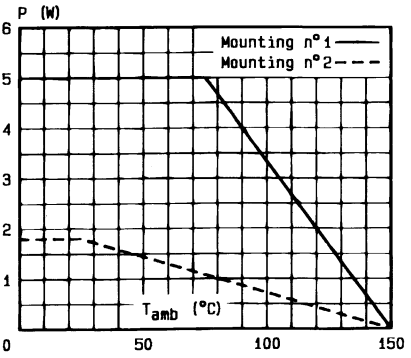


Fig.4 - Power dissipation versus ambient temperature.

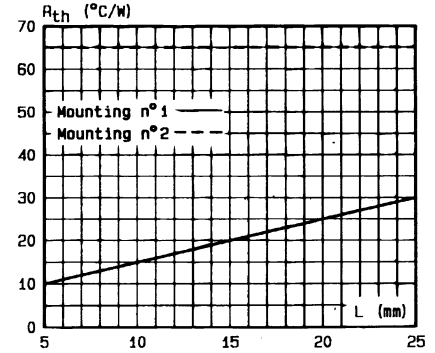
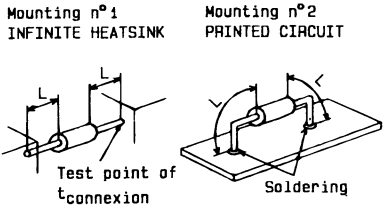


Fig.5 - Thermal resistance versus lead length.



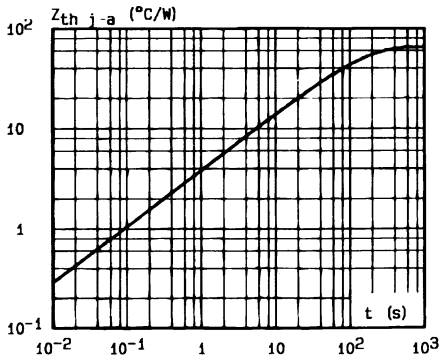


Fig.6 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

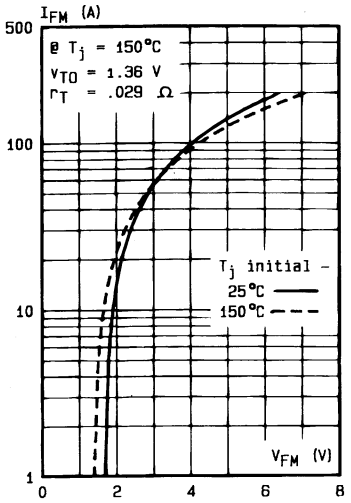


Fig.7 - Peak forward current versus peak forward voltage drop (maximum values).

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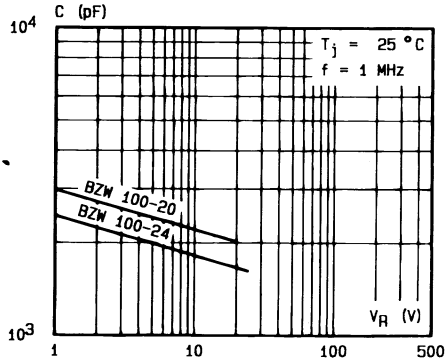

Fig.8 - Capacitance versus reverse applied voltage (typical values).

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