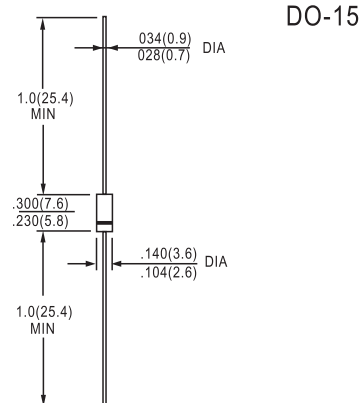


FEATURES

- PEAK PULSE POWER : 400 W (10/1000μs)
- STAND-OFF VOLTAGE RANGE :
From 5.8V to 376 V
- UNI AND BIDIRECTIONAL TYPES
- LOW CLAMPING FACTOR
- FAST RESPONSE TIME
- UL RECOGNIZED



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$)

Symbol	Parameter		Value	Unit
P_{PP}	Peak pulse power dissipation (see note 1)	$T_j \text{ initial} = T_{amb}$	400	W
P	Power dissipation on infinite heatsink	$T_{amb} = 75^{\circ}\text{C}$	1.7	W
I_{FSM}	Non repetitive surge peak forward current for unidirectional types	$t_p = 10\text{ms}$ $T_j \text{ initial} = T_{amb}$	30	A
T_{stg} T_j	Storage temperature range Maximum junction temperature		- 65 to + 175 175	$^{\circ}\text{C}$ $^{\circ}\text{C}$
T_L	Maximum lead temperature for soldering during 10s a 5mm from case.		230	$^{\circ}\text{C}$

Note 1 : For a surge greater than the maximum values, the diode will fail in short-circuit.

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-l)}$	Junction to leads		60	$^{\circ}\text{C/W}$
$R_{th(j-a)}$	Junction to ambient on printed circuit.	$L_{lead} = 10 \text{ mm}$	100	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

Types		I _{RM} @ V _{RM}		V _{BR} @ I _R		V _{CL} @ I _{PP}		V _{CL} @ I _{PP}		αT	C
		max		min		max		max		max	typ
				note2		10/1000μs		8/20μs		note3	note4
Unidirectional	Bidirectional	μA	V	V	mA	V	A	V	A	10 ⁻⁴ /°C	pF
BZW04-5V8	BZW04-5V8B	1000	5.8	6.45	10	10.5	38.0	13.4	174	5.7	3500
BZW04-6V4	BZW04-6V4B	500	6.4	7.13	10	11.3	35.4	14.5	160	6.1	3100
BZW04-8V5	BZW04-8V5B	10	8.5	9.5	1	14.5	27.6	18.6	124	7.3	2000
BZW04-10	BZW04-10B	5	10.2	11.4	1	16.7	24.0	21.7	106	7.8	1550
BZW04-13	BZW04-13B	5	12.8	14.3	1	21.2	19.0	27.2	85	8.4	1200
BZW04-15	BZW04-15B	1	15.3	17.1	1	25.2	16.0	32.5	71	8.8	975
BZW04-19	BZW04-19B	1	18.8	20.9	1	30.6	13.0	39.3	59	9.2	800
BZW04-20	BZW04-20B	1	20.5	22.8	1	33.2	12.0	42.8	54	9.4	725
BZW04-23	BZW04-23B	1	23.1	25.7	1	37.5	10.7	48.3	48	9.6	625
BZW04-26	BZW04-26B	1	25.6	28.5	1	41.5	9.6	53.5	43	9.7	575
BZW04-28	BZW04-28B	1	28.2	31.4	1	45.7	8.8	59.0	39	9.8	510
BZW04-31	BZW04-31B	1	30.8	34.2	1	49.9	8.0	64.3	36	9.6	480
BZW04-33	BZW04-33B	1	33.3	37.1	1	53.9	7.4	69.7	33	10.0	450
BZW04-40	BZW04-40B	1	40.2	44.7	1	64.8	6.2	84	27	10.1	370
BZW04-48	BZW04-48B	1	47.8	53.2	1	77.0	5.2	100	23	10.3	320
BZW04-58	BZW04-58B	1	58.1	64.6	1	92.0	4.3	121	19	10.4	270
BZW04-70	BZW04-70B	1	70.1	77.9	1	113	3.5	146	16.0	10.5	230
BZW04-85	BZW04-85B	1	85.5	95.0	1	137	2.9	178	13.0	10.6	200
BZW04-102	BZW04-102B	1	102	114	1	165	2.4	212	11.0	10.7	170
BZW04-128	BZW04-128B	1	128	143	1	207	2.0	265	9.0	10.8	145
BZW04-154	BZW04-154B	1	154	171	1	246	1.6	317	7.0	10.8	125
BZW04-171	BZW04-171B	1	171	190	1	274	1.5	353	6.5	10.8	120
BZW04-188	BZW04-188B	1	188	209	1	328	1.4	388	6.0	10.8	110
BZW04-213	BZW04-213B	1	231	237	1	344	1.5	442	5.2	11.0	100
BZW04-256	BZW04-256B	1	256	285	1	414	1.2	529	4.3	11.0	90
BZW04-273	BZW04-273B	1	273	304	1	438	1.2	564	4.0	11.0	85
BZW04-299	BZW04-299B	1	299	332	1	482	0.8	618	3.7	11.0	80
BZW04-342	BZW04-342B	1	342	380	1	548	0.9	706	3.2	11.0	75
BZW04-376	BZW04-376B	1	376	418	1	603	0.8	776	3.0	11.0	70

RATINGS AND CHARACTERISTIC CURVES BYW04 series

Fig.1a: Capacitance versus reverse applied voltage for unidirectional types (typical values).

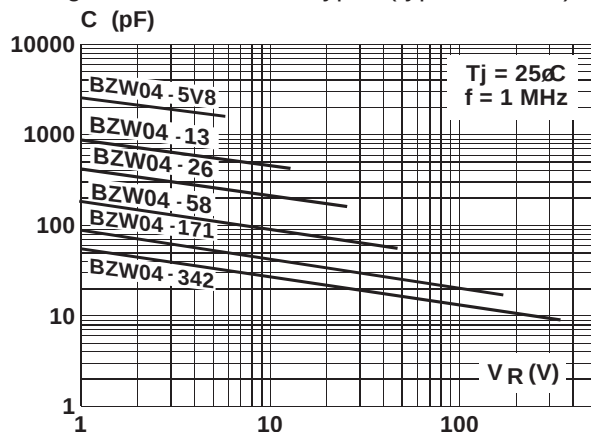


Fig.1b: Capacitance versus reverse applied voltage for bidirectional types (typical values).

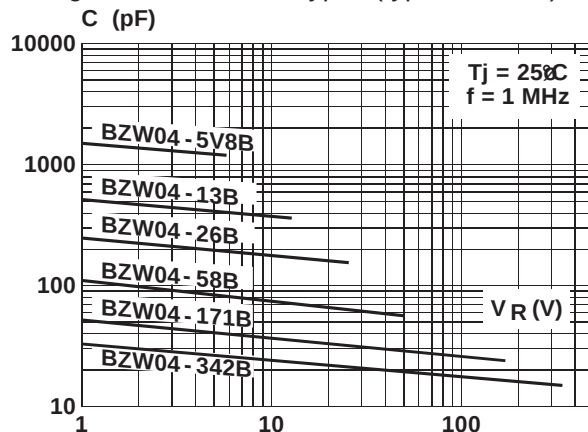


Fig.2: Peak forward voltage drop versus peak forward current (typical values for unidirectional types).

Note : Multiply by 2 for units with $V_{BR} > 220V$.

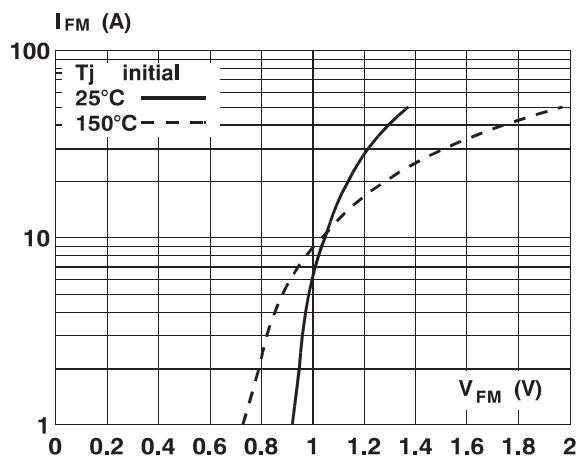


Fig.3: Transient thermal impedance junction ambient versus pulse duration (For FR4 PC Board with L lead = 10mm).

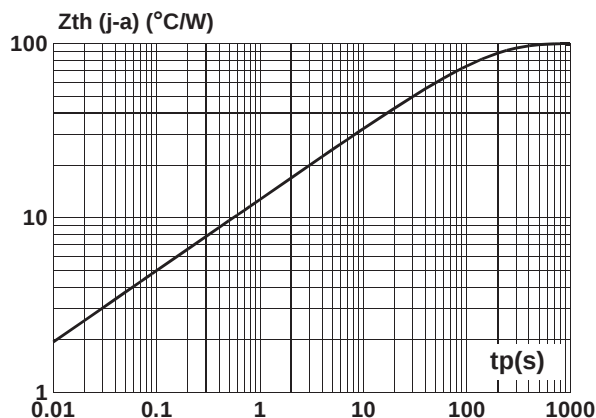


Fig.4: Relative variation of leakage current versus junction temperature.

