ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

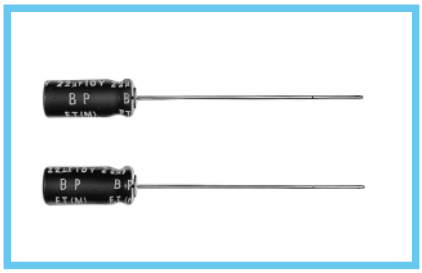
ET

Bi-Polarized, Wide Temperature Range

series

Bi-polarized　Anti-Solvent Feature

- Bi-polarized series for operations over wide temperature range of –55 ~ +105°C.
- Adapted to the RoHS directive (2002/95/EC).



ET

High Temperature

VP

■Specifications

Item	Performance Characteristics
Category Temperature Range	–55 ~ +105°C
Rated Voltage Range	6.3 ~ 100V
Rated Capacitance Range	0.47 ~ 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than 0.03CV or 3 (μA), whichever is greater.
tan δ	Measurement frequency : 120Hz, Temperature : 20°C

Rated voltage (V)	6.3	10	16	25	35	50	63	100
tan δ (MAX.)	0.24	0.20	0.16	0.16	0.14	0.12	0.10	0.09

Stability at Low Temperature — Measurement frequency : 120Hz

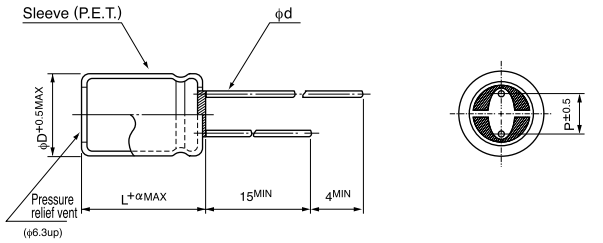
Rated voltage (V)		6.3	10	16	25	35	50	63	100
Impedance ratio ZT / Z20 (MAX.)	Z–25°C / Z+20°C	4	3	2	2	2	2	2	2
	Z–40°C / Z+20°C	8	6	4	4	3	3	3	3

Endurance — After 1000 hours' application of rated voltage at 105°C with the polarity inverted every 250 hours, capacitors meet the characteristic requirement listed at right.

Capacitance change	Within ±20% of initial value
tan δ	200% or less of initial specified value
Leakage current	Initial specified value or less

Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.
Marking	Printed with white color letter on black sleeve.

■Radial Lead Type



(mm)

α	
	(L < 20) 1.5
	(L ≥ 20) 2.0

φD	5	6.3	8	10	12.5	16
P	2.0	2.5	3.5	5.0	5.0	7.5
φd	0.5	0.5	0.6	0.6	0.6	0.8

• Please refer to page 21 about the end seal configulation.

Type numbering system (Example : 10V 47μF)

1	2	3	4	5	6	7	8	9	10	11
U	E	T	1	A	4	7	0	M	E	D

Configuration ※
Capacitance tolerance (±20%)
Rated Capacitance (47μF)
Rated voltage (10V)
Series name
Type

※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 · 16	HD

■Dimensions

Cap. (μF) \ V	6.3		10		16		25		35		50		63		100	
Code	0J		1A		1C		1E		1V		1H		1J		2A	
0.47	R47										5×11	8			5×11	10
1	010										5×11	12			5×11	15
2.2	2R2										5×11	18			6.3×11	22
3.3	3R3										5×11	22	6.3×11	26	8×11.5	32
4.7	4R7						5×11	23	5×11	25	6.3×11	29	6.3×11	31	8×11.5	39
10	100				5×11	30	5×11	34	6.3×11	40	8×11.5	51	8×11.5	53	10×12.5	64
22	220		5×11	42	6.3×11	51	6.3×11	55	8×11.5	68	10×12.5	82	10×16	96	10×20	114
33	330	5×11	6.3×11	57	6.3×11	63	8×11.5	79	10×12.5	89	10×16	107	10×20	129	12.5×20	164
47	470	6.3×11	6.3×11	67	8×11.5	89	10×12.5	100	10×12.5	111	10×20	146	10×20	157	12.5×25	200
100	101	8×11.5	10×12.5	125	10×12.5	139	10×16	164	10×20	196	12.5×25	264	12.5×25	275	16×25	304
220	221	10×12.5	10×16	204	10×20	279	12.5×25	336	12.5×25	364	16×25	443	16×31.5	486		
330	331	10×16	10×20	275	12.5×20	346	12.5×25	414	16×25	493	16×31.5	593				
470	471	10×20	12.5×20	371	12.5×25	460	16×25	543	16×25	586					Case size φD×L (mm)	Rated ripple
1000	102	12.5×25	16×25	668	16×25	746	16×31.5	871								

Rated Ripple (mArms) at 105°C 120Hz

●Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz ~
~ 47	0.75	1.00	1.35	1.57	2.00
100 ~ 470	0.80	1.00	1.23	1.34	1.50
1000	0.85	1.00	1.10	1.13	1.15

Please refer to page 21, 22, 23 about the formed or taped product spec.
Please refer to page 3 for the minimum order quantity.