ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

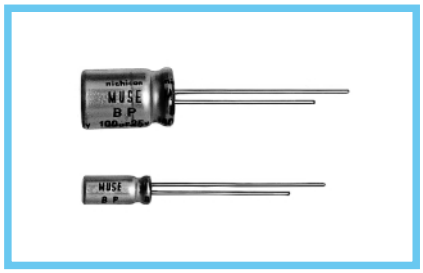
nichicon MUSE **ES** series

Bi-Polarized, For Audio Equipment

For Audio Use | Bi-polarized | Anti-Solvent Feature

- Bi-polarized “nichicon MUSE” acoustic series.
- Suited for audio signal circuits.
- Adapted to the RoHS directive (2002/95/EC).

ES ← Bi-polarized FW



■Specifications

Item	Performance Characteristics
Category Temperature Range	–40 to +85°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	0.47 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's 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
tan δ (MAX.)	0.24	0.20	0.16	0.16	0.14	0.12

Stability at Low Temperature — Measurement frequency : 120Hz

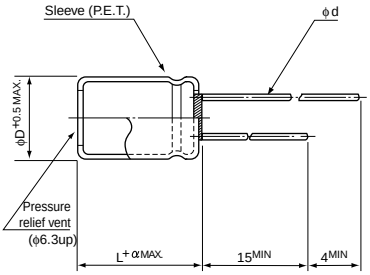
Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio ZT / Z20 (MAX.)	Z–25°C / Z+20°C	4	3	2	2	2	2
	Z–40°C / Z+20°C	8	6	4	4	4	4

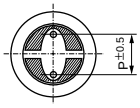
Endurance — After 1000 hours' application of rated voltage at 85°C with the polarity inverted every 250 hours, capacitors meet the characteristics requirement listed at right.

Capacitance change	Within ±20% of initial value
tan δ	150% or less of initial specified value
Leakage current	Initial specified value or less

Shelf Life	After storing the capacitors under no load at 85°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 black color letter on clear green sleeve.

■Radial Lead Type





(mm)

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

α	
	(φD < 10) 1.0
	(φD ≧ 10) 1.5

• Please refer to page 20 about the end seal configulation.

Type numbering system (Example : 10V 47μF)

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

Configuration

φD	Code
5	DM
6.3	EM
8 · 10	PM
12.5 · 16	HM

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

■Dimensions

φD×L (mm)

Cap.(μF) \ V	Code	6.3	10	16	25	35	50
		0J	1A	1C	1E	1V	1H
0.47	R47						5×11
1	010						5×11
2.2	2R2						5×11
3.3	3R3						5×11
4.7	4R7				5×11	5×11	6.3×11
10	100			5×11	5×11	6.3×11	8×11.5
22	220		5×11	6.3×11	6.3×11	8×11.5	10×12.5
33	330	5×11	6.3×11	6.3×11	8×11.5	10×12.5	10×16
47	470	6.3×11	6.3×11	8×11.5	10×12.5	10×12.5	10×20
100	101	8×11.5	10×12.5	10×12.5	10×16	10×20	12.5×25
220	221	10×12.5	10×16	10×20	12.5×25	12.5×25	16×25
330	331	10×16	10×20	12.5×20	12.5×25	16×25	16×31.5
470	471	10×20	12.5×20	12.5×25	16×25	16×25	
1000	102	12.5×25	16×25	16×25	16×31.5		

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.