

# ALUMINUM ELECTROLYTIC CAPACITORS

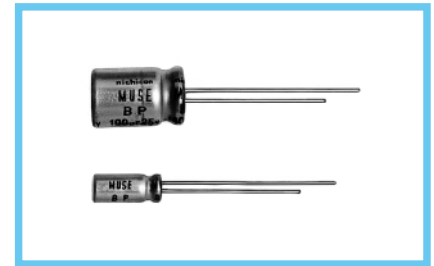
nichicon

**MUSE ES** series

Bi-Polarized, For Audio Equipment



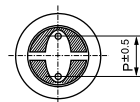
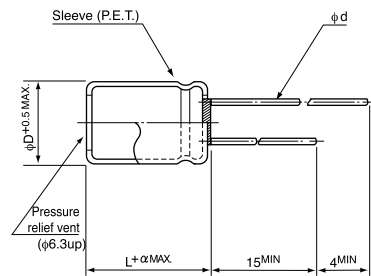
- Bi-polarized “nichicon MUSE” acoustic series.
- Suited for audio signal circuits.
- Adapted to the RoHS directive (2002/95/EC).



## Specifications

Item	Performance Characteristics						
Category Temperature Range	-40 ~ +85°C						
Rated Voltage Range	6.3 ~ 50V						
Rated Capacitance Range	0.47 ~ 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 Z-25°C / Z+20°C	4	3	2	2	2	2
	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	8	6	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					
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.						
	Leakage current	Initial specified value or less					
Marking	Printed with black color letter on clear green sleeve.						

## Radial Lead Type

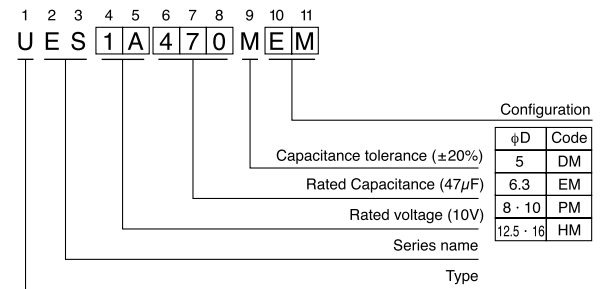


	5	6.3	8	10	12.5	16
φD (mm)	5	6.3	8	10	12.5	16
P (mm)	2.0	2.5	3.5	5.0	5.0	7.5
φd (mm)	0.6	0.6	0.6	0.6	0.8	0.8

α	φD < 10	1.0
	φD ≥ 10	1.5

- Please refer to page 21 about the end seal configuration.

## Type numbering system (Example : 10V 47μF)



Configuration

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

## Dimensions

V		φD × L (mm)					
Cap. (μF)	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 21, 22, 23 about the formed or taped product spec.  
Please refer to page 3 for the minimum order quantity.