

Series: **MC**
 Type: **TS (Snap-in)**

Aluminium Electrolytic Capacitors
 (Type Snap-in Series MC)

Japan

Over voltage
guaranteed

■ Features

- Lifetime: 105 °C 2000 h
- Improved safety for DC overvoltages up to 1.5 times rated working voltage.

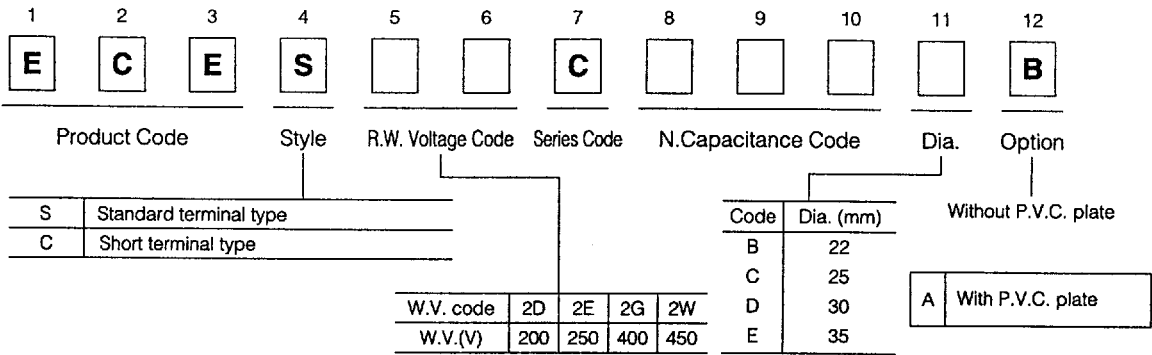
■ Recommended Applications

- Smoothing circuits, AC adaptor, Inverter lighting system

■ Specifications

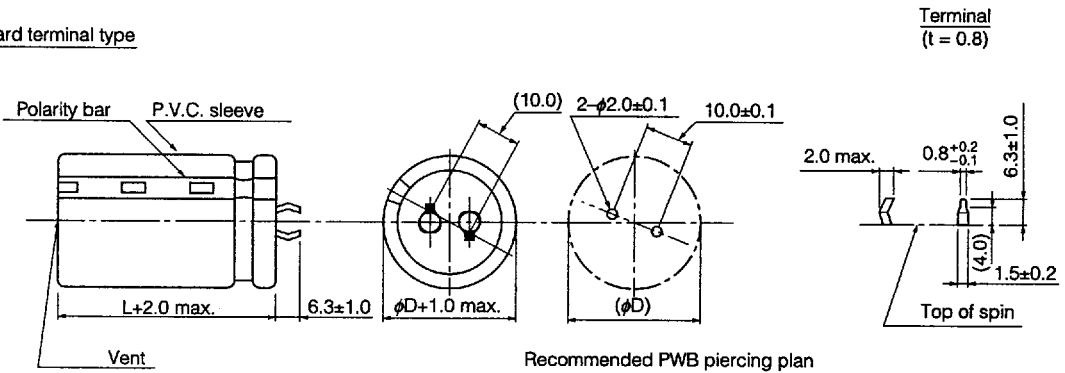
Operating Temp. Range	-40 to +105 °C	-25 to +105 °C																
Rated W.V. Range	200 to 250 V.DC	400 to 450 V.DC																
Nominal Cap. Range	120 to 1500 µF	39 to 390 µF																
Capacitance Tolerance	±20 % (120 Hz/+20 °C)																	
DC Leakage Current	0.03 CV (µA) or 3 mA, whichever is smaller, after 5 minutes application of rated C: Capacitance (µF) V: W.V. (V.DC) working voltage at +20 °C																	
tan δ	0.15 max. (120 Hz/+20 °C)																	
Frequency Correction Factor for Ripple Current	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20%;">Frequency (Hz)</td> <td>50</td> <td>60</td> <td>100</td> <td>120</td> <td>500</td> <td>1 k</td> <td>10 k ~</td> </tr> <tr> <td>C.F.</td> <td>0.75</td> <td>0.80</td> <td>0.95</td> <td>1.00</td> <td>1.20</td> <td>1.25</td> <td>1.40</td> </tr> </table>		Frequency (Hz)	50	60	100	120	500	1 k	10 k ~	C.F.	0.75	0.80	0.95	1.00	1.20	1.25	1.40
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C.F.	0.75	0.80	0.95	1.00	1.20	1.25	1.40											
Endurance	<p>After 2000 hours application of DC voltage with specified ripple current (≤ rated DC working voltage) at +105 °C, the capacitor shall meet the following limits.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 30%;">Capacitance change</td> <td>±20 % of initial measured value</td> </tr> <tr> <td>tan δ</td> <td>≤ 200 % of initial specified value</td> </tr> <tr> <td>DC leakage current</td> <td>≤ Initial specified value</td> </tr> </table>		Capacitance change	±20 % of initial measured value	tan δ	≤ 200 % of initial specified value	DC leakage current	≤ Initial specified value										
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tan δ	≤ 200 % of initial specified value																	
DC leakage current	≤ Initial specified value																	
Shelf Life	After storage for 1000 hours at +105 °C with no voltage applied, the capacitor shall meet the specified limits for "Endurance".																	
Overvoltage	Please contact the factory for detailed information on test methods and standards relating overvoltage characteristics																	

Explanation of Part Numbers

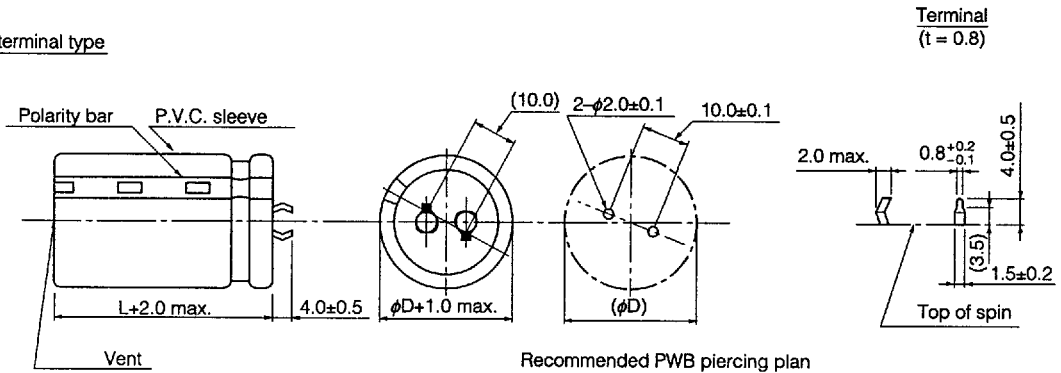


Dimensions in mm (not to scale)

Standard terminal type



Short terminal type



■ Case size/Ripple current: (A) r.m.s. (120 Hz/+105 °C)

W.V. (code)		200 V (2D) (SV) 250 V			
Cap. (μF) (code)	Ripple current	Case size φD×L (mm)			
		B	C	D	E
180 (181)	0.90	22×25			
220 (221)	1.00	22×30	25×25		
270 (271)	1.10	22×35	25×30	30×25	
330 (331)	1.20	22×40	25×30	30×25	
390 (391)	1.30	22×45	25×35	30×30	
470 (471)	1.40	22×50	25×40	30×30	
560 (561)	1.50		25×45	30×35	35×30
680 (681)	1.70		25×50	30×40	35×30
820 (821)	2.00			30×45	35×35
1000 (102)	2.20			30×50	35×40
1200 (122)	2.30				* 35×45
1500 (152)	2.50				* 35×50

W.V. (code)		250 V (2E) (SV) 300 V			
Cap. (μF) (code)	Ripple current	Case size φD×L (mm)			
		B	C	D	E
120 (121)	0.70	22×25			
150 (151)	0.80	22×30	25×25		
180 (181)	0.90	22×35	25×30		
220 (221)	1.00	22×40	25×30	30×25	
270 (271)	1.10	22×45	25×35	30×30	
330 (331)	1.20	22×50	25×40	30×30	
390 (391)	1.30		25×45	30×35	35×30
470 (471)	1.40		25×50	30×40	35×30
560 (561)	1.50			30×45	35×35
680 (681)	1.70			30×50	35×40
820 (821)	2.00				* 35×45
1000 (102)	2.20				* 35×50

() shows W.V. and capacitance code.

*When capacitors of φ35×45 L and φ35×50 L are mounted on PWB, reinforce them with mounting clamp or adhesives.
(Avoid using adhesives including halogenated compositions.)

■ Case size/Ripple current: (A) r.m.s. (120 Hz/+105 °C)

W.V. (code)		400 V (2G) (SV) 450 V			
Cap. (μF) (code)	Ripple current	Case size φD×L (mm)			
		B	C	D	E
47 (470)	0.47	22×25			
56 (560)	0.51	22×30	25×25		
68 (680)	0.56	22×35	25×30		
82 (820)	0.64	22×40	25×30	30×25	
100 (101)	0.69	22×45	25×35	30×30	
120 (121)	0.75	22×50	25×40	30×30	
150 (151)	0.82		25×45	30×35	35×30
180 (181)	0.90		25×50	30×40	35×30
220 (221)	1.00			30×45	35×35
270 (271)	1.10			30×50	35×40
330 (331)	1.20				* 35×45
390 (391)	1.30				* 35×50

W.V. (code)		450 V (2W) (SV) 500 V			
Cap. (μF) (code)	Ripple current	Case size φD×L (mm)			
		B	C	D	E
39 (390)	0.37	22×25			
47 (470)	0.40	22×30	25×25		
56 (560)	0.47	22×35	25×30		
68 (680)	0.53	22×40	25×30	30×25	
82 (820)	0.56	22×45	25×35	30×30	
100 (101)	0.61	22×50	25×40	30×30	
120 (121)	0.67		25×45	30×35	
150 (151)	0.75		25×50	30×40	35×30
180 (181)	0.82			30×45	35×35
220 (221)	0.92			30×50	35×40
270 (271)	1.00				* 35×45
330 (331)	1.10				* 35×50

() shows W.V. and capacitance code.

* When capacitors of φ35×45 L and φ35×50 L are mounted on PWB, reinforce them with mounting clamp or adhesives.
(Avoid using adhesives including halogenated compositions.)