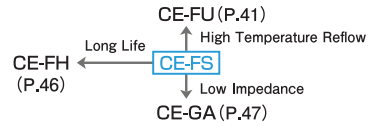


CE-FS Series

105°C Standard



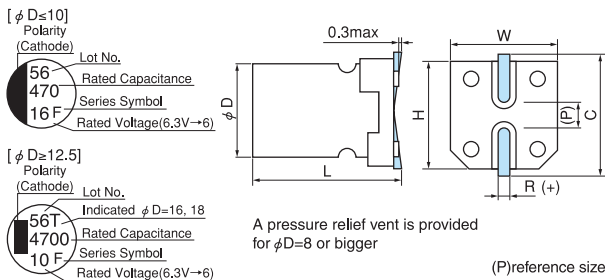
- 105°C, 1,000 to 2,000hours
- Solvent proof (within 2 minutes)



Specifications

Items	Condition	Specifications								
Rated voltage (V)	—	6.3	10	16	25	35	50	63	100	
Surge Voltage (V)	Room temperature	8.0	13	20	32	44	63	79	125	
Category temperature range (°C)	—	-55 to +105								-40 to +105
Capacitance tolerance (%)	120Hz/20°C	M : ±20								
Dissipation Factor (tan δ)	tan δ (max) 120Hz/20°C	φ4 to φ6.3	0.24	0.20	0.16	0.14	0.12	0.10	0.12	0.10
		φ8 to φ16	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10
		φ18	0.34	0.30	0.26	0.22	0.18	0.16	0.14	0.10
Leakage current (LC)	μA/after 2minutes (max)	Exceeding 1,000 μF, +0.02 every 1,000 μF								
Impedance ratio at low temperature	Based the value at 120Hz, +20°C	-40°C Z/Z _{20°C}	3	3	2	2	2	2	2	3
		-55°C Z/Z _{20°C}	8	5	4	3	3	3	3	—
Endurance	105°C rated voltage applied (With the rated ripple current)	Test	φ4 to φ6.3, φ10 × 7.7 : 1,000hours, φ8 to φ18 : 2,000hours							
		ΔC/C	Within ±25% of the initial value							
		tan δ	Less than 200% of the specified value							
		LC	Less than the specified value							

Marking, Dimensions



(Unit : mm)

D ^{+0.5max}	L	W ^{±0.2}	H ^{±0.2}	C ^{±0.2}	R	P
4	5.4 ^{+0.1} _{-0.2}	4.3	4.3	5.0	0.5 to 0.8	1.0
4	6.0 ^{±0.3}	4.3	4.3	5.0	0.5 to 0.8	1.0
5	5.4 ^{+0.1} _{-0.2}	5.3	5.3	6.0	0.5 to 0.8	1.4
6.3	5.4 ^{+0.1} _{-0.2}	6.6	6.6	7.3	0.5 to 0.8	2.2
6.3	6.0 ^{±0.3}	6.6	6.6	7.3	0.5 to 0.8	2.2
6.3	7.7 ^{±0.3}	6.6	6.6	7.3	0.5 to 0.8	2.2
8	10.2 ^{±0.3}	8.3	8.3	9.0	0.7 to 1.0	3.2
10	7.7 ^{±0.3}	10.3	10.3	11.0	1.0 to 1.4	4.6
10	10.2 ^{±0.3}	10.3	10.3	11.0	1.0 to 1.4	4.6
12.5	13.5 ^{±0.5}	12.8	12.8	13.5	1.0 to 1.4	4.6
16	16.5 ^{±0.5}	16.3	16.3	17.3	1.7 to 2.1	7.0
18	16.5 ^{±1.0}	19.0	19.0	20.0	1.7 to 2.1	7.0
18	21.5 ^{±1.0}	19.0	19.0	20.0	1.7 to 2.1	7.0

Surface Mount Type
Aluminum Electrolytic Capacitors

- CE-BE
- CE-BD
- CE-BS
- CE-BSS
- CE-FE
- CE-LD
- CE-FU
- CE-FS**
- CE-FSS
- CE-FH
- CE-GA
- CE-AX
- CE-KX
- CE-ZX
- CE-ZC
- CE-LX
- CE-LS
- CE-LH
- CE-LL
- CE-PC
- CE-PH
- CE-PS
- CE-PF
- CE-TH
- CE-NP
- CE-FN

■ Size, Rated Ripple Current

μF \ V	6.3		10		16		25		35	
4.7							4x5.4	13	4x5.4	14
10					4x5.4	18	5x5.4	20	5x5.4	21
22	4x5.4	22	5x5.4	25	5x5.4	27	6.3x5.4	36	6.3x5.4	38
33	5x5.4	27	5x5.4	30	6.3x5.4	40	6.3x5.4	44	6.3x6.0	42
47	5x5.4	33	6.3x5.4	41	6.3x5.4	48	6.3x6.0	48	6.3x6.0	49
100	6.3x5.4	50	6.3x5.4	53	6.3x5.4	60	6.3x7.7	91	6.3x7.7	84
150			6.3x6.0	62	6.3x7.7	95	8x10.2	140	8x10.2	155
220	6.3x6.0	67	6.3x7.7	105	6.3x7.7	105	8x10.2	175	8x10.2	190
330	6.3x7.7	105	8x10.2	195	8x10.2	195	8x10.2	220	10x10.2	300
470	8x10.2	210	8x10.2	210	8x10.2	230	10x10.2	300	12.5x13.5	410
680	8x10.2	210	10x7.7	210					12.5x13.5	430
1000	8x10.2	230	10x10.2	310			12.5x13.5	460	16x16.5	700
1500	10x10.2	310			12.5x13.5	500			16x16.5	740
2200			12.5x13.5	510			16x16.5	805	18x16.5	950
2700									18x21.5	1200
3300	12.5x13.5	520			16x16.5	840	18x16.5	1040		
3900							18x21.5	1280		
4700			16x16.5	880	18x16.5	1090				
5600					18x21.5	1300				
6800	16x16.5	930	18x16.5	1150						
8200			18x21.5	1350						
10000	18x16.5	1200								
12000	18x21.5	1350								

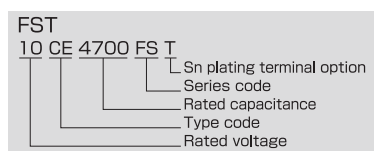
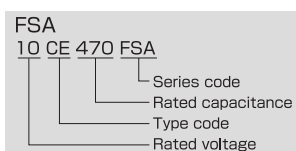
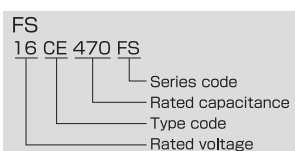
μF \ V	50		63		100	
0.47	4x5.4	3.5	4x5.4	3.5		
1.0	4x5.4	7.0	4x5.4	7.0	4x6.0	7.0
2.2	4x5.4	11	4x5.4	11	6.3x6.0	14
3.3	4x5.4	13	5x5.4	14	6.3x6.0	20
4.7	5x5.4	16	5x5.4	16	6.3x6.0	25
10	6.3x5.4	24	6.3x5.4	24	6.3x7.7	35
22	6.3x6.0	42	6.3x7.7	49	8x10.2	84
33	6.3x7.7	60	8x10.2	112	10x10.2	133
47	6.3x7.7	63	8x10.2	119	12.5x13.5	240
68			8x10.2	126	12.5x13.5	245
82	10x7.7	140				
100	8x10.2	140	10x10.2	196	16x16.5	490
150					16x16.5	500
220	10x10.2	220	12.5x13.5	287	18x16.5	650
330	12.5x13.5	365			18x21.5	700
390	12.5x13.5	380				
470			16x16.5	630		
680			18x16.5	750		
1000	16x16.5	655	18x21.5	900		
1500	18x21.5	1100				

Please refer to page 15 for ripple current frequency coefficients.

Case size: ϕ DxL(mm)
10x7.7:CE-FSA
 ϕ 16, ϕ 18:CE-FST

Rated ripple current
mArms(120Hz, 105°C)

■ Part number



Surface Mount Type
Aluminum Electrolytic Capacitors

- CE-BE
- CE-BD
- CE-BS
- CE-BSS
- CE-FE
- CE-LD
- CE-FU
- CE-FS
- CE-FSS
- CE-FH
- CE-GA
- CE-AX
- CE-KX
- CE-ZX
- CE-ZC
- CE-LX
- CE-LS
- CE-LH
- CE-LL
- CE-PC
- CE-PH
- CE-PS
- CE-PF
- CE-TH
- CE-NP
- CE-FN

Aluminum Electrolytic Type / Surface Mount Type

RoHS compliance

CE-FS Series

105°C Standard

High Voltage

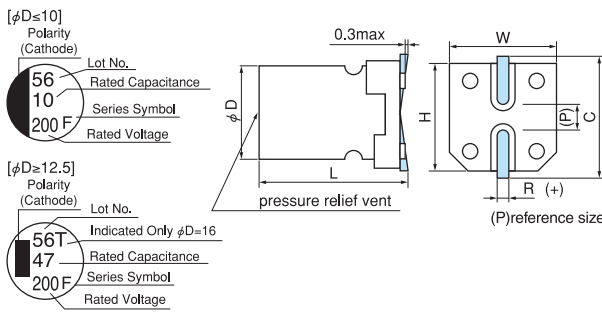


- 160 to 400V, 105°C, 1,000 to 2,000hours
- Non solvent proof

Specifications

Items	Condition	Specifications				
Rated voltage (V)	—	160	200	250	400	
Surge voltage (V)	Room temperature	200	250	300	450	
Category temperature range (°C)	—	-40 to +105				
Capacitance tolerance (%)	120Hz/20°C	M : ±20				
Dissipation Factor (tan δ)	tan δ (max) 120Hz/20°C	0.20			0.25	
Leakage current (LC)	μA/after 2minutes (max)	CV ≤ 1,000	0.03CV + 15			
		CV > 1,000	0.02CV + 25			
Impedance ratio at low temperature	Based the value at 120Hz, +20°C	-25°C Z/Z20°C	3	3	3	6
		-40°C Z/Z20°C	6	6	6	10
Endurance	105°C rated voltage applied (With the rated ripple current)	Test	φ8 : 1,000hours, φ10 to φ16 : 2,000hours			
		ΔC/C	Within ±25% of the initial value			
		tan δ	Less than 200% of the specified value			
		LC	Less than the specified value			

Marking, Dimensions



(Unit : mm)

D ^{+0.5max}	L ^{±0.3}	W ^{±0.2}	H ^{±0.2}	C ^{±0.2}	R	P
8	10.5	8.3	8.3	9.0	0.7 to 1.0	3.2
10	10.5	10.3	10.3	11.0	1.0 to 1.4	4.6
12.5	13.5 ^{±0.5}	12.8	12.8	13.5	1.0 to 1.4	4.6
16	16.5 ^{±0.5}	16.3	16.3	17.3	1.7 to 2.1	7.0

Size, Rated Ripple Current

μF \ V	160		200		250		400	
2.2							8×10.5	25
3.3					8×10.5	31	10×10.5	36
4.7					8×10.5	37	10×10.5	38
6.8					8×10.5	44	12.5×13.5	47
10	8×10.5	57	10×10.5	64	10×10.5	64	12.5×13.5	57
22	12.5×13.5	112	12.5×13.5	112	12.5×13.5	112	16×16.5	115
33	12.5×13.5	137	12.5×13.5	137	16×16.5	150		
47	16×16.5	180	16×16.5	180	16×16.5	180		
68	16×16.5	215	16×16.5	215				
82	16×16.5	235						

Please refer to page 15 for ripple current frequency coefficients.

Rated ripple current
mA rms (120Hz, 105°C)

Case size: φDxL (mm)
16×16.5: CE-FST

Part number

