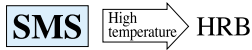


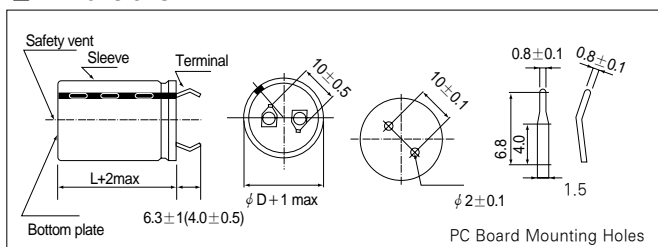
- Standard snap-in terminal series
- Smoothing circuits, AC adaptor, etc.



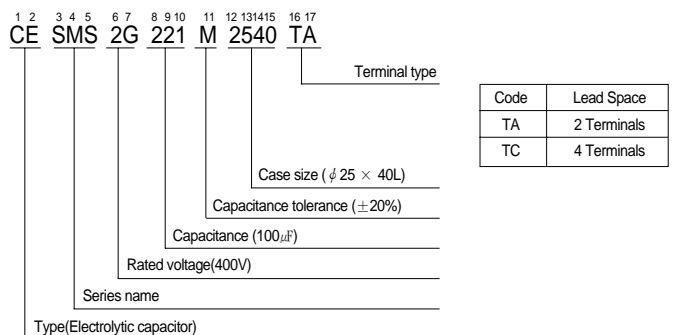
### Specifications

Item	Performance Characteristics							
Operating	-40 ~ +85°C (~350V), -25 ~ +85°C (400V~450V)							
Voltage	10 ~ 450V							
Capacitance Range	56 ~ 56000 $\mu$ F							
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C							
Leakage Current	After 5minutes application of rated voltage, leakage current is not more than 0.03CV( $\mu$ A) or 3.0(mA), whichever is smaller							
tan $\delta$	(20°C, 120Hz)							
	Rated voltage(V)	10    16    25    35    50    63    80~450						
	tan $\delta$ (MAX.)	0.40    0.35    0.30    0.25    0.20    0.20    0.15						
	Add 0.01 per 1000 $\mu$ F for more than 1000 $\mu$ F items.							
Stability at Low Temperature	(120Hz)							
	Rated voltage(V)	10    16 ~ 35    50 ~ 100    160 ~ 350    400 ~ 450						
	① Z(-25°C) / Z(+20°C) MAX	5    4    3    3    4						
	② Z(-40°C) / Z(+20°C) MAX	18    15    10    8						
	Add ① 0.5, or ② 1.0 per 1000 $\mu$ F for more than 1000 $\mu$ F items.							
Load Life	After an application of DC bias voltage plus the rated ac ripple current for 2000hours at 85°C, the peak voltage shall not exceed the rated DC voltage.	<table border="1"> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Capacitance change</td> <td>Within <math>\pm 20\%</math> of the initial measured value</td> </tr> <tr> <td>tan <math>\delta</math></td> <td>Within 150% of the initial specified value</td> </tr> </table>	Leakage current	Initial specified value or less	Capacitance change	Within $\pm 20\%$ of the initial measured value	tan $\delta$	Within 150% of the initial specified value
	Leakage current	Initial specified value or less						
Capacitance change	Within $\pm 20\%$ of the initial measured value							
tan $\delta$	Within 150% of the initial specified value							
	The measurement shall meet following limits. Measurements shall be performed after 2hours exposure at room temperature.							
Shelf Life	After 1000hours at 85°C without voltage application measurements shall meet the following limits.	<table border="1"> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Capacitance change</td> <td>Within <math>\pm 20\%</math> of the initial measured value</td> </tr> <tr> <td>tan <math>\delta</math></td> <td>Within 150% of the initial specified value</td> </tr> </table>	Leakage current	Initial specified value or less	Capacitance change	Within $\pm 20\%$ of the initial measured value	tan $\delta$	Within 150% of the initial specified value
	Leakage current	Initial specified value or less						
Capacitance change	Within $\pm 20\%$ of the initial measured value							
tan $\delta$	Within 150% of the initial specified value							
	Measurement shall be performed after exposure for 24hours at room temperature after application of DC rated voltage to the capacitors for 30minutes.							
Marking	Printed with gold color letter on dark green sleeve							
Applicable Standards	JIS C-5141, JIS C-5102							

### Dimensions



### Part number system



### Frequency compensation coefficient of permissible ripple current

Frequency	50Hz	60Hz	120Hz	300Hz	1KHz	10KHz~
~100V	0.92	0.95	1.00	1.06	1.11	1.20
160 ~ 250V	0.85	0.90	1.00	1.18	1.32	1.50
315 ~ 450V	0.82	0.87	1.00	1.16	1.30	1.40

■ Dimensions & Maximum permissible ripple current

W.V(V <sub>DC</sub> ) Cap(μF)	10WV(1A)				16WV(1C)				25WV(1E)				35WV(1V)			
	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35
4700													22×30 (3.12)	25.4×25 (3.13)		
5600									22×25 (2.73)				22×35 (3.41)	25.4×30 (3.47)		
6800									22×30 (3.01)	25.4×25 (3.11)			22×40 (3.76)	25.4×30 (3.64)	30×25 (3.72)	
8200					22×25 (3.01)				22×35 (3.41)	25.4×30 (3.54)			22×45 (4.12)	25.4×35 (4.03)	30×30 (4.24)	
10000					22×30 (3.45)				22×40 (4.08)	25.4×30 (3.88)	30×25 (3.96)		22×50 (4.56)	25.4×40 (4.48)	30×30 (4.44)	35×25 (4.42)
12000	22×25 (3.3)				22×35 (3.77)	25.4×25 (3.88)			22×45 (4.47)	25.4×35 (4.32)	30×30 (4.47)		25.4×45 (5.14)	30×35 (5.14)	35×30 (5.16)	
15000	22×30 (3.82)	25.4×25 (3.85)			22×40 (4.22)	25.4×30 (4.43)	30×25 (4.53)		22×50 (4.99)	25.4×40 (4.91)	30×30 (4.72)	35×25 (4.71)	25.4×50 (5.81)	30×40 (5.66)	35×35 (5.77)	
18000	22×35 (4.25)	25.4×25 (4.1)			22×45 (4.62)	25.4×35 (4.96)	30×30 (5.15)			25.4×45 (5.47)	30×35 (5.46)	35×30 (5.27)		30×50 (6.38)	35×40 (6.32)	
22000	22×40 (4.81)	25.4×30 (4.67)	30×25 (4.79)		22×50 (5.41)	25.4×40 (5.37)	30×30 (5.35)			25.4×50 (6.05)	30×40 (5.86)	35×35 (5.92)			35×45 (6.99)	
27000	22×45 (5.44)	25.4×35 (5.21)	30×30 (5.45)			25.4×45 (5.99)	30×35 (5.93)	35×25 (5.68)			30×50 (6.7)	35×40 (6.45)				35×50 (7.74)
33000	22×50 (5.94)	25.4×40 (5.92)	30×30 (5.66)	35×25 (5.76)		25.4×50 (6.65)	30×40 (6.65)	35×30 (6.5)				35×45 (7.41)				
47000		25.4×50 (7.05)	30×40 (6.97)	35×30 (6.62)			30×50 (7.92)	35×40 (7.61)								
56000			30×45 (7.42)	35×35 (7.12)				35×45 (8.16)	← Case size φ D×Lmm ← Ripple current (Arms) at 85℃, 120Hz							

W.V(V <sub>DC</sub> ) Cap(μF)	50WV(1H)				63WV(1J)				80WV(1K)				100WV(2A)			
	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35
820													22×30 (1.86)			
1000													22×35 (2.02)	25.4×25 (2.12)		
1200									22×30 (2.17)				22×40 (2.12)	25.4×30 (2.35)	30×25 (2.43)	
1500									22×35 (2.42)	25.4×25 (2.45)			22×45 (2.43)	25.4×35 (2.67)	30×30 (2.78)	
1800					22×30 (2.45)				22×40 (2.65)	25.4×30 (2.76)	30×25 (2.26)		22×50 (2.74)	25.4×40 (2.97)	30×35 (3.05)	35×25 (3.12)
2200	22×25 (2.71)				22×30 (2.71)	25.4×25 (2.78)			22×45 (3.02)	25.4×35 (3.15)	30×30 (3.09)		25.4×45 (3.45)	30×35 (3.38)	35×30 (3.29)	
2700	22×30 (2.84)				22×35 (2.99)	25.4×30 (3.14)			22×50 (3.35)	25.4×40 (3.33)	30×35 (3.45)	35×25 (3.52)	25.4×50 (3.68)	30×40 (3.85)	35×35 (3.72)	
3300	22×35 (2.96)	25.4×25 (3.04)			22×40 (3.31)	25.4×30 (3.45)	30×25 (3.48)		22×60 (3.83)	25.4×45 (3.85)	30×35 (3.67)	35×30 (3.61)	25.4×55 (4.24)	30×45 (4.19)	35×40 (4.28)	
3900	22×35 (3.22)	25.4×30 (3.46)			22×50 (3.6)	25.4×35 (3.75)	30×30 (3.85)			25.4×50 (4.42)	30×40 (4.56)	35×35 (4.3)		30×50 (5.06)	35×40 (4.86)	
4700	22×40 (3.54)	25.4×35 (3.85)	30×25 (3.76)		22×55 (3.95)	25.4×40 (4.05)	30×35 (4)	35×25 (4.08)		25.4×55 (5.12)	30×45 (5.23)	35×35 (4.91)		30×60 (5.54)	35×45 (5.33)	
5600	22×45 (3.94)	25.4×40 (4.24)	30×30 (4.2)	35×25 (4.35)		25.4×45 (4.32)	30×35 (4.27)	35×30 (4.32)			30×50 (5.53)	35×40 (5.35)			35×50 (5.82)	
6800	22×55 (4.76)	25.4×45 (4.76)	30×35 (4.93)	35×30 (5.05)		25.4×55 (5.08)	30×45 (4.96)	35×35 (4.75)			30×60 (6.07)	35×45 (5.9)			35×60 (6.41)	
8200		25×50 (5.43)	30×40 (5.31)	35×30 (5.22)			30×50 (5.62)	35×40 (5.51)				35×50 (6.47)				

### ■ Dimensions & Maximum permissible ripple current

W.V(V <sub>DC</sub> ) Cap(μF)	50WV(1H)				63WV(1J)				80WV(1K)				100WV(2A)			
	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35
10000			30×45 (5.98)	35×35 (5.77)			30×55 (6.24)	35×45 (6.08)				35×60 (7.16)				
12000			30×50 (6.56)	35×40 (6.32)				35×50 (6.66)								
15000				35×45 (7.07)												
18000				35×50 (7.74)	← Case size φ D×Lmm ← Ripple current (Arms) at 85℃, 120Hz											

W.V(V <sub>DC</sub> ) Cap(μF)	160WV(2C)				180WV(2Y)				200WV(2D)				250WV(2E)			
	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35
180													22×25 (1.07)			
220													22×30 (1.17)			
270								22×30 (1.41)					22×35 (1.31)	25.4×25 (1.38)		
330	22×30 (1.4)				22×30 (1.35)			22×30 (1.56)	25.4×25 (1.58)				22×40 (1.75)	25.4×30 (1.81)		
390	22×30 (1.54)	25.4×25 (1.58)			22×35 (1.55)	25.4×25 (1.58)			22×35 (1.68)	25.4×30 (1.75)			22×45 (1.91)	25.4×35 (1.95)	30×25 (1.89)	
470	22×35 (1.75)	25.4×30 (1.86)			22×40 (1.75)	25.4×30 (1.92)	30×25 (1.76)		22×40 (1.85)	25.4×30 (1.97)	30×25 (1.85)		22×50 (2.11)	25.4×40 (2.2)	30×30 (2.15)	
560	22×40 (1.95)	25.4×30 (2.05)	30×25 (1.98)		22×45 (1.98)	25.4×35 (1.87)	30×30 (2.12)		22×45 (2.43)	25.4×35 (2.38)	30×30 (2.5)			25.4×45 (2.35)	30×35 (2.35)	35×25 (2.25)
680	22×45 (2.21)	25.4×35 (2.18)	30×30 (2.56)		22×50 (2.25)	25.4×40 (2.25)	30×35 (2.34)	35×25 (2.07)	22×55 (2.68)	25.4×40 (2.58)	30×30 (2.47)	35×25 (2.43)		25.4×50 (2.75)	30×40 (2.67)	35×30 (2.5)
820	22×50 (2.46)	25.4×40 (2.46)	30×30 (2.57)	35×25 (2.37)	22×60 (2.52)	25.4×45 (2.63)	30×35 (2.47)	35×30 (2.52)		25.4×45 (3.05)	30×35 (2.85)	35×30 (2.93)			30×45 (2.98)	35×35 (2.77)
1000	22×60 (2.8)	25.4×45 (2.85)	30×35 (2.76)	35×30 (2.8)		25.4×50 (3.12)	30×40 (3.08)	35×30 (2.85)		25.4×50 (3.42)	30×45 (3.35)	35×30 (3.25)			30×55 (3.4)	35×40 (3.32)
1200		25.4×50 (3.15)	30×40 (3.12)	35×30 (3.15)			30×45 (3.24)	35×35 (3.3)			30×50 (3.65)	35×35 (3.5)				35×45 (3.53)
1500			30×50 (3.59)	35×40 (3.7)			30×55 (3.64)	35×45 (3.75)			30×55 (3.82)	35×45 (3.87)				35×55 (4.04)
1800			30×55 (4.13)	35×45 (4.02)				35×50 (4.02)	← Case size φ D×Lmm ← Ripple current (Arms) at 85℃, 120Hz							

W.V(V <sub>DC</sub> ) Cap(μF)	315WV(2F)				350WV(2V)				400WV(2G)				450WV(2W)			
	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35	φ 22	φ 25.4	φ 30	φ 35
56													22×25 (0.59)			
68													22×30 (0.63)			
82					22×25 (0.7)				22×25 (0.83)				22×30 (0.78)	25.4×25 (0.78)		
100	22×25 (0.77)				22×30 (0.81)				22×30 (0.92)	25.4×25 (0.95)			22×35 (0.92)	25.4×30 (0.93)		
120	22×30 (0.83)				22×35 (0.92)	25.4×25 (0.94)			22×35 (1.02)	25.4×30 (1.05)			22×40 (1.04)	25.4×35 (1.05)	30×25 (1.02)	
150	22×30 (0.98)	25.4×25 (1)			22×40 (1.05)	25.4×30 (1.06)	30×25 (1.01)		22×40 (1.16)	25.4×30 (1.18)	30×25 (1.15)		22×50 (1.19)	25.4×40 (1.18)	30×30 (1.15)	
180	22×35 (1.1)	25.4×30 (1.15)			22×45 (1.13)	25.4×35 (1.16)	30×30 (1.14)		22×45 (1.44)	25.4×35 (1.37)	30×30 (1.4)			25.4×45 (1.36)	30×35 (1.35)	35×25 (1.35)

W.V(Vdc) Cap( $\mu$ F)	315WV(2F)				350WV(2V)				400WV(2G)				450WV(2W)			
	$\phi$ 22	$\phi$ 25.4	$\phi$ 30	$\phi$ 35	$\phi$ 22	$\phi$ 25.4	$\phi$ 30	$\phi$ 35	$\phi$ 22	$\phi$ 25.4	$\phi$ 30	$\phi$ 35	$\phi$ 22	$\phi$ 25.4	$\phi$ 30	$\phi$ 35
220	22×40 (1.25)	25.4×30 (1.24)	30×25 (1.28)		22×50 (1.31)	25.4×40 (1.45)	30×30 (1.43)	35×25 (1.4)	22×55 (1.49)	25.4×40 (1.45)	30×30 (1.42)	35×25 (1.44)		25.4×50 (1.5)	30×40 (1.47)	35×30 (1.55)
270	22×45 (1.45)	25.4×40 (1.55)	30×30 (1.53)			25.4×45 (1.54)	30×35 (1.49)	35×30 (1.54)		25.4×45 (1.65)	30×35 (1.62)	35×30 (1.67)			30×45 (1.75)	35×35 (1.78)
330	22×50 (1.6)	25.4×45 (1.75)	30×35 (1.76)	35×25 (1.8)		25.4×50 (1.82)	30×40 (1.76)	35×30 (1.72)		25.4×50 (1.95)	30×40 (1.92)	35×35 (1.9)			30×50 (2.01)	35×40 (2.01)
390		25.4×50 (1.93)	30×35 (1.91)	35×30 (1.86)			30×45 (2.08)	35×35 (2.01)			30×45 (2.16)	35×40 (2.13)				35×45 (2.24)
470			30×45 (2.21)	35×35 (2.07)			30×55 (2.48)	35×40 (2.32)			30×50 (2.41)	35×45 (2.39)				35×50 (2.53)
560			30×50 (2.54)	35×40 (2.33)				35×45 (2.53)				35×50 (2.69)				
680				35×45 (2.66)				35×50 (2.95)								
820				35×50 (3)	← Case size $\phi$ D×Lmm ← Ripple current (Arms) at 85°C, 120Hz											