

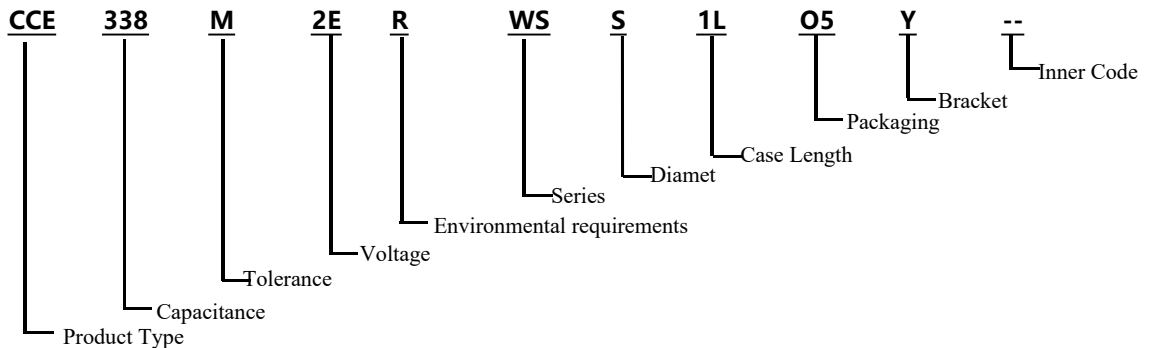
WS Series

- 85°C 2000hours Screw type
- 85°C standard purpose product
- RoHS Requirements

Specification

Item	Characteristics	
Rated Voltage Range	10~100V	160~550V
Operating Temperature Range	-40~+85°C	-25~+85°C
Capacitance Tolerance	±20% (M)	
Leakage Current(20°C)	I≤0.02CVμA or 5mA, whichever is smaller After 5 minutes at 20°C application of rated voltage, C: Nominal Capacitance (μF) V: Rated Voltage (V)	
Dissipation Factor (20°C,120Hz)	Less than values shown in the standard ratings	
Low Temperature Stability	Rated Voltage (V)	10~100 160~550
	Z-25°C/Z+20°C (120Hz)	/ 8
	Z-40°C/Z+20°C (120Hz)	15 /
Load Life	The capacitor is stored at a temperature of 85±2°C with DC bias voltage plus the rated ripple current for 2000+48/0 hours. (The sum of DC and ripple peak voltage shall not exceed the rated working voltage) Then the product should be tested after 16 hours recovering time at atmospheric conditions. The result should meet the following table:	
	Capacitance Change	Within ±20% of initial value
	Dissipation Factor	Not more than 200% of the specified value
	Leakage Current	Not more than the specified value
Shelf Life	The capacitors are then stored with no voltage applied at a temperature of 85±2°C for 1000+48/0 hours. Next they shall be connected to a series limiting resistor(1k±100Ω) with D.C. rated voltage applied for 60min, After which the capacitors shall be stored at room temperature for more than 24 hours before testing,The result should meet the following table:	
	Capacitance Change	Within ±20% of initial value
	Dissipation Factor	Not more than 175% of the specified value
	Leakage Current	Not more than the specified value
Ripple Current Coefficient	Freq.(Hz)	50/60 120 300 1K ≥10K
	Voltage(V)	≤50V 0.95 1.00 1.04 1.10 1.15
	63V<V≤100V	0.95 1.00 1.06 1.16 1.30
	100V<V≤550V	0.80 1.00 1.10 1.25 1.50
	Ambient Temp(°C)	40 60 70 85
	WV	≤ 500 2.70 2.00 1.70 1.00
	> 500	1.89 1.67 1.41 1.00

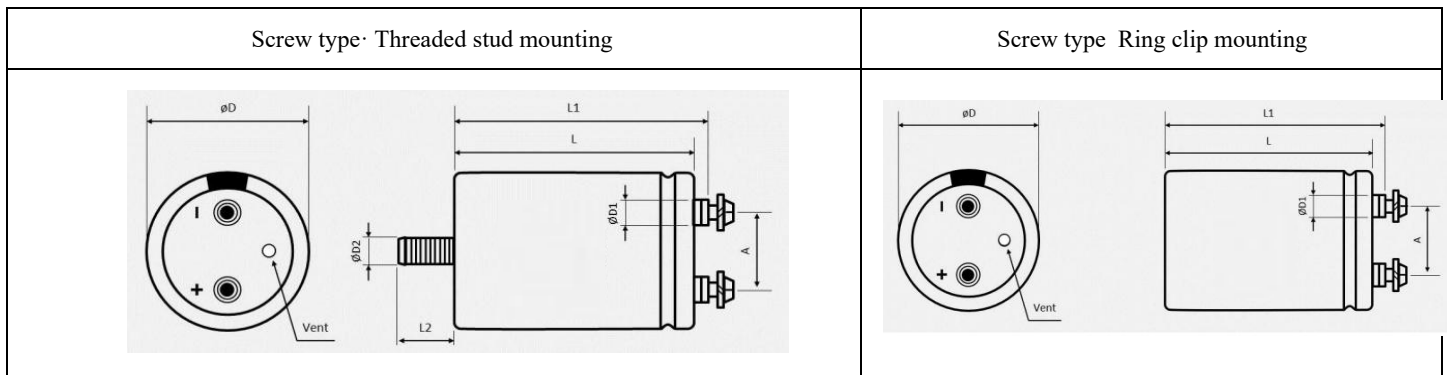
Part Number System:



Dimensions:

Unit: mm

O Type Terminal	D Type Terminal	T Type Terminal	Sample	Screw type Ring clip mounting	
I Type (2-legs Bracket)		Y Type (3-legs Bracket)			



Terminal	D±2	L±3	L1±3	D ₁ ±0.3	A±0.5	L2±1	D2	Min. Full Thread (mm)	Terminal type
M5	35	50~120	56.5~126.5	8	12.7	12	M8	8	O Type
M5	51	50~140	56.5~126.5	10	22	16	M8	8	O Type
M5	63.5	80~140	86.5~146.5	10	28.6	16	M8	8	O Type
M5	76	100~240	106.5~246.5	10	31.8	16	M12	12	O Type
M5	90	100~240	106.5~246.5	10	31.8	16	M12	12	O Type
M5	76	100~240	106.5~246.5	17.2	31.8	16	M12	12	D Type
M5	90	100~240	106.5~246.5	17.2	31.8	16	M12	12	D Type
M6	76	100~240	106.5~246.5	17.2	31.8	16	M12	12	D Type
M6	90	100~240	106.5~246.5	17.2	31.8	16	M12	12	D Type
M5	51	50~140	55.5~125.5	13(a=10)	28.6	16	M8	8	T Type
M5	63.5	80~140	86.5~146.5	15(a=10)	31.8	16	M12	12	T Type
M6	76	100~240	106.5~246.5	15(a=10)	31.8	16	M12	12	T Type

Specification Sheet

Rated voltage(V)	Capacitance (μF)	Case Size DxL(mm)	tan δ (120Hz, +20°C)	Leakage Current (μA)max	Ripple Current +85°C 120Hz (A rms)	P/N
10	39000	35x50	0.60	5000	4.70	CCE399M1ARWSQ50**
10	82000	35x80	0.60	5000	7.40	CCE829M1ARWSQ80**
10	100000	35x100	0.70	5000	8.00	CCE10AM1ARWSQ1L**
10	120000	35x120	0.70	5000	9.40	CCE12AM1ARWSQA2**
10	150000	51x80	0.90	5000	9.80	CCE15AM1ARWS80**
10	220000	51x100	1.00	5000	12.10	CCE22AM1ARWS1L**
10	270000	51x120	1.20	5000	13.60	CCE27AM1ARWSA2**
10	390000	63.5x100	1.50	5000	15.30	CCE39AM1ARWST1L**
10	470000	63.5x120	2.00	5000	16.00	CCE47AM1ARWSTA2**
10	560000	76x100	2.50	5000	17.30	CCE56AM1ARWSU1L**
10	680000	76x120	3.00	5000	18.70	CCE68AM1ARWSUA2**
16	27000	35x50	0.45	5000	4.20	CCE279M1CRWSQ50**
16	56000	35x80	0.60	5000	6.50	CCE569M1CRWSQ80**
16	82000	35x100	0.70	5000	8.00	CCE829M1CRWSQ1L**
16	100000	35x120	0.70	5000	9.60	CCE10AM1CRWSQA2**
16	120000	51x80	0.80	5000	9.60	CCE12AM1CRWS80**
16	150000	51x100	0.90	5000	11.20	CCE15AM1CRWS1L**
16	220000	51x120	1.00	5000	14.20	CCE22AM1CRWSA2**
16	270000	63.5x100	1.20	5000	15.30	CCE27AM1CRWST1L**
16	330000	63.5x120	1.30	5000	17.10	CCE33AM1CRWSTA2**
16	390000	76x100	1.60	5000	18.00	CCE39AM1CRWSU1L**
16	470000	76x120	1.80	5000	19.30	CCE47AM1CRWSUA2**
16	560000	76x140	2.00	5000	20.70	CCE56AM1CRWSUA4**
25	18000	35x50	0.35	5000	4.00	CCE189M1ERWSQ50**
25	39000	35x80	0.40	5000	6.20	CCE399M1ERWSQ80**
25	47000	35x100	0.40	5000	7.40	CCE479M1ERWSQ1L**
25	56000	35x120	0.45	5000	8.30	CCE569M1ERWSQA2**
25	82000	51x80	0.50	5000	9.70	CCE829M1ERWS80**
25	100000	51x100	0.60	5000	10.80	CCE10AM1ERWS1L**
25	120000	51x120	0.60	5000	12.80	CCE12AM1ERWSA2**
25	180000	63.5x100	0.75	5000	14.70	CCE18AM1ERWST1L**
25	220000	63.5x120	0.80	5000	16.80	CCE22AM1ERWSTA2**
25	270000	76x100	0.90	5000	18.30	CCE27AM1ERWSU1L**
25	330000	76x120	1.00	5000	20.70	CCE33AM1ERWSUA2**
25	390000	76x140	1.20	5000	22.10	CCE39AM1ERWSUA4**
25	560000	90x140	1.50	5000	25.80	CCE56AM1ERWSXA4**
35	15000	35x50	0.30	5000	3.90	CCE159M1VRWSQ50**

35	33000	35x80	0.40	5000	6.00	CCE339M1VRWSQ80**
35	39000	35x100	0.40	5000	7.00	CCE399M1VRWSQ1L**
35	47000	35x120	0.45	5000	8.00	CCE479M1VRWSQA2**
35	68000	51x80	0.50	5000	9.00	CCE689M1VRWSS80**
35	82000	51x100	0.55	5000	10.30	CCE829M1VRWSS1L**
35	120000	51x120	0.60	5000	12.80	CCE12AM1VRWSSA2**
35	150000	63.5x100	0.70	5000	14.00	CCE15AM1VRWST1L**
35	180000	63.5x120	0.70	5000	16.60	CCE18AM1VRWSTA2**
35	220000	76x100	0.75	5000	17.30	CCE22AM1VRWSU1L**
35	270000	76x120	0.80	5000	19.80	CCE27AM1VRWSUA2**
35	330000	76x140	0.90	5000	22.50	CCE33AM1VRWSUA4**
35	470000	90x140	1.00	5000	28.30	CCE47AM1VRWSXA4**
50	10000	35x50	0.25	5000	4.10	CCE109M1HRWSQ50**
50	18000	35x80	0.25	5000	5.20	CCE189M1HRWSQ80**
50	22000	35x100	0.30	5000	5.90	CCE229M1HRWSQ1L**
50	27000	35x120	0.35	5000	6.60	CCE279M1HRWSQA2**
50	39000	51x80	0.40	5000	7.40	CCE399M1HRWSS80**
50	56000	51x100	0.40	5000	9.80	CCE569M1HRWSS1L**
50	68000	51x120	0.45	5000	11.10	CCE689M1HRWSSA2**
50	82000	63.5x100	0.50	5000	12.20	CCE829M1HRWST1L**
50	120000	63.5x120	0.50	5000	16.00	CCE12AM1HRWSTA2**
50	150000	76x120	0.60	5000	18.10	CCE15AM1HRWSUA2**
50	180000	76x140	0.70	5000	19.50	CCE18AM1HRWSUA4**
50	270000	90x140	0.80	5000	24.60	CCE27AM1HRWSXA4**
63	5600	35x50	0.20	5000	3.00	CCE568M1JRWSSQ50**
63	10000	35x80	0.25	5000	4.00	CCE109M1JRWSSQ80**
63	15000	35x100	0.25	5000	5.30	CCE159M1JRWSSQ1L**
63	18000	35x120	0.25	5000	6.20	CCE189M1JRWSSQA2**
63	22000	51x80	0.30	5000	6.50	CCE229M1JRWSS80**
63	33000	51x100	0.35	5000	8.10	CCE339M1JRWSS1L**
63	39000	51x120	0.35	5000	9.60	CCE399M1JRWSSA2**
63	47000	63.5x100	0.40	5000	10.20	CCE479M1JRWST1L**
63	68000	63.5x120	0.40	5000	13.30	CCE689M1JRWSTA2**
63	100000	76x120	0.45	5000	17.10	CCE10AM1JRWWSUA2**
63	120000	76x140	0.50	5000	19.00	CCE12AM1JRWWSUA4**
63	150000	90x140	0.55	5000	22.00	CCE15AM1JRWWSXA4**
80	3300	35x50	0.15	5000	2.50	CCE338M1KRWSQ50**
80	6800	35x80	0.20	5000	3.70	CCE688M1KRWSQ80**
80	10000	35x100	0.20	5000	4.90	CCE109M1KRWSQ1L**
80	12000	35x120	0.20	5000	5.40	CCE129M1KRWSQA2**
80	15000	51x80	0.25	5000	6.00	CCE159M1KRWSS80**
80	22000	51x100	0.30	5000	7.10	CCE229M1KRWSS1L**
80	27000	51x120	0.30	5000	8.60	CCE279M1KRWSSA2**
80	33000	63.5x100	0.35	5000	9.30	CCE339M1KRWST1L**
80	47000	63.5x120	0.35	5000	12.00	CCE479M1KRWSTA2**
80	68000	76x120	0.35	5000	15.40	CCE689M1KRWSUA2**
80	82000	76x140	0.35	5000	18.10	CCE829M1KRWSUA4**
80	100000	90x140	0.40	5000	21.00	CCE10AM1KRWSXA4**
100	2200	35x50	0.10	4400	2.50	CCE228M2ARWSQ50**
100	4700	35x80	0.15	5000	3.40	CCE478M2ARWSQ80**
100	6800	35x100	0.15	5000	4.20	CCE688M2ARWSQ1L**
100	8200	35x120	0.15	5000	5.00	CCE828M2ARWSQA2**
100	10000	51x80	0.20	5000	5.20	CCE109M2ARWSS80**
100	18000	51x120	0.20	5000	8.10	CCE189M2ARWSSA2**
100	22000	63.5x100	0.25	5000	8.60	CCE229M2ARWST1L**
100	27000	63.5x120	0.25	5000	10.30	CCE279M2ARWSTA2**
100	33000	76x100	0.25	5000	11.10	CCE339M2ARWSU1L**
100	39000	76x120	0.25	5000	12.40	CCE399M2ARWSUA2**
100	47000	76x140	0.25	5000	14.30	CCE479M2ARWSUA4**
100	68000	90x140	0.30	5000	18.00	CCE689M2ARWSXA4**
160	1200	35x50	0.15	3840	2.00	CCE128M2CRWSQ50**
160	2200	35x80	0.15	5000	3.40	CCE228M2CRWSQ80**
160	2700	35x100	0.15	5000	3.70	CCE278M2CRWSQ1L**
160	3300	35x120	0.15	5000	4.50	CCE338M2CRWSQA2**
160	4700	51x80	0.20	5000	5.60	CCE478M2CRWSS80**
160	6800	51x100	0.20	5000	7.50	CCE688M2CRWSS1L**

160	8200	51x120	0.20	5000	8.10	CCE828M2CRWSSA2**
160	10000	63.5x100	0.20	5000	9.80	CCE109M2CRWST1L**
160	12000	63.5x120	0.20	5000	10.80	CCE129M2CRWSTA2**
160	15000	76x100	0.20	5000	12.70	CCE159M2CRWSU1L**
160	18000	76x120	0.20	5000	14.00	CCE189M2CRWSUA2**
160	22000	76x140	0.20	5000	16.60	CCE229M2CRWSUA4**
160	33000	90x140	0.25	5000	18.90	CCE339M2CRWSXA4**
200	820	35x50	0.15	3280	1.60	CCE827M2DRWSQ50**
200	1800	35x80	0.15	5000	2.80	CCE188M2DRWSQ80**
200	2200	35x100	0.15	5000	3.60	CCE228M2DRWSQ1L**
200	2700	35x120	0.15	5000	4.00	CCE278M2DRWSQA2**
200	3300	51x80	0.15	5000	6.50	CCE338M2DRWSS80**
200	5600	51x120	0.15	5000	7.60	CCE568M2DRWSSA2**
200	8200	63.5x100	0.20	5000	9.50	CCE828M2DRWST1L**
200	10000	63.5x120	0.20	5000	11.00	CCE109M2DRWSTA2**
200	12000	76x100	0.20	5000	11.50	CCE129M2DRWSU1L**
200	15000	76x120	0.20	5000	12.80	CCE159M2DRWSUA2**
200	18000	76x140	0.20	5000	15.00	CCE189M2DRWSUA4**
200	22000	90x140	0.25	5000	15.60	CCE229M2DRWSXA4**
250	1200	35x80	0.15	5000	2.30	CCE128M2ERWSQ80**
250	1500	35x100	0.15	5000	3.00	CCE158M2ERWSQ1L**
250	1800	35x120	0.15	5000	3.30	CCE188M2ERWSQA2**
250	2200	51x80	0.15	5000	3.70	CCE228M2ERWSS80**
250	3300	51x100	0.15	5000	5.10	CCE338M2ERWSS1L**
250	3900	51x120	0.15	5000	5.90	CCE398M2ERWSSA2**
250	4700	63.5x100	0.20	5000	6.90	CCE478M2ERWST1L**
250	6800	63.5x120	0.20	5000	8.70	CCE688M2ERWSTA2**
250	10000	76x120	0.20	5000	11.10	CCE109M2ERWSUA2**
250	12000	76x140	0.20	5000	13.00	CCE129M2ERWSUA4**
250	15000	76x155	0.25	5000	16.10	CCE159M2ERWSUAE**
250	15000	90x140	0.20	5000	14.90	CCE159M2ERWSXA4**
250	22000	90x150	0.20	5000	18.50	CCE229M2ERWSX1R**
350	680	35x80	0.25	4760	2.90	CCE687M2VRWSQ80**
350	1000	35x100	0.25	5000	3.80	CCE108M2VRWSQ1L**
350	1200	35x120	0.25	5000	4.20	CCE128M2VRWSQA2**
350	1500	51x80	0.25	5000	4.50	CCE158M2VRWSS80**
350	2200	51x90	0.25	5000	5.80	CCE228M2VRWSS90**
350	3300	63.5x90	0.25	5000	8.00	CCE338M2VRWST90**
350	3900	63.5x110	0.25	5000	9.20	CCE398M2VRWSTA0**
350	4700	63.5x130	0.25	5000	10.90	CCE478M2VRWST2C**
350	4700	76x90	0.25	5000	10.30	CCE478M2VRWSU90**
350	5600	76x115	0.25	5000	11.70	CCE568M2VRWSU2A**
350	6800	76x130	0.25	5000	14.00	CCE688M2VRWSU2C**
350	8200	76x155	0.25	5000	15.60	CCE828M2VRWSUAE**
350	12000	90x150	0.25	5000	20.00	CCE129M2VRWSX1R**
400	1000	51x80	0.25	5000	3.40	CCE108M2GRWSS80**
400	1200	51x80	0.25	5000	3.80	CCE128M2GRWSS80**
400	1500	51x105	0.25	5000	4.50	CCE158M2GRWSS2J**
400	1800	51x105	0.25	5000	5.20	CCE188M2GRWSS2J**
400	2200	63.5x95	0.25	5000	6.40	CCE228M2GRWST95**
400	2200	51x100	0.25	5000	5.60	CCE228M2GRWSS1L**
400	2700	51x130	0.25	5000	7.10	CCE278M2GRWSS2C**
400	3300	63.5x115	0.25	5000	8.50	CCE338M2GRWST2A**
400	3900	63.5x130	0.25	5000	9.70	CCE398M2GRWST2C**
400	4700	76x105	0.25	5000	10.30	CCE478M2GRWSU2J**
400	4700	76x115	0.25	5000	10.70	CCE478M2GRWSU2A**
400	5600	76x115	0.25	5000	11.50	CCE568M2GRWSU2A**
400	5600	76x130	0.25	5000	12.20	CCE568M2GRWSU2C**
400	6800	76x150	0.25	5000	14.40	CCE688M2GRWSU1R**
400	8200	76x155	0.25	5000	14.60	CCE828M2GRWSUAE**
400	8200	90x150	0.25	5000	16.50	CCE828M2GRWSX1R**
400	10000	90x150	0.25	5000	18.20	CCE109M2GRWSX1R**
400	12000	90x170	0.25	5000	20.50	CCE129M2GRWSXA7**
400	15000	90x230	0.25	5000	26.50	CCE159M2GRWSXB3**
450	1000	51x80	0.25	5000	3.50	CCE108M2WRWSS80**
450	1200	51x100	0.25	5000	4.50	CCE128M2WRWSS1L**

450	1500	51x105	0.25	5000	5.00	CCE158M2WRWSS2J**
450	1800	51x115	0.25	5000	5.60	CCE188M2WRWSS2A**
450	2200	63.5x95	0.25	5000	6.50	CCE228M2WRWST95**
450	2700	63.5x100	0.25	5000	7.30	CCE278M2WRWST1L**
450	2700	76x115	0.25	5000	9.00	CCE278M2WRWSU2A**
450	3900	76x115	0.25	5000	9.70	CCE398M2WRWSU2A**
450	4700	76x130	0.25	5000	11.20	CCE478M2WRWSU2C**
450	5600	76x155	0.25	5000	13.30	CCE568M2WRWSUAE**
450	6800	76x155	0.25	5000	14.40	CCE688M2WRWSUAE**
450	6800	90x155	0.25	5000	15.30	CCE688M2WRWSXAE**
450	8200	90x155	0.25	5000	17.00	CCE828M2WRWSXAE**
450	10000	90x170	0.25	5000	18.50	CCE109M2WRWSXA7**
450	12000	90x230	0.25	5000	23.50	CCE129M2WRWSXB3**
500	470	51x80	0.25	4700	1.80	CCE477M2HRWSS80**
500	680	51x105	0.25	5000	2.50	CCE687M2HRWSS2J**
500	820	51x105	0.25	5000	2.80	CCE827M2HRWSS2J**
500	1000	51x115	0.25	5000	3.20	CCE108M2HRWSS2A**
500	1500	51x115	0.25	5000	4.00	CCE158M2HRWSS2A**
500	1500	63.5x95	0.25	5000	4.00	CCE158M2HRWST95**
500	1800	63.5x115	0.25	5000	4.80	CCE188M2HRWST2A**
500	2200	63.5x130	0.25	5000	5.70	CCE228M2HRWST2C**
500	2700	76x115	0.25	5000	6.50	CCE278M2HRWSU2A**
500	3900	76x130	0.25	5000	8.40	CCE398M2HRWSU2C**
550	100	35x50	0.25	1100	0.60	CCE107M25RWSQ50**
550	180	35x80	0.25	1980	1.00	CCE187M25RWSQ80**
550	270	35x100	0.25	2970	1.30	CCE277M25RWSQ1L**
550	330	35x120	0.25	3630	1.60	CCE337M25RWSQA2**
550	390	51x80	0.25	4290	1.70	CCE397M25RWSS80**
550	560	51x100	0.25	5000	2.10	CCE567M25RWSS1L**
550	680	51x130	0.25	5000	2.70	CCE687M25RWSS2C**
550	820	63.5x130	0.25	5000	3.10	CCE827M25RWST2C**
550	1200	76x100	0.25	5000	4.20	CCE128M25RWSU1L**
550	1500	76x100	0.25	5000	4.60	CCE158M25RWSU1L**
550	1800	76x100	0.25	5000	5.20	CCE188M25RWSU1L**
550	2200	76x110	0.25	5000	5.90	CCE228M25RWSUA0**
550	3300	76x140	0.25	5000	8.00	CCE338M25RWSUA4**

Remark:

- 1)Specification are subject to change without notice should a safety or technical concern arise regarding the product , please be sure to contact our sales offices ;
- 2)The sizes in the above table are all general specifications. If you need other specifications,please contact us.
- 3)"**"indicates packaging method