

EC Series

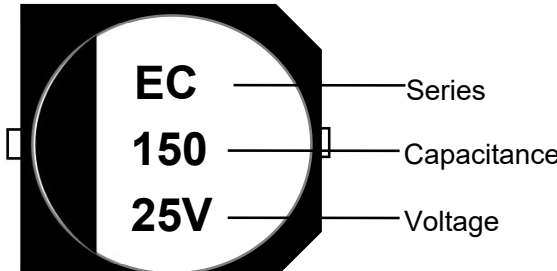
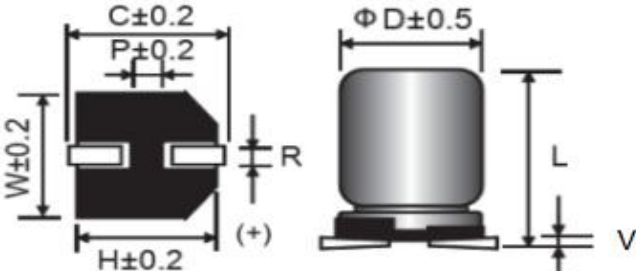
Feature

- ◆ AEC-Q200 qualified
- ◆ Guaranteed duration: 5000 hours at 105°C
- ◆ SMT process
- ◆ Low impedance, long life
- ◆ RoHS compliant

Items	Characteristics									
Temperature Range	-55°C ~ +105°C									
Rated Voltage Range	6.3V ~ 100V									
Capacitance Range	22 ~ 12000 μF									
Capacitance Tolerance	±20% (20°C, 120Hz)									
Leakage Current	I ≤ 0.01CV or 3μA, Take the larger of the two values (after applying the rated working voltage for 2 minutes) CR: nominal capacitance (μF) UR: rated voltage (V)									
Dissipation Factor (tg δ) (20°C, 120Hz)	UR (V)	6.3	10	16	25	35	50	63	80	100
	tg δ	0.30	0.26	0.22	0.16	0.14	0.14	0.08	0.08	0.07
Endurance	Under the condition of 105°C, after being subjected to the rated operating voltage for 5000 hours and subsequently returned to 20°C, the capacitors shall meet the following requirements.									
	Capacitance Change	within ±30% of the initial value								
	Dissipation Factor	≤300% of initial rated value								
High Temperature Storage	After being stored for 1000 hours without voltage application in a 105°C environment and then recovered to 20°C, the capacitor shall meet the above endurance requirements.									
	UR (V)	6.3	10	16	25	35	50	63	80	100
	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	2	2
Low Temperature	Z(-55°C)/Z(20°C)	8	5	4	3	3	3	3	3	3
	The capacitor shall be maintained on a hot plate at 250°C for 30 seconds. After removal and recovery at room temperature, it shall meet the requirements listed on the right.									
Resistance to soldering heat	Capacitance Change							within ±10% of the initial value		
	Dissipation Factor (tg δ)							≤ initial ralted value		
	Leakage Current							≤ initial ralted value		

Coefficient of Frequency for Rated Ripple Current

Frequency (Hz) (Hz)	120 ≤ F <1K	1K ≤ F <10K	10K ≤ F <100K	100K ≤ F
≤ 33	0.35	0.70	0.90	1.00
33~150	0.40	0.85	0.92	1.00
>150	0.60	0.85	0.95	1.00

Mark	Appearance & Dimension
 <p>EC — Series</p> <p>150 — Capacitance</p> <p>25V — Voltage</p>	 <p>(Unit:mm)</p>

Dimensions	ΦD	L	W	H	C	R	P	Vmax
8x10	8	10.0±0.5	8.3	8.3	9.0	0.7~1.1	3.2	0.3
10x10	10	10.0±0.5	10.3	10.3	11.0	0.7~1.3	4.5	0.3
10x12.5	10	12.5±0.5	10.3	10.3	11.0	0.7~1.3	4.5	0.4
12.5x13.5	12.5	13.5±0.5	13.0	13.0	13.7	1.1~1.4	4.5	0.4
16x16.5	16	16.5±0.5	17.0	17.0	18.0	1.4~1.8	6.4	0.4
18x16.5	18	16.5±1.0	19.0	19.0	20.0	1.4~1.8	6.4	0.4
18x21.5	18	21.5±1.0	19.0	19.0	20.0	1.4~1.8	6.4	0.4

EC Characteristics Table

Rated Voltage (V.DC)	Capacitance ($\pm 20\%$) (μF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current (100KHz/105 $^{\circ}\text{C}$) (mA r.m.s)	$\tan \delta$ (120Hz/20 $^{\circ}\text{C}$)	Impedance (100KHz) (20 $^{\circ}\text{C}$) (Ω)	
6.3	470	8	10	600	0.30	0.170	500
	680	8	10	600	0.30	0.170	500
	1000	8	10	600	0.30	0.170	500
	1500	10	10	850	0.30	0.090	500
	2200	12.5	13.5	1100	0.30	0.060	250
	6800	16	16.5	1800	0.30	0.035	200
	8200	18	16.5	2060	0.30	0.033	150
	10000	18	16.5	2060	0.30	0.033	150
	12000	18	21.5	2060	0.30	0.028	100
10	330	8	10	600	0.26	0.170	500
	470	8	10	600	0.26	0.170	500
	680	10	10	850	0.26	0.090	500
	1000	10	10	850	0.26	0.090	500
	1500	12.5	13.5	1100	0.26	0.060	250
	2200	12.5	13.5	1100	0.26	0.060	250
	4700	16	16.5	1800	0.26	0.035	200
	6800	18	16.5	2060	0.26	0.033	150
	8200	18	21.5	2060	0.26	0.028	100
16	330	8	10	600	0.22	0.170	500
	470	8	10	600	0.22	0.170	500
	680	10	10	850	0.22	0.090	500
	1000	10	10	850	0.22	0.090	500
	1000	12.5	13.5	1100	0.22	0.060	250
	1500	12.5	13.5	1100	0.22	0.060	250
	3300	16	16.5	1800	0.22	0.035	200
	4700	18	16.5	2060	0.22	0.033	150
	5600	18	21.5	2060	0.22	0.028	100
25	150	8	10	600	0.16	0.170	500
	220	8	10	600	0.16	0.170	500
	330	8	10	600	0.16	0.170	500
	470	10	10	850	0.16	0.090	500
	680	12.5	13.5	1100	0.16	0.060	250
	1000	12.5	13.5	1100	0.16	0.060	250
	1500	16	16.5	1800	0.16	0.035	200
	2200	16	16.5	1800	0.16	0.035	200
	3300	18	16.5	2060	0.16	0.033	150
3900	18	21.5	2060	0.16	0.028	100	
35	100	8	10	600	0.14	0.170	500
	150	8	10	600	0.14	0.170	500
	220	10	10	850	0.14	0.090	500
	470	12.5	13.5	1100	0.14	0.060	250
	680	12.5	13.5	1100	0.14	0.060	250
	1000	16	16.5	1800	0.14	0.035	200
	1500	16	16.5	1800	0.14	0.035	200
	2200	18	16.5	2060	0.14	0.033	150
	2700	18	21.5	2060	0.14	0.028	100

EC Characteristics Table

Rated Voltage (V.DC)	Capacitance (±20%) (µF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current (100KHz/105°C) (mA r.m.s)	tan δ (120Hz/20°C)	Impedance (100KHz) (20°C) (Ω)	
50	56	8	10	330	0.14	0.340	500
	68	8	10	330	0.14	0.340	500
	100	8	10	330	0.14	0.340	500
	150	10	10	670	0.14	0.180	500
	330	12.5	13.5	900	0.14	0.120	250
	470	16	16.5	1610	0.14	0.073	200
	680	16	16.5	1610	0.14	0.073	200
	1000	16	16.5	1610	0.14	0.073	200
	1200	18	16.5	1900	0.14	0.068	150
	1500	18	21.5	2100	0.14	0.042	100
63	47	8	10	200	0.08	0.700	500
	56	10	10	369	0.08	0.480	500
	100	12.5	13.5	800	0.08	0.160	250
	150	12.5	13.5	800	0.08	0.160	250
	220	12.5	13.5	800	0.08	0.160	250
	330	16	16.5	1410	0.08	0.082	200
	470	16	16.5	1410	0.08	0.082	200
	680	18	16.5	1690	0.08	0.080	150
	1000	18	21.5	1960	0.08	0.055	100
80	33	8	10	130	0.08	1.880	500
	47	10	10	200	0.08	0.900	500
	100	12.5	13.5	500	0.08	0.320	250
	150	12.5	13.5	500	0.08	0.320	250
	330	16	16.5	793	0.08	0.170	200
	470	18	16.5	917	0.08	0.153	150
100	22	8	10	130	0.07	1.880	500
	33	10	10	200	0.07	0.650	500
	47	12.5	13.5	500	0.07	0.320	250
	68	12.5	13.5	500	0.07	0.320	250
	100	16	16.5	793	0.07	0.170	200
	150	16	16.5	793	0.07	0.170	200
	220	18	16.5	917	0.07	0.153	150
	330	18	21.5	1230	0.07	0.083	100