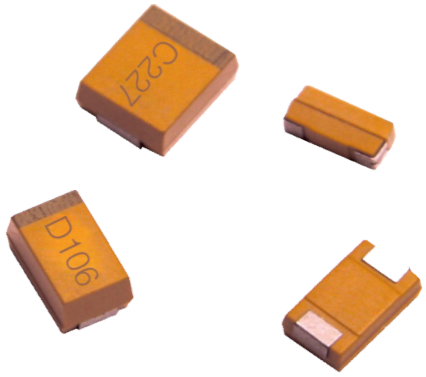
CBAE SERIES STANDARD

double 85

BASIC MECHANICAL DESIGN FEATURE

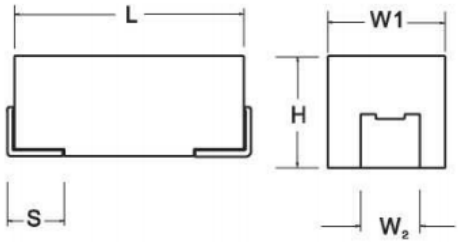


- resin molding packaging, good sealing, sheet type, small volume, light weight, polarity;
- electrical performance is excellent and stable, high reliability, good storage stability;
- conductive polymer electrolyte, ultra-low ESR (equivalent series resistance), high-frequency capacity retention, large ripple current resistance;
- benign failure mode;
- is suitable for aircraft, vehicles, ships, radar, electronics, communication and other fields with reliability requirements of electronic equipment surface mounted DC or pulse circuit;
- adds optional dual 85 products: Using new technology, the products have the ability to store and work at high temperature and high humidity for long periods (85℃, 85%RH, 1000h) despite maintaining the original performance.
- If users need double 85 products, please indicate them in the order contract.
- execution standards: GJB2283-95, QJ / PWV501-2011

(Note: When purchasing double 85 products, please note "double 85" in the notes of the order contract)

BASIC MECHANICAL DESIGN FEATURE

Use temperature range: -55~125℃; see Application Guide 4.1;
Rated voltage, downrated voltage and nominal capacitance: see Table 2;
allowable allowable capacity: K:±10%; M:±20%;
Room temperature DC leakage current, room temperature loss
Angle is cut: do not exceed that specified in Table 2;
AC ripple current (85℃, 100KHz): not exceeding that specified in Table 2;
Equivalent series resistance ESR (25℃, 100KHz): not exceeding that specified in Table 2;
High and low temperature characteristics: see Table 2;
Overall dimensions and shell code: see Figure 1 and Table 1.



CHAT 1

Table 1 Overall dimensions of the capacitors (mm)

hull	L	W_1	H	S	W_2
A	3.2±0.3	1.6±0.3	1.6±0.3	0.8±0.2	1.2±0.2
B	3.5±0.3	2.8±0.3	1.9±0.3	0.8±0.2	2.2±0.2
C	6.0±0.3	3.2±0.3	2.5±0.3	1.3±0.2	2.2±0.2
H	7.3±0.3	4.3±0.3	2.1±0.3	1.7±0.2	2.4±0.2
D	7.3±0.3	4.3±0.3	2.8+0.3	1.5±0.2	2.4±0.2
E	7.3±0.3	4.3±0.3	4.1±0.3	1.5±0.2	2.4±0.2
V	7.3±0.3	6.1±0.3	3.6±0.3	1.5±0.2	3.0±0.2
W	7.3±0.3	6.1±0.3	4.1±0.3	1.5±0.2	3.0±0.2
X	7.3±0.3	6.0±0.3	6.0±0.3	1.5±0.2	4.0±0.2
S	11.0±0.3	9.0±0.3	4.5±0.3	1.5±0.2	10.5±0.4
T	11.0+0.3	12.5±0.3	5.5±0.3	2.1±0.2	10.5±0.4

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μA)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 2.5V												
1	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
15	A	0.150	0.73	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
15	B	0.100	0.94	5.0	40.0	50.0.	-10～+10	-10～+30	-10～+50	10	12	15
22	A	0.150	0.73	5.5	44.0	55.0	-10～+10	-10～+30	-10～+50	10	12	15
22	B	0.100	0.94	5.5	44.0	55.0	-10～+10	-10～+30	-10～+50	10	12	15
33	B	0.090	0.99	8.3	66.0	82.5	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.060	1.38	8.3	66.0	82.5	-10～+10	-10～+30	-10～+50	10	12	15
47	B	0.090	0.99	11.8	94.0	117.5	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.060	1.38	11.8	94.0	117.5	-10～+10	-10～+30	-10～+50	10	12	15
68	B	0.090	0.99	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
68	C	0.060	1.38	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
100	C	0.060	1.38	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.045	1.87	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.025	2.62	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.045	1.87	37.5	300.0	375.0	-10～+10	-10～+30	-10～+50	10	12	15
220	D	0.045	1.87	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.025	2.62	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.045	1.87	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.025	2.62	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
470	D	0.045	1.87	117.5	940.0	1175.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.025	2.62	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
680	D	0.045	1.87	250.0	2000.0	2500.0	-10～+10	-10～+30	-10～+50	10	12	15
680	E	0.025	2.62	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15
680	V	0.025	2.90	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	E	0.050*	1.85	250.0	2000.0	2500.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	E	0.020	2.94	250.0	2000.0	2500.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	V	0.040	2.29	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15
1500	W	0.025	2.93	375.0	3000.0	3750.0	-10～+10	-10～+30	-10～+50	10	12	15
2200	T	0.025	4.14	550.0	4400.0	5500.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 4V												
1	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μA)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 4V												
3.3	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.100	0.99	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.150	0.72	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.100	0.99	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
15	A	0.150	0.72	6.0	48.0	60.0	-10～+10	-10～+30	-10～+50	10	12	15
15	B	0.100	0.94	6.0	48.0	60.0	-10～+10	-10～+30	-10～+50	10	12	15
22	A	0.250	0.56	8.8	70.4	88.0	-10～+10	-10～+30	-10～+50	10	12	15
22	B	0.090	0.99	8.8	70.4	88.0	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.060	1.38	8.8	70.4	88.0	-10～+10	-10～+30	-10～+50	10	12	15
33	B	0.090	0.99	13.2	105.6	132.0	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.060	1.38	13.2	105.6	132.0	-10～+10	-10～+30	-10～+50	10	12	15
47	B	0.090	0.99	18.8	150.4	188.0	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.060	1.38	18.8	150.4	188.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.060	1.62	18.8	150.4	188.0	-10～+10	-10～+30	-10～+50	10	12	15
68	B	0.090	0.99	27.2	217.6	272.0	-10～+10	-10～+30	-10～+50	10	12	15
68	C	0.060	1.38	27.2	217.6	272.0	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.060	1.62	27.2	217.6	272.0	-10～+10	-10～+30	-10～+50	10	12	15
100	C	0.060	1.38	40.0	320.0	400.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.045	1.87	40.0	320.0	400.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.025	2.62	40.0	320.0	400.0	-10～+10	-10～+30	-10～+50	10	12	15
150	H	0.060	1.47	60.0	480.0	600.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.045	1.87	60.0	480.0	600.0	-10～+10	-10～+30	-10～+50	10	12	15
220	D	0.045	1.87	88.0	704.0	880.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.025	2.62	88.0	704.0	880.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.060*	1.62	132.0	1056.0	1320.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.045	1.87	132.0	1056.0	1320.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.025	2.62	132.0	1056.0	1320.0	-10～+10	-10～+30	-10～+50	10	12	15
330	V	0.040	2.30	132.0	1056.0	1320.0	-10～+10	-10～+30	-10～+50	10	12	15
470	D	0.045	1.87	188.0	1504.0	1880.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.025	2.62	188.0	1504.0	1880.0	-10～+10	-10～+30	-10～+50	10	12	15
470	V	0.040	2.30	188.0	1504.0	1880.0	-10～+10	-10～+30	-10～+50	10	12	15
680	D	0.090*	1.32	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15
680	D	0.050	1.77	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15
680	E	0.050*	1.85	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15
680	E	0.025	2.62	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15
680	V	0.025	2.90	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15
680	W	0.025	2.93	272.0	2176.0	2720.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100K Hz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 4V												
1000	W	0.025	2.93	400.0	3200.0	4000.0	-10～+10	-10～+30	-10～+50	10	12	15
1500	T	0.025	4.14	600.0	4800.0	6000.0	-10～+10	-10～+30	-10～+50	10	12	15
2200	T	0.025	4.14	880.0	7040.0	8800.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 6.3V												
1	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	B	0.250	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	B	0.250	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	C	0.100	1.07	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.250*	0.56	6.3	50.4	63.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.120	0.80	6.3	50.4	63.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.100	0.94	6.3	50.4	63.0	-10～+10	-10～+30	-10～+50	10	12	15
10	C	0.100	1.07	6.3	50.4	63.0	-10～+10	-10～+30	-10～+50	10	12	15
15	A	0.250	0.56	9.5	75.6	94.5	-10～+10	-10～+30	-10～+50	10	12	15
15	B	0.100	0.94	9.5	75.6	94.5	-10～+10	-10～+30	-10～+50	10	12	15
15	C	0.080	1.20	9.4	75.6	94.5	-10～+10	-10～+30	-10～+50	10	12	15
22	A	0.250	0.56	13.9	110.9	138.6	-10～+10	-10～+30	-10～+50	10	12	15
22	B	0.090	0.99	13.9	110.9	138.6	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.060	1.38	13.9	110.9	138.6	-10～+10	-10～+30	-10～+50	10	12	15
33	B	0.090	0.99	20.8	166.3	207.9	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.060	1.38	20.8	166.3	207.9	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.060	1.62	20.7	166.3	207.9	-10～+10	-10～+30	-10～+50	10	12	15
47	A	0.250	0.56	29.6	236.8	296.1	-10～+10	-10～+30	-10～+50	10	12	15
47	B	0.090	0.99	29.6	236.9	296.1	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.060	1.38	29.6	236.9	296.1	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.060	1.62	29.6	236.8	296.1	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.050	1.85	29.6	236.8	296.1	-10～+10	-10～+30	-10～+50	10	12	15
68	B	0.090	0.99	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
68	C	0.060	1.38	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
68	H	0.060	1.47	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.060*	1.62	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.045	1.87	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.060	1.69	42.8	342.7	428.4	-10～+10	-10～+30	-10～+50	10	12	15
100	B	0.090	0.99	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 6.3V												
100	C	0.060	1.38	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15
100	H	0.060	1.47	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.060	1.62	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.025	2.62	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15
100	V	0.080	1.63	63.0	504.0	630.0	-10～+10	-10～+30	-10～+50	10	12	15
150	B	0.090	0.94	94.5	756.0	945.0	-10～+10	-10～+30	-10～+50	10	12	15
150	C	0.060	1.38	94.5	756.0	945.0	-10～+10	-10～+30	-10～+50	10	12	15
150	H	0.060	1.47	94.5	756.0	945.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.045	1.87	94.5	756.0	945.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.060	1.69	94.5	756.0	945.0	-10～+10	-10～+30	-10～+50	10	12	15
220	C	0.060	1.38	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
220	H	0.060	1.47	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
220	D	0.045	1.87	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.025	2.62	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
220	V	0.050	2.06	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
220	W	0.080	1.64	138.6	1108.8	1386.0	-10～+10	-10～+30	-10～+50	10	12	15
330	H	0.060	1.47	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.060*	1.62	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.045	1.87	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.050*	1.85	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.025	2.62	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	B	0.050	2.06	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
330	W	0.050	2.08	207.9	1663.2	2079.0	-10～+10	-10～+30	-10～+50	10	12	15
470	D	0.050	1.78	296.1	2368.8	2961.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.050*	1.85	296.1	2368.8	2961.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.025	2.62	296.1	2368.8	2961.0	-10～+10	-10～+30	-10～+50	10	12	15
470	V	0.025	2.90	296.1	2368.8	2961.0	-10～+10	-10～+30	-10～+50	10	12	15
470	W	0.050	2.08	296.1	2368.8	2961.0	-10～+10	-10～+30	-10～+50	10	12	15
680	E	0.050*	1.85	428.4	3427.2	4284.0	-10～+10	-10～+30	-10～+50	10	12	15
680	E	0.025	2.62	428.4	3427.2	4284.0	-10～+10	-10～+30	-10～+50	10	12	15
680	V	0.025	2.90	428.4	3427.2	4284.0	-10～+10	-10～+30	-10～+50	10	12	15
680	W	0.050	2.08	428.4	3427.2	4284.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	V	0.060	1.62	630.0	5040.0	6300.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	W	0.025	2.93	630.0	5040.0	6300.0	-10～+10	-10～+30	-10～+50	10	12	15
1500	T	0.025	4.14	945.0	7560.0	9450.0	-10～+10	-10～+30	-10～+50	10	12	15
2200	T	0.025	4.14	1386.0	11088.0	13860.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 10V												
1	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	B	0.150	0.59	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 10V												
3.3	B	0.150	0.59	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	C	0.100	1.07	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	A	0.250	0.56	6.8	54.4	68.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.100	0.94	6.8	54.4	68.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	C	0.100	1.07	6.8	54.4	68.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.250*	0.56	10.0	80.0	100.0	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.120	0.80	10.0	80.0	100.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.100	0.94	10.0	80.0	100.0	-10～+10	-10～+30	-10～+50	10	12	15
10	C	0.100	1.07	10.0	80.0	100.0	-10～+10	-10～+30	-10～+50	10	12	15
10	D	0.090	1.32	10.0	80.0	100.0	-10～+10	-10～+30	-10～+50	10	12	15
15	A	0.250	0.56	15.0	120.0	150.0	-10～+10	-10～+30	-10～+50	10	12	15
15	B	0.090	0.99	15.0	120.0	150.0	-10～+10	-10～+30	-10～+50	10	12	15
15	C	0.060	1.38	15.0	120.0	150.0	-10～+10	-10～+30	-10～+50	10	12	15
22	A	0.250	0.56	22.0	176.0	220.0	-10～+10	-10～+30	-10～+50	10	12	15
22	B	0.090	0.99	22.0	176.0	220.0	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.060	1.38	22.0	176.0	220.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.060	1.62	22.0	176.0	220.0	-10～+10	-10～+30	-10～+50	10	12	15
33	B	0.090	0.99	33.0	264.0	330.0	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.060	1.38	33.0	264.0	330.0	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.045	1.87	33.0	264.0	330.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.050	1.85	33.0	264.0	330.0	-10～+10	-10～+30	-10～+50	10	12	15
47	B	0.090	0.99	47.0	376.0	470.0	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.060	1.38	47.0	376.0	470.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.045	1.87	47.0	376.0	470.0	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.050	1.85	47.0	376.0	470.0	-10～+10	-10～+30	-10～+50	10	12	15
68	B	0.090	0.99	68.0	544.0	680.0	-10～+10	-10～+30	-10～+50	10	12	15
68	C	0.060	1.38	68.0	544.0	680.0	-10～+10	-10～+30	-10～+50	10	12	15
68	H	0.060	1.47	68.0	544.0	680.0	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.045	1.87	68.0	544.0	680.0	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.060	1.85	68.0	544.0	680.0	-10～+10	-10～+30	-10～+50	10	12	15
100	B	0.090	0.99	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	C	0.060	1.38	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	H	0.060	1.47	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.060*	1.62	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.045	1.87	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.025	2.62	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	V	0.080	1.62	100.0	800.0	1000.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 10V												
150	C	0.060	1.38	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
150	H	0.060	1.47	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.060*	1.62	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.045	1.87	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.050*	1.85	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.025	2.62	150.0	1200.0	1500.0	-10～+10	-10～+30	-10～+50	10	12	15
220	H	0.060	1.47	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
220	D	0.045	1.87	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.050*	1.85	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.025	2.62	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
220	V	0.050	2.05	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
220	W	0.080	2.93	220.0	1760.0	2200.0	-10～+10	-10～+30	-10～+50	10	12	15
330	D	0.060	1.62	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.050*	1.85	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.025	2.62	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
330	V	0.040*	2.29	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
330	V	0.025	2.90	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
330	W	0.050	2.93	330.0	2640.0	3300.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.050*	1.85	470.0	3760.0	4700.0	-10～+10	-10～+30	-10～+50	10	12	15
470	E	0.025	2.62	470.0	3760.0	4700.0	-10～+10	-10～+30	-10～+50	10	12	15
470	V	0.040*	2.29	470.0	3760.0	4700.0	-10～+10	-10～+30	-10～+50	10	12	15
470	V	0.025	2.90	470.0	3760.0	4700.0	-10～+10	-10～+30	-10～+50	10	12	15
470	W	0.050	2.93	470.0	3760.0	4700.0	-10～+10	-10～+30	-10～+50	10	12	15
680	V	0.040	2.29	680.0	5440.0	6800.0	-10～+10	-10～+30	-10～+50	10	12	15
680	W	0.025	2.93	680.0	5440.0	6800.0	-10～+10	-10～+30	-10～+50	10	12	15
680	T	0.025	4.14	680.0	5440.0	6800.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	W	0.050	2.93	1000.0	8000.0	10000.0	-10～+10	-10～+30	-10～+50	10	12	15
1000	T	0.025	4.14	1000.0	8000.0	10000.0	-10～+10	-10～+30	-10～+50	10	12	15
1500	T	0.025	4.14	1500.0	12000.0	15000.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 16V												
1	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
1	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	B	0.100	0.94	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	C	0.100	1.07	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	A	0.250	0.56	5.0	42.2	52.8	-10～+10	-10～+30	-10～+50	10	12	15
3.3	B	0.100	0.94	5.3	42.2	52.8	-10～+10	-10～+30	-10～+50	10	12	15
3.3	C	0.100	1.07	5.2	42.2	52.8	-10～+10	-10～+30	-10～+50	10	12	15
4.7	A	0.250	0.56	7.5	60.2	75.2	-10～+10	-10～+30	-10～+50	10	12	15
4.7	B	0.150	0.76	7.5	60.2	75.2	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μA)			Capacity change range of (%)			Loss angle is tangent to max (%)		
				+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
		+25℃	+85℃									
rated voltage (U_R) 16V												
4.7	C	0.100	1.07	7.5	60.1	75.2	-10～+10	-10～+30	-10～+50	10	12	15
6.8	A	0.250	0.56	10.9	87.0	108.8	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.150	0.76	10.9	87.0	108.8	-10～+10	-10～+30	-10～+50	10	12	15
6.8	C	0.100	1.07	10.8	87.0	108.8	-10～+10	-10～+30	-10～+50	10	12	15
6.8	D	0.090	1.33	10.8	87.0	108.8	-10～+10	-10～+30	-10～+50	10	12	15
10	A	0.250	0.56	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.150	0.76	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.100*	0.94	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
10	C	0.060	1.38	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
10	D	0.090	1.33	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
10	E	0.080	1.47	16.0	128.0	160.0	-10～+10	-10～+30	-10～+50	10	12	15
15	B	0.100	0.94	24.0	192.0	240.0	-10～+10	-10～+30	-10～+50	10	12	15
15	C	0.060	1.38	24.0	192.0	240.0	-10～+10	-10～+30	-10～+50	10	12	15
15	D	0.075	1.45	24.0	192.0	240.0	-10～+10	-10～+30	-10～+50	10	12	15
22	B	0.150	0.76	35.2	281.6	352.0	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.060	1.38	35.2	281.6	352.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.045	1.87	35.2	281.6	352.0	-10～+10	-10～+30	-10～+50	10	12	15
22	E	0.055	1.77	35.2	281.6	352.0	-10～+10	-10～+30	-10～+50	10	12	15
33	B	0.150	0.77	52.8	422.4	528.0	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.060	1.38	52.8	422.4	528.0	-10～+10	-10～+30	-10～+50	10	12	15
33	H	0.060	1.47	52.8	422.4	528.0	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.045	1.87	52.8	422.4	528.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.050	1.85	52.8	422.4	528.0	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.060	1.38	75.2.	601.6	752.0	-10～+10	-10～+30	-10～+50	10	12	15
47	H	0.060	1.47	75.2	601.6	752.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.060*	1.62	75.2	601.6	752.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.045	1.87	75.2	601.6	752.0	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.50	1.85	75.2	601.6	752.0	-10～+10	-10～+30	-10～+50	10	12	15
68	C	0.100	1.07	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.060*	1.62	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.045	1.87	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.050*	1.85	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.025	2.62	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
68	V	0.100	1.45	108.8	870.4	1088.0	-10～+10	-10～+30	-10～+50	10	12	15
100	C	0.100	1.07	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.060*	1.62	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.045	1.87	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.050*	1.85	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.025	2.62	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100K Hz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ +25℃	+85℃	+125℃
rated voltage (U_R) 16V												
100	V	0.080	1.62	160.0	1280.0	1600.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.060*	1.62	240.0	1920.0	2400.0	-10～+10	-10～+30	-10～+50	10	12	15
150	D	0.045	1.87	240.0	1920.0	2400.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.050*	1.85	240.0	1920.0	2400.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.025	2.62	240.0	1920.0	2400.0	-10～+10	-10～+30	-10～+50	10	12	15
220	D	0.080	1.41	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.050*	1.85	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.025	2.62	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
220	V	0.040*	2.29	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
220	V	0.025	2.90	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
220	W	0.045	2.19	352.0	2816.0	3520.0	-10～+10	-10～+30	-10～+50	10	12	15
330	E	0.025	2.62	528.0	4224.0	5280.0	-10～+10	-10～+30	-10～+50	10	12	15
330	V	0.025	2.90	528.0	4224.0	5280.0	-10～+10	-10～+30	-10～+50	10	12	15
330	W	0.025	2.93	528.0	4224.0	5280.0	-10～+10	-10～+30	-10～+50	10	12	15
470	W	0.050	2.08	752.0	6016.0	7520.0	-10～+10	-10～+30	-10～+50	10	12	15
470	T	0.025	4.14	752.0	6016.0	7520.0	-10～+10	-10～+30	-10～+50	10	12	15
680	T	0.025	4.14	1088.0	8704.0	10880.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 20V												
1	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
1	B	0.150	0.76	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
1	C	0.120	0.98	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	B	0.150	0.76	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	C	0.120	0.98	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	A	0.250	0.56	6.6	52.8	66.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	B	0.150	0.76	6.6	52.8	66.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	C	0.100	1.07	6.6	52.8	66.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	B	0.150	0.76.	9.4	75.2	94.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	C	0.100	1.07	9.4	75.2	94.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	D	0.090	1.33	9.4	75.2	94.0	-10～+10	-10～+30	-10～+50	10	12	15
4.7	E	0.080	1.47	9.4	75.2	94.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.150	0.76	13.6	108.8	136.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	C	0.100	1.07	13.6	108.8	136.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	D	0.090	1.33	13.6	108.8	136.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	E	0.080	1.47	13.6	108.8	136.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.150	0.76	20.0	160.0	200.0	-10～+10	-10～+30	-10～+50	10	12	15
10	C	0.100	1.07	20.0	160.0	200.0	-10～+10	-10～+30	-10～+50	10	12	15
10	D	0.090	1.33	20.0	160.0	200.0	-10～+10	-10～+30	-10～+50	10	12	15
10	E	0.055	1.77	20.0	160.0	200.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 20V												
15	C	0.080	1.20	30.0	240.0	300.0	-10～+10	-10～+30	-10～+50	10	12	15
15	D	0.045	1.87	30.0	240.0	300.0	-10～+10	-10～+30	-10～+50	10	12	15
15	E	0.080	1.47	30.0	240.0	300.0	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.080	1.20	44.0	352.0	440.0	-10～+10	-10～+30	-10～+50	10	12	15
22	H	0.060	1.47	44.0	352.0	440.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.060*	1.62	44.0	352.0	440.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.045	1.87	44.0	352.0	440.0	-10～+10	-10～+30	-10～+50	10	12	15
22	E	0.035	2.22	44.0	352.0	440.0	-10～+10	-10～+30	-10～+50	10	12	15
33	C	0.080	1.20	66.0	528.0	660.0	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.045	1.87	66.0	528.0	660.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.050*	1.85	66.0	528.0	660.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.035	2.22	66.0	528.0	660.0	-10～+10	-10～+30	-10～+50	10	12	15
33	V	0.100	1.45	66.0	528.0	660.0	-10～+10	-10～+30	-10～+50	10	12	15
47	C	0.150	0.88	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.060*	1.62	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.045	1.87	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.050*	1.85	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.035	2.22	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	V	0.100	1.45	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
47	W	0.100	1.47	94.0	752.0	940.0	-10～+10	-10～+30	-10～+50	10	12	15
68	D	0.090	1.33	136.0	1088.0	1360.0	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.080	1.47	136.0	1088.0	1360.0	-10～+10	-10～+30	-10～+50	10	12	15
68	V	0.100	1.45	136.0	1088.0	1360.0	-10～+10	-10～+30	-10～+50	10	12	15
68	W	0.100	1.47	136.0	1088.0	1360.0	-10～+10	-10～+30	-10～+50	10	12	15
100	D	0.090	1.33	200.0	1600.0	2000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	E	0.080	1.47	200.0	1600.0	2000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	V	0.080	1.62	200.0	1600.0	2000.0	-10～+10	-10～+30	-10～+50	10	12	15
100	W	0.080	1.64	200.0	1600.0	2000.0	-10～+10	-10～+30	-10～+50	10	12	15
150	E	0.080	1.47	300.0	2400.0	3000.0	-10～+10	-10～+30	-10～+50	10	12	15
150	V	0.080	1.62	300.0	2400.0	3000.0	-10～+10	-10～+30	-10～+50	10	12	15
150	W	0.080	1.64	300.0	2400.0	3000.0	-10～+10	-10～+30	-10～+50	10	12	15
220	E	0.080	1.47	440.0	3520.0	4400.0	-10～+10	-10～+30	-10～+50	10	12	15
220	V	0.080	1.62	440.0	3520.0	4400.0	-10～+10	-10～+30	-10～+50	10	12	15
220	W	0.080	1.64	440.0	3520.0	4400.0	-10～+10	-10～+30	-10～+50	10	12	15
rated voltage (U_R) 25V												
1	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
1	B	0.150	0.76	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
1	C	0.120	0.98	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	A	0.250	0.56	5.0	40.0	50.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 25V												
2.2	B	0.150	0.76	5.5	44.0	55.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	C	0.100	1.07	5.5	44.0	55.0	-10～+10	-10～+30	-10～+50	10	12	15
2.2	D	0.090	1.32	5.5	44.0	55.0	-10～+10	-10～+30	-10～+50	10	12	15
3.3	B	0.150	0.76	8.3	66.0	82.5	-10～+10	-10～+30	-10～+50	10	12	15
3.3	C	0.100	1.07	8.3	66.0	82.5	-10～+10	-10～+30	-10～+50	10	12	15
3.3	D	0.090	1.32	8.2	66.0	82.5	-10～+10	-10～+30	-10～+50	10	12	15
4.7	B	0.150	0.76	11.8	94.0	117.5	-10～+10	-10～+30	-10～+50	10	12	15
4.7	C	0.100	1.07	11.8	94.0.	117.5	-10～+10	-10～+30	-10～+50	10	12	15
4.7	D	0.090	1.32	11.7	94.0	117.5	-10～+10	-10～+30	-10～+50	10	12	15
4.7	E	0.080	1.47	11.7	94.0	117.5	-10～+10	-10～+30	-10～+50	10	12	15
6.8	B	0.150	0.76	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	C	0.100	1.07	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	D	0.090	1.32	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
6.8	E	0.080	1.47	17.0	136.0	170.0	-10～+10	-10～+30	-10～+50	10	12	15
10	B	0.300	0.54	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
10	C	0.100	1.07	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
10	D	0.090*	1.32	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
10	D	0.075	1.44	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
10	E	0.080	1.47	25.0	200.0	250.0	-10～+10	-10～+30	-10～+50	10	12	15
15	C	0.100	1.07	37.5	300.0	375.0	-10～+10	-10～+30	-10～+50	10	12	15
15	D	0.090*	1.32	37.5	300.0	375.0	-10～+10	-10～+30	-10～+50	10	12	15
15	D	0.075	1.44	37.5	300.0	375.0	-10～+10	-10～+30	-10～+50	10	12	15
15	E	0.080	1.47	37.5	300.0	375.0	-10～+10	-10～+30	-10～+50	10	12	15
22	C	0.100	1.07	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	H	0.090	1.21	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.090*	1.32	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	D	0.075	1.44	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	E	0.080*	1.47	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	E	0.055	1.77	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
22	V	0.100	1.45	55.0	440.0	550.0	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.090*	1.32	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
33	D	0.075	1.44	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.080*	1.47	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
33	E	0.055	1.77	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
33	V	0.100	1.45	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
33	W	0.100	1.47	82.5	660.0	825.0	-10～+10	-10～+30	-10～+50	10	12	15
47	D	0.090	1.32	117.5	940.0	1175.0	-10～+10	-10～+30	-10～+50	10	12	15
47	E	0.090	1.23	117.5	940.0	1175.0	-10～+10	-10～+30	-10～+50	10	12	15
47	V	0.100	1.45	117.5	940.0	1175.0	-10～+10	-10～+30	-10～+50	10	12	15

Table 2 Rated voltage, ripple current, nominal capacitance, equivalent series resistance (ESR), shell code, and high and low temperature characteristics of the capacitor

Nominal electricity capacity C_R (μF)	shell Number	ESR max 100KHz (Ω)	AC ripple current max100KHz (A)	Leak current max (μ A)			Capacity change range of (%)			Loss angle is tangent to max (%)		
		+25℃	+85℃	+25℃	+85℃	+125℃	-55℃	+85℃	+125℃	-55℃ / +25℃	+85℃	+125℃
rated voltage (U_R) 25V												
47	W	0.100	1.47	117.5	940.0	1175.0	-10～+10	-10～+30	-10～+50	10	12	15
68	E	0.080	1.47	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15
68	V	0.100	1.45	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15
68	W	0.100	1.47	170.0	1360.0	1700.0	-10～+10	-10～+30	-10～+50	10	12	15

PART NUMBER EXAMPLE