

CBBAC

for defense



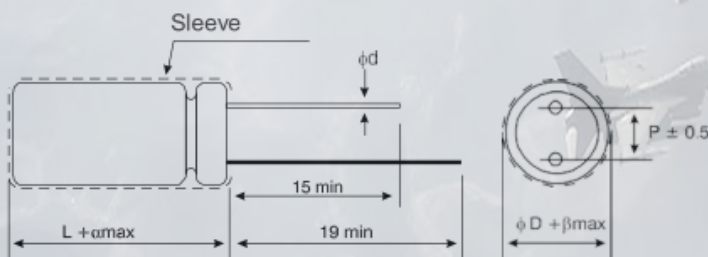
- 125 °C series, high heat resistance, leaded type.
- Low ESR, high frequency and low impedance.
- The national military standard level meets the environmental requirements of vibration and low pressure.
- It is suitable for energy storage, filtering and bypass in electronic circuits in aerospace, aviation, cold, high altitude and ocean.
- Main technical indicators

item	characteristic	
Operating temperature range	-55°C~+125°C	
Rated operating voltage range	10V~100V	
Nominal capacitance range	8.2μF~22000μF	
Allowable deviation of nominal capacitance	M (±20%) (25°C, 120Hz)	
DC leakage current*1	I≤0.01CRUR (μA) (25°C, 2min) C _R : Nominal capacitance (μF); U _R : Rated voltage (V)	
Loss tangent tgδ (max)	For details, please refer to the "List of Product Specifications and Technical Parameters" (25°C, 120Hz)	
ESR (maximum)*2	For details, please refer to the "List of Product Specifications and Technical Parameters" (25°C, 100KHz)	
Low temperature characteristics (capacitance rate of change)	(C _{25°C} -C _{.55°C}) /C _{25°C} ≤35% (25°C, 120Hz)	
Durability (High Temperature Test)	The rated voltage is applied at 125 °C for 2000h, and after recovery for 24h, the test is at room temperature (25 °C±5 °C), and its electrical performance conforms to:	
	Rate of change in capacitance	≤± 15% of initial measurements
	DC leakage current	≤ initial prescriptive value
	The loss angle is tangent	≤ initial measurements
Store at high temperatures	After storage at 125 °C for 1000h, recovery for 24 h, and test at room temperature (25 °C±5 °C), its electrical performance conforms to:	
	Rate of change in capacitance	≤± 15% of initial measurements
	DC leakage current	≤ initial prescriptive value
	The loss angle is tangent	≤ initial measurements
	ESR	≤ 200% of the initial measurement

Execution standard number: Q/MN21002—2020 GJB10175—2021 Note:

- 1) 1KΩ protection resistor in series during testing and charging;
- 2) The test location is the root of the capacitor lead terminal.

■ Outline drawing and size table (mm)



∅	6.3	8	10	12.5	16	18
F	2.5	3.5	5.0		7.5	
d	0.6				0.8	
A	1.0		2.0			
B	0.5			1.0		

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■ List of product specifications and technical parameters

rated voltage V	capacity μF	Dimensions D \times L (mm)	tg δ (120Hz)	ESR (m Ω ,25 $^{\circ}\text{C}$) (100kHz)	Ripple current mA,rms (100kHz, 125 $^{\circ}\text{C}$)
10 1A	270	6.3 \times 8	0.12	28	880
	330	6.3 \times 11	0.12	25	1040
	390	6.3 \times 11	0.12	25	1040
	470	8 \times 8	0.12	25	1040
	560	8 \times 8	0.12	25	1040
	680	8 \times 11.5	0.12	20	1200
	820	8 \times 11.5	0.12	20	1200
	1000	10 \times 10	0.12	18	1200
	1200	10 \times 12.5	0.13	18	1360
	1500	10 \times 12.5	0.13	18	1360
	1800	10 \times 16	0.13	18	1520
	2200	10 \times 20	0.13	18	1600
	2700	12.5 \times 16	0.13	15	1760
	3300	12.5 \times 20	0.14	15	1920
	3900	12.5 \times 20	0.14	15	1920
	4700	12.5 \times 25	0.15	15	2000
	5600	12.5 \times 25	0.15	15	2000
	6800	16 \times 25	0.16	15	2120
	8200	16 \times 25	0.16	15	2120
	10000	16 \times 30	0.17	15	2320
12000	16 \times 35	0.18	15	2400	
15000	18 \times 30	0.18	15	2400	
18000	18 \times 35	0.18	15	2520	
22000	18 \times 40	0.19	15	2680	
16 1C	180	6.3 \times 8	0.12	28	880
	220	6.3 \times 8	0.12	28	880
	270	6.3 \times 11	0.12	25	1040
	330	8 \times 8	0.12	25	1040
	390	8 \times 8	0.12	25	1040
	470	8 \times 11.5	0.12	20	1200
	560	8 \times 11.5	0.12	20	1200
	680	10 \times 10	0.12	18	1200
	820	10 \times 12.5	0.12	18	1360
	1000	10 \times 12.5	0.12	18	1360
	1200	10 \times 16	0.12	18	1520
	1500	12.5 \times 16	0.13	15	1760
	1800	12.5 \times 16	0.13	15	1760
	2200	12.5 \times 20	0.13	15	1920
	2700	12.5 \times 20	0.14	15	1920
	3300	12.5 \times 25	0.14	15	2000

rated voltage V	capacity μF	Dimensions D \times L (mm)	tg δ (120Hz)	ESR (m Ω ,25 $^{\circ}\text{C}$) (100kHz)	Ripple current mA,rms (100kHz, 125 $^{\circ}\text{C}$)	
16 1C	3900	12.5 \times 25	0.15	15	2000	
	4700	16 \times 25	0.15	15	2120	
	5600	16 \times 30	0.16	15	2320	
	6800	16 \times 35	0.16	15	2360	
	8200	16 \times 35	0.16	15	2360	
	10000	18 \times 30	0.17	15	2400	
	12000	18 \times 35	0.18	15	2520	
	15000	18 \times 40	0.18	15	2680	
	20 1D	100	6.3 \times 8	0.12	28	960
		120	6.3 \times 8	0.12	28	960
150		6.3 \times 11	0.12	25	1120	
180		6.3 \times 11	0.12	25	1120	
220		8 \times 8	0.12	25	1120	
270		8 \times 11.5	0.12	20	1280	
330		8 \times 11.5	0.12	20	1280	
390		10 \times 10	0.12	18	1280	
470		10 \times 12.5	0.12	18	1440	
560		10 \times 12.5	0.12	18	1440	
680		10 \times 16	0.12	18	1600	
820		10 \times 16	0.12	18	1600	
1000		12.5 \times 16	0.13	18	1880	
1200		12.5 \times 16	0.13	18	1880	
1500		12.5 \times 20	0.13	18	2080	
1800		12.5 \times 20	0.14	18	2080	
2200		12.5 \times 25	0.14	15	2120	
2700		12.5 \times 25	0.14	15	2120	
25 1E	3300	16 \times 25	0.14	15	2240	
	3900	16 \times 30	0.15	15	2320	
	4700	16 \times 35	0.15	15	2480	
	5600	16 \times 35	0.15	15	2480	
	6800	18 \times 35	0.16	15	2560	
	8200	18 \times 40	0.16	15	2640	
	10000	18 \times 40	0.16	15	2640	
	100	6.3 \times 8	0.12	28	800	
	120	6.3 \times 11	0.12	25	960	
	150	6.3 \times 11	0.12	25	960	
	180	8 \times 8	0.12	25	1120	
	220	8 \times 11.5	0.12	20	1280	
270	8 \times 11.5	0.12	20	1280		
330	10 \times 10	0.12	18	1280		

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List of specifications and technical parameters

rated voltage V	capacity μF	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ,25℃) (100kHz)	Ripple current mA,rms (100kHz, 125℃)
25 1E	390	10×10	0.12	18	1280
	470	10×12.5	0.12	18	1440
	560	10×12.5	0.12	18	1440
	680	10×16	0.12	18	1600
	820	12.5×16	0.12	16	1880
	1000	12.5×16	0.12	16	1880
	1200	12.5×20	0.13	16	2080
	1500	12.5×20	0.13	16	2080
	1800	12.5×25	0.14	15	2120
	2200	16×25	0.14	15	2240
	2700	16×25	0.14	15	2240
	3300	16×30	0.14	15	2360
	3900	16×35	0.14	15	2480
	4700	18×30	0.14	15	2560
	5600	18×30	0.15	15	2560
	6800	18×35	0.15	15	2600
8200	18×40	0.16	15	2640	
35 1V	68	6.3×8	0.12	28	880
	82	6.3×11	0.12	25	1040
	100	8×8	0.12	25	1040
	120	8×8	0.12	25	1040
	150	8×11.5	0.12	22	1200
	180	8×11.5	0.12	22	1200
	220	10×10	0.12	20	1200
	270	10×12.5	0.12	20	1360
	330	10×16	0.12	20	1520
	390	12.5×16	0.12	20	1760
	470	12.5×16	0.12	20	1760
	560	12.5×20	0.12	17	1920
	680	12.5×25	0.12	17	2120
	820	12.5×25	0.12	17	2120
	1000	16×25	0.12	17	2400
	1200	16×25	0.13	17	2400
	1500	16×30	0.13	17	2480
	1800	16×35	0.13	17	2480
	2200	18×30	0.13	17	2480
	2700	18×30	0.13	17	2480
3300	18×35	0.13	17	2640	
3900	18×35	0.13	17	2640	
4700	18×40	0.13	17	2800	

rated voltage V	capacity μF	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ,25℃) (100kHz)	Ripple current mA,rms (100kHz, 125℃)
40 1G	47	6.3×8	0.12	35	880
	56	6.3×11	0.12	32	1040
	68	6.3×11	0.12	32	1040
	82	8×8	0.12	32	1040
	100	8×11.5	0.12	30	1200
	120	8×11.5	0.12	30	1200
	150	10×10	0.12	28	1200
	180	10×10	0.12	28	1200
	220	10×12.5	0.12	25	1360
	270	10×16	0.12	22	1520
	330	10×16	0.12	22	1520
	390	12.5×16	0.12	20	1760
	470	12.5×16	0.12	20	1760
	560	12.5×20	0.12	20	1920
	680	12.5×20	0.12	20	1920
	820	12.5×25	0.12	20	2120
	1000	12.5×25	0.12	20	2120
	1200	16×25	0.12	17	2400
	1500	16×30	0.12	16	2440
	1800	16×35	0.12	16	2480
2200	16×35	0.12	16	2480	
2700	18×35	0.12	16	2640	
3300	18×40	0.12	16	2800	
50 1H	27	6.3×8	0.12	35	640
	33	6.3×11	0.12	32	800
	39	6.3×11	0.12	32	800
	47	8×8	0.12	32	800
	56	8×8	0.12	32	800
	68	8×11.5	0.12	30	960
	82	10×10	0.12	28	960
	100	10×10	0.12	28	960
	120	10×12.5	0.12	25	1120
	150	10×16	0.12	21	1280
	180	10×16	0.12	21	1280
	220	12.5×16	0.12	18	1600
	270	12.5×16	0.12	18	1600
	330	12.5×20	0.12	18	1720
	390	12.5×20	0.12	18	1720
	470	12.5×25	0.12	17	1800
560	12.5×25	0.12	17	1800	

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rated voltage V	capacity μF	Dimensions D×L (mm)	$\text{tg}\delta$ (120Hz)	ESR ($\text{m}\Omega, 25^\circ\text{C}$) (100kHz)	Ripple current mA,rms (100kHz, 125°C)
50 1H	680	16×25	0.12	16	2040
	820	16×30	0.12	16	2200
	1000	16×35	0.12	16	2280
	1200	16×35	0.12	16	2280
	1500	18×30	0.12	16	2400
	1800	18×35	0.12	16	2520
	2200	18×40	0.12	16	2680
63 1J	18	6.3×8	0.10	45	640
	22	6.3×11	0.10	40	800
	27	8×8	0.10	40	800
	33	8×8	0.10	40	800
	39	8×11.5	0.10	35	960
	47	8×11.5	0.10	35	960
	56	10×10	0.10	30	960
	68	10×12.5	0.10	25	1120
	82	10×12.5	0.10	25	1120
	100	10×16	0.10	22	1280
	120	10×16	0.10	22	1280
	150	12.5×16	0.10	18	1520
	180	12.5×16	0.10	18	1520
	220	12.5×20	0.10	17	1800
	270	12.5×25	0.10	17	2000
	330	12.5×25	0.10	17	2000
	390	16×25	0.10	16	2240
	470	16×25	0.10	16	2240
	560	16×30	0.10	16	2320
	680	16×35	0.10	16	2360
820	18×30	0.10	16	2360	
1000	18×35	0.10	16	2400	
1200	18×40	0.10	16	2680	
80 1K	8.2	6.3×8	0.10	50	520
	10	6.3×11	0.10	45	680
	12	6.3×11	0.10	45	680
	15	8×8	0.10	45	680
	18	8×11.5	0.10	40	840
	22	8×11.5	0.10	40	840

rated voltage V	capacity μF	Dimensions D×L (mm)	$\text{tg}\delta$ (120Hz)	ESR ($\text{m}\Omega, 25^\circ\text{C}$) (100kHz)	Ripple current mA,rms (100kHz, 125°C)
80 1K	27	8×11.5	0.10	40	840
	33	10×10	0.10	35	840
	39	10×12.5	0.10	30	1000
	47	10×12.5	0.10	30	1000
	56	10×16	0.10	25	1160
	68	10×20	0.10	24	1320
	82	12.5×16	0.10	22	1400
	100	12.5×20	0.10	20	1480
	120	12.5×20	0.10	20	1480
	150	12.5×25	0.10	18	1800
	180	12.5×25	0.10	18	1800
	220	16×25	0.10	18	2000
	270	16×30	0.10	18	2160
	330	16×35	0.10	18	2320
	390	18×30	0.10	17	2320
470	18×35	0.10	17	2360	
560	18×40	0.10	17	2480	
680	18×40	0.10	17	2480	
100 2A	27	10×10	0.12	40	480
	33	10×12.5	0.12	35	640
	39	10×12.5	0.12	35	640
	47	10×16	0.12	30	784
	56	10×20	0.12	26	1040
	68	12.5×16	0.12	24	1160
	82	12.5×20	0.12	22	1280
	100	12.5×20	0.12	22	1280
	120	12.5×25	0.12	22	1560
	150	12.5×25	0.12	22	1560
	180	16×25	0.12	20	1760
	220	16×25	0.12	20	1760
	270	16×30	0.12	20	1880
	330	16×35	0.12	20	2040
	390	18×30	0.12	19	2040
470	18×35	0.12	19	2160	
560	18×40	0.12	18	2280	

■ Ripple current frequency coefficient

Frequency (f)	$1\text{KHz} \leq f < 10\text{KHz}$	$10\text{KHz} \leq f < 100\text{KHz}$	$100\text{KHz} \leq f < 300\text{KHz}$	
coefficient	0.05	0.3	0.7	1.0