

CDBAG

for defense



- Suitable for reflow soldering, high-density installation for small, low-profile equipment.
- Super interference absorption ability, excellent temperature and frequency characteristics.
- Military products meet environmental requirements such as vibration and low air pressure. It can be supplied according to the "seven specialty" level, and can also be supplied according to the "general army" level.
- 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℃~+105℃
Rated operating voltage range	6.3V~25V
Nominal capacitance (25℃, 120Hz)	10μF~15000μF
Allowable deviation of nominal capacitance (25℃, 120Hz)	M (±20%)
DC leakage current (25℃, 2min) *1	$I \leq 0.02 C_R U_R (\mu A)$ or 300 μA (whichever is greater) C_R : Nominal capacitance (μF); U_R : Rated voltage (V)
Loss tangent (max) (25℃, 120Hz)	For details, please refer to the "List of Product Specifications and Technical Parameters"
ESR (max) (25℃, 100KHz) *2	For details, please refer to the "List of Product Specifications and Technical Parameters"
High and low temperature characteristics (impedance ratio, 100KHz)	-55℃: $Z_{-55℃}/Z_{+25℃} \leq 1.25$; 105℃: $Z_{105℃}/Z_{+25℃} \leq 1.25$
Durability (High Temperature Test)	The rated voltage is applied at 105℃ for 2000h, and after recovery for 24h, the electrical performance of the rated voltage (25℃±5℃) is tested at room temperature
	Rate of change in capacitance $\leq \pm 20\%$ of the initial measurement
	The loss angle is tangent $\leq 200\%$ of the initial measurement
	DC leakage current $\leq$ initial prescriptive value
	ESR $\leq 200\%$ of the initial measurement
Steady-state damp heat	60℃, 90~95%RH storage for 1000h, recovery for 24h, room temperature (25±5℃) test, its electrical performance conforms:
	Rate of change in capacitance $\leq \pm 20\%$ of the initial measurement
	The loss angle is tangent $\leq 150\%$ of the initial specified value
	DC leakage current $\leq$ initial prescriptive value
	ESR $\leq 150\%$ of the initial specified value

Executive standard number: Q/MN60006-2017 Seven special standard number: QZJ840634

*1 1KΩ protection resistor in series during testing and charging; *2 The test position is the root of the capacitor lead segment.

■ Outline drawing and size table (mm)

Standard product: (Size: $\phi 5 \times 5.4 \sim \phi 18 \times 21.5$)		D×L	D	L	A	B	C	E	H
		5×5.4	5	5.4±0.3	2.2	5.3	5.3	1.4	0.5~0.8
		6.3×5.4	6.3	5.4±0.3	2.6	6.6	6.6	2.1	0.5~0.8
		6.3×7.7	6.3	7.7±0.3	2.6	6.6	6.6	2.1	0.5~0.8
		6.3×9.7	6.3	9.7±0.3	2.6	6.6	6.6	2.1	0.5~0.8
		8×6.2	8	6.2±0.3	2.9	8.3	8.3	3.2	0.8~1.1
Vibration-resistant (Size: $\phi 8 \times 10 \sim \phi 18 \times 21.5$) 		8×10	8	10±1.0	2.9	8.3	8.3	3.2	0.8~1.1
		8×11.7	8	11.7±1.0	2.9	8.3	8.3	3.2	0.8~1.1
		10×7.5	10	7.5±1.0	3.2	10.3	10.3	4.6	0.8~1.1
		10×10	10	10±1.0	3.2	10.3	10.3	4.6	0.8~1.1
		10×10.5	10	10.5±1.0	3.2	10.3	10.3	4.6	0.8~1.1
		10×12.3	10	12.3±1.0	3.2	10.3	10.3	4.6	0.8~1.1
		10×16	10	16±1.0	3.2	10.3	10.3	4.6	0.8~1.1
		12×13.5	12	13.5±1.0	4.7	12.8	12.8	4.4	0.8~1.2
		12.5×16	12.5	16±1.0	4.7	12.8	12.8	4.4	1.0~1.3
		16×16.5	16	16.5±1.0	5.7	17.0	17.0	6.5	1.0~1.3
		16×21.5	16	21.5±1.0	5.7	17.0	17.0	6.5	1.0~1.3
		18×16.5	18	16.5±1.0	6.7	19.0	19.0	6.5	1.0~1.3
		18×21.5	18	21.5±1.0	6.7	19.0	19.0	6.5	1.0~1.3

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■ List of product specifications and technical parameters

rated voltage (V)	Capacitance (μF)	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ) (100kHz)	Ripple current mA.rms (100kHz)
6.3 1J	47	5×5.4	0.12	45	1670
	56	5×5.4	0.12	45	1670
	68	5×5.4	0.12	45	1670
	82	5×5.4	0.12	45	1670
	100	6.3×5.4	0.12	27	2400
	120	6.3×5.4	0.12	27	2400
	150	6.3×5.4	0.12	19	2700
	180	6.3×5.4	0.12	17	3100
	180	6.3×7.7	0.12	15	3150
	220	6.3×7.7	0.12	15	3150
	270	6.3×7.7	0.12	15	3150
	330	6.3×7.7	0.12	15	3150
	330	10×7.5	0.12	15	3200
	390	6.3×9.7	0.12	12	3400
	470	6.3×9.7	0.12	10	4300
	560	8×10	0.12	10	5400
	680	8×10	0.12	10	5400
	820	8×11.7	0.12	9	5600
	1000	8×11.7	0.12	9	5600
	1000	10×10	0.12	8	5900
	1200	10×10	0.13	8	5900
	1500	10×12.3	0.13	8	6100
	1800	10×12.3	0.13	8	6100
	2200	10×16	0.13	8	6300
	2700	10×16	0.13	8	6300
	3300	12.5×13.5	0.14	8	6600
	3900	12.5×13.5	0.14	8	6600
	3900	12.5×16	0.14	8	6800
	4700	12.5×16	0.15	8	6800
	5600	16×16.5	0.15	8	7000
	6800	16×16.5	0.16	8	7000
	8200	18×16.5	0.16	8	7200
	10000	16×21.5	0.17	8	7100
	10000	18×16.5	0.17	8	7200
	12000	16×21.5	0.18	8	7100
	15000	18×21.5	0.18	8	7500
10 1A	10	5×5.4	0.12	45	1670
	12	5×5.4	0.12	45	1670
	15	5×5.4	0.12	45	1670
	18	5×5.4	0.12	45	1670
	22	5×5.4	0.12	45	1670
	27	5×5.4	0.12	45	1670
	33	5×5.4	0.12	45	1670

rated voltage (V)	Capacitance (μF)	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ) (100kHz)	Ripple current mA.rms (100kHz)
10 1A	33	6.3×5.4	0.12	30	2200
	39	5×5.4	0.12	45	1670
	39	6.3×5.4	0.12	30	2200
	47	5×5.4	0.12	30	2200
	47	6.3×5.4	0.12	30	2200
	56	5×5.4	0.12	30	2200
	56	6.3×5.4	0.12	30	2200
	68	5×5.4	0.12	30	2200
	68	6.3×5.4	0.12	30	2200
	82	6.3×5.4	0.12	30	2200
	100	6.3×5.4	0.12	30	2200
	100	6.3×7.7	0.12	20	2690
	120	6.3×5.4	0.12	30	2200
	120	6.3×7.7	0.12	20	2690
	150	6.3×7.7	0.12	20	2690
	180	6.3×7.7	0.12	20	2690
	220	6.3×7.7	0.12	20	2690
	220	6.3×9.7	0.12	15	3100
	270	6.3×9.7	0.12	15	3100
	330	8×10	0.12	15	3950
	330	8×11.7	0.12	15	3950
	390	8×10	0.12	11	4800
	470	8×10	0.12	8	5400
	560	8×11.7	0.12	8	5600
	680	10×10	0.12	8	5900
	820	10×10	0.12	8	5900
	1000	10×10	0.12	8	5900
	1200	10×12.3	0.13	8	6100
	1500	10×12.3	0.13	8	6100
	1800	10×16	0.13	8	6300
	2200	10×16	0.13	8	6300
	2200	12.5×13.5	0.13	8	6600
	2700	12.5×13.5	0.13	8	6600
	2700	12.5×16	0.13	8	6800
	3300	12.5×16	0.14	8	6800
	3900	16×16.5	0.14	8	7000
	4700	16×16.5	0.15	8	7000
	5600	16×16.5	0.15	8	7000
	5600	18×16.5	0.15	8	7200
	6800	16×21.5	0.16	8	7100
	8200	18×16.5	0.16	8	7200
	10000	18×21.5	0.17	8	7500
	12000	18×21.5	0.18	8	7500

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■ List of product specifications and technical parameters

rated voltage (V)	Capacitance (μF)	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ) (100kHz)	Ripple current mA.rms (100kHz)
16 1C	10	5×5.4	0.12	45	1670
	10	6.3×5.4	0.12	30	2200
	12	5×5.4	0.12	45	1670
	12	6.3×5.4	0.12	30	2200
	15	5×5.4	0.12	45	1670
	15	6.3×5.4	0.12	30	2200
	18	5×5.4	0.12	45	1670
	18	6.3×5.4	0.12	30	2200
	22	5×5.4	0.12	45	1670
	22	6.3×5.4	0.12	30	2200
	27	5×5.4	0.12	45	1670
	27	6.3×5.4	0.12	30	2200
	33	5×5.4	0.12	45	1670
	33	6.3×5.4	0.12	30	2200
	39	5×5.4	0.12	45	1670
	39	6.3×5.4	0.12	30	2200
	47	5×5.4	0.12	45	1670
	47	6.3×5.4	0.12	30	2200
	56	6.3×5.4	0.12	30	2200
	68	6.3×5.4	0.12	30	2200
	82	6.3×5.4	0.12	30	2200
	82	6.3×7.7	0.12	20	2690
	82	8×6.2	0.12	20	2690
	100	6.3×7.7	0.12	20	2690
	120	6.3×7.7	0.12	20	2690
	120	8×6.2	0.12	20	2690
	150	8×6.2	0.12	20	2690
	150	10×7.5	0.12	20	2890
	180	6.3×9.7	0.12	18	3500
	220	8×10	0.12	18	3890
	270	8×10	0.12	16	3970
	270	8×11.7	0.12	16	4070
	330	8×10	0.12	16	4070
	390	8×11.7	0.12	16	4070
	470	10×10	0.12	12	5900
	470	10×12.3	0.12	10	6100
	560	10×10	0.12	10	5900
	680	10×12.3	0.12	10	6100
	820	10×12.3	0.12	10	6100
	1000	10×16	0.12	8	6300
	1200	10×16	0.13	8	6300
16 1D	1200	12.5×13.5	0.13	8	6600
	1500	12.5×13.5	0.13	8	6600
	1500	12.5×16	0.13	8	6800
	1800	12.5×16	0.13	8	6800
	2200	16×16.5	0.13	8	7000
	2700	16×16.5	0.13	8	7000
	3300	16×16.5	0.14	8	7000
	3900	16×21.5	0.14	8	7100
	3900	18×16.5	0.14	8	7200
	4700	16×21.5	0.15	8	7100
	4700	18×21.5	0.15	8	7500
	5600	18×21.5	0.15	8	7500
	10	5×5.4	0.12	45	1670
	10	6.3×5.4	0.12	30	2200
	10	6.3×7.7	0.12	25	2670
	12	5×5.4	0.12	45	1670
	12	6.3×5.4	0.12	30	2200
	12	6.3×7.7	0.12	25	2670
	15	5×5.4	0.12	45	1670
	15	6.3×5.4	0.12	30	2200
	15	6.3×7.7	0.12	25	2670
	18	5×5.4	0.12	45	1670
	18	6.3×5.4	0.12	30	2200
	18	6.3×7.7	0.12	25	2670
	22	5×5.4	0.12	45	1670
	22	6.3×5.4	0.12	30	2200
	22	6.3×7.7	0.12	25	2670
	27	5×5.4	0.12	45	1670
	27	6.3×5.4	0.12	30	2200
	27	6.3×7.7	0.12	25	2670
	33	5×5.4	0.12	45	1670
	33	6.3×5.4	0.12	30	2200
	33	6.3×7.7	0.12	25	2670
	39	6.3×5.4	0.12	30	2200
	39	6.3×7.7	0.12	25	2670
	47	6.3×7.7	0.12	25	2670
	47	8×6.2	0.12	25	2670
	56	6.3×7.7	0.12	25	2670
	56	8×6.2	0.12	25	2670
	68	6.3×7.7	0.12	25	2670
	82	6.3×7.7	0.12	25	2670

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List of product specifications and technical parameters

rated voltage (V)	Capacitance (μF)	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ) (100kHz)	Ripple current mA,rms (100kHz)	rated voltage (V)	Capacitance (μF)	Dimensions D×L (mm)	tgδ (120Hz)	ESR (mΩ) (100kHz)	Ripple current mA,rms (100kHz)
20 1D	100	6.3×7.7	0.12	25	2670	25 1E	27	6.3×5.4	0.12	45	2100
	120	6.3×9.7	0.12	20	2950		27	6.3×7.7	0.12	25	2670
	120	8×10	0.12	18	3600		33	6.3×5.4	0.12	45	2100
	150	8×10	0.12	18	3600		33	6.3×7.7	0.12	25	2670
	180	8×10	0.12	18	3600		39	6.3×5.4	0.12	45	2100
	220	10×10	0.12	15	4880		39	6.3×7.7	0.12	25	2670
	270	10×10	0.12	15	4880		47	6.3×5.4	0.12	30	2200
	330	10×10	0.12	15	4880		47	6.3×7.7	0.12	25	2670
	390	10×12.3	0.12	15	5500		56	6.3×7.7	0.12	25	2670
	470	10×12.3	0.12	12	5800		68	6.3×7.7	0.12	25	2670
	560	10×16	0.12	12	6300		82	8×10	0.12	20	3000
	680	10×16	0.12	12	6300		100	8×10	0.12	18	3600
	820	10×16	0.12	12	6300		120	8×10	0.12	18	3600
	820	12.5×13.5	0.12	12	6600		150	8×10	0.12	18	3600
	1000	12.5×16	0.12	12	6800		180	8×10	0.12	18	3600
	1200	12.5×16	0.13	12	6800		220	10×10	0.12	15	4880
	1500	16×16.5	0.13	12	7000		270	10×10	0.12	15	4880
	1800	16×16.5	0.13	12	7000		330	10×12.3	0.12	15	5500
	2200	16×21.5	0.13	12	7100		390	10×12.3	0.12	12	5800
	2200	18×16.5	0.13	12	7200		470	10×16	0.12	12	6300
	2700	16×21.5	0.13	12	7100		560	12.5×13.5	0.12	12	6600
	2700	18×16.5	0.13	12	7200		680	12.5×13.5	0.12	12	6600
	3300	18×21.5	0.14	12	7500		680	12.5×16	0.12	12	6800
	3900	18×21.5	0.14	12	7500		820	12.5×16	0.12	12	6800
	4700	18×21.5	0.15	12	7500		1000	12.5×16	0.12	12	6800
25 1E	10	6.3×5.4	0.12	45	2100		1200	16×16.5	0.13	12	7000
	10	6.3×7.7	0.12	25	2670		1500	16×16.5	0.13	12	7000
	12	6.3×5.4	0.12	45	2100		1500	18×16.5	0.13	12	7200
	12	6.3×7.7	0.12	25	2670		1800	16×21.5	0.13	12	7100
	15	6.3×5.4	0.12	45	2100		2200	16×21.5	0.13	12	7100
	15	6.3×7.7	0.12	25	2670		2200	18×16.5	0.13	12	7200
	18	6.3×5.4	0.12	45	2100		2200	18×21.5	0.13	12	7500
	18	6.3×7.7	0.12	25	2670		2700	18×21.5	0.13	12	7500
	22	6.3×5.4	0.12	45	2100		3300	18×21.5	0.14	12	7500
	22	6.3×7.7	0.12	25	2670		3900	18×21.5	0.14	12	7500

PART NUMBER EXAMPLE

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