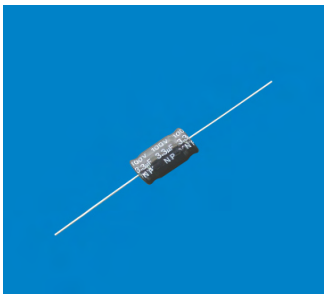
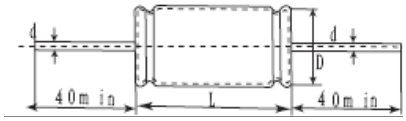
WesTech Component Co., Ltd



■AK10(AN) SERIES

Axial Non-polar

▶ Specialy designed for use in speaker dividiny net work for low ripple current.

Item	Characteristics								
Size and its tolerance 	D	±0.5			±1.0				
		6	8		10		12	13	16
	L ± 0.2	16	16	19	19	21	23	26	31	32
	d ± 0.1	0.6					0.8		
Operating Temp. Range	-40℃ ~ +85℃								
Rated Working Voltage U_R	50 ~ 100V								
Capacitance Range C_R	1.0 ~ 100μ F								
Capacitance Tol. △ C/C_R	±20%,±10%(100Hz)								
Dissipation Factor tgδ	U_R(V)	50V				100V			
	100Hz	tgδ ≤ 0.12				tgδ ≤ 0.10			
Leakage Current I_L	≤ 0.03·C_R·U_R+4μ A (After 2 minutes application of U_R)								
Load Life	The following specifications shall be satisfied when the capcitors are restored to 25℃ after rated Dc voltage applied for 1000 hours at 85℃,During this test the rated Dc voltage shall be reversed on the capacitor every 125 hours:△ C≤ ±20% of initial value,tgδ ≤ 150% of specified value,I_L≤ specified value.								

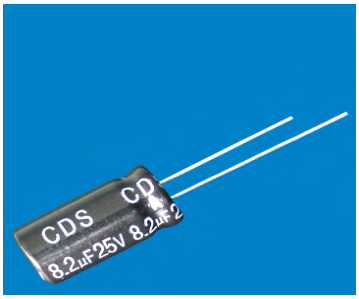
Case Size of Standard Products

C_R(μF) \ U_R(V)	50V	100V
1 μF	6×16	6×16
1.5 μF	6×16	6×16
2.2 μF	6×16	6×16
3.3 μF	6×16	8×16
4.7 μF	6×16	8×16
6.8 μF	6×16	8×19
10 μF	8×16	10×19
15 μF	8×19	10×21
22 μF	10×19	10×24
33 μF	12×23	12×26
47 μF	12×26	13×31
68 μF	12×26	13×31
100 μF	13×31	16×32

Permissible Ripple Current (mA at 20℃,100Hz):

	1μ F	1.5μ F	2.2μ F	3.3μ F	4.7μ F	6.8μ F	10μ F	15μ F	22μ F	33μ F	47μ F	68μ F	100 μ F
50V	23	28	28	35	41	50	64	88	106	136	162	215	271
100V	23	28	35	43	52	70	88	119	145	1 8 4	220	291	391

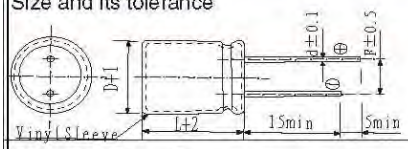
WesTech Component Co., Ltd



■CDS(HX) SERIES

For Horizontal Deflection

- ▶Nonpolar Small loss at high frequency, high ripple current.
- ▶Used in S correction of horizontal deflection current in TVs.

Item	Characteristics					
Size and its tolerance 	ØD	10	13	16	18	
	F ± 0.5	5.0		7.5		
	d ± 0.1	0.6		0.8		
Operating Temp. Range	-40℃～+85℃					
Rated Working Voltage U_R	10V～100V DC					
Capacitance Range C_R	0.47μF～47μF					
Capacitance Tol. $\Delta C/C_R$	±10%, ±20%(+20℃100 or 120Hz)					
Dissipation Factor tgδ	+20℃,100 or 120Hz.	U_R (V)	10	16	25	35	50	63	100
		tgδ	0.08	0.06	0.05	0.04	0.04	0.03	0.03
Leakage Current I_L	≤100μA At+20℃,after 5 minutes application of U_R								
Load Life	At +85℃, after U_R applied for 1000 hours (polarity inverson after discharge per 250 hours):								
		ΔC	±15% of initial measured value						
		DF(tgδ)	≤150% of initial specified value						
		LC(I_L)	≤ initial specified value						
Shelf Life	At+85℃,after shelf for 500 hours(without voltage applied),then restored for 16 hours at room temp.								
		ΔC	±15% of initial measured value						
		DF(tgδ)	≤150% of initial specified value						
		LC(I_L)	≤ 200% of initial specified value						

Case Size of Standard Products

U_R(V) C_R(μF)	10	16	25	35	50	63	100
0.47							13×20
0.68						13×20	13×25
1.0			10×20	10×20	13×20	13×25	16×25
1.5			10×20	13×20	13×25	16×25	16×32
2.2		10×20	13×20	13×25	16×25	16×32	16×36
3.3	10×20	13×20	13×25	16×25	16×32	16×36	18×36
4.7	13×20	13×25	16×25	16×32	16×36	18×36	18×40
6.8	13×25	16×25	16×32	16×36	18×36	18×40	
10	16×25	16×32	16×36	18×36	18×40		
15	16×32	16×36	18×36	18×40			
22	16×36	18×36	18×40				
33	18×36	18×40					
47	18×40						

WesTech Component Co., Ltd

■CD294(SK) SERIES

- Load life of 2000 hours at 105℃
- High ripple current
- Smaller Size
- PCB Mounting

SPECIFCATIONS

Item	Characteristics
Operating Temperature Range(℃)	-40℃ - + 105℃
Capacitance Tolerance(25℃,120Hz)	± 20%
Leakage Current(μA)	0.01CV or 1.2mA whichever is smaller.(at 25℃,after 5 minutes) C:Nominal Capacitance(μF)V:Rated Voltage(V)
Dissipation Factor(25℃,120Hz)	
Temperature Stability(120Hz)	
Load Life(+105℃)	
Shelf Life(+105℃)	500 hours.No voltage applied.After test:U,to be applied for 60 minutes,24 to 48 hours before measurement.

Dissipation Factor(25℃,120Hz):

Rated Voltage(V)	10	16	25	35	50	63~100	160~200	250~400
tanδ	0.45	0.35	0.30	0.25	0.20	0.15	0.12	0.15

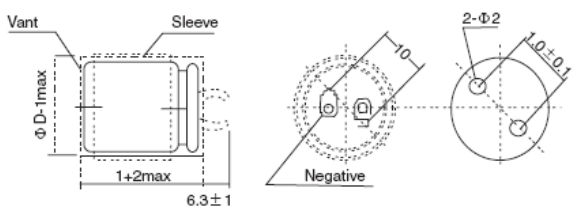
Temperature Stability(120Hz):

Rated Voltage(V)		10,16	25	35	50,63	80,100	160~200	250~400
Impedance Ratio	Z-25℃/Z+20℃	4	3	3	2	2	3	4
	Z-40℃/Z+20℃	15	10	8	6	5	6	

Load Life(+105℃):

Time	2000 hours
Leakage Current	Not more than the specified value.
Capacitance Change	Within + 20% of the initial value.
Dissipation Factor	Not more than 200% of the specified value.

DIMENSIONS



MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Rated Voltage(V) \ Freq(Hz)	50	120	1K	10K	20K
≤50	0.95	1	1.10	1.15	1.15
6.3~100	0.95	1	1.16	1.30	1.33
≥160	0.90	1	1.20	1.50	1.55

Temperature coefficient

Temperature(℃)	+40	+55	+70	+85	+105
Factor	2.7	2.5	2.1	1.7	1.0

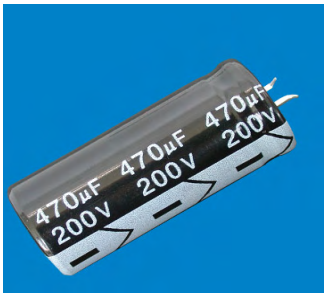
ALUMINUM ELECTROLYTIC CAPACITORS

▶ STANDARD RATINGS

WV(V)	10		16		25		35		50		63		80		100	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
ϕD×L(mm)	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms
22×25	6800	1.5	4700	1.4	3300	1.3	2200	1.1	1200	0.96	820	0.92	560	0.76	390	0.64
22×30	10000	1.9	6800	1.8	4700	1.6	2700	1.3	1800	1.2	1200	1.2	820	0.96	560	0.80
22×35	12000	2.1	8200	2.0	5600	1.8	3900	1.6	2200	1.4	1500	1.3	1000	1.1	680	0.92
22×40	15000	2.5	10000	2.3	6800	2.0	4700	1.9	2700	1.6	1800	1.5	1200	1.2	820	1.0
22×50	18000	2.8	15000	2.9	10000	2.6	6800	2.4	-	-	2200	1.7	1800	1.6	1200	1.3
25×25	8200	1.7	6800	1.8	4700	1.6	3300	1.3	1800	1.2	1200	1.1	820	0.96	560	0.80
25×30	12000	2.1	10000	2.2	5600	1.8	3900	1.6	2700	1.5	1500	1.3	1000	1.1	680	0.92
25×35	15000	2.5	12000	2.5	8200	2.2	5600	2.0	3300	1.8	1800	1.5	1500	1.4	1000	1.1
25×40	18000	2.8	15000	2.9	10000	2.6	6800	2.3	-	-	-	-	1800	1.6	-	-
25×50	-	-	18000	3.3	12000	2.9	8200	2.7	5600	2.5	3300	2.2	2200	1.8	1500	1.5
30×25	12000	2.2	10000	2.3	6800	2.0	4700	1.9	2700	1.6	1500	1.4	1200	1.3	820	1.0
30×30	18000	2.8	12000	2.6	8200	2.3	5600	2.1	3300	1.8	2200	1.7	1500	1.5	1000	1.2
30×35	22000	3.2	18000	3.3	12000	2.9	8200	2.9	4700	2.3	2700	2.0	1800	1.6	1200	1.4
30×40	-	-	22000	3.7	15000	3.3	10000	3.0	5600	2.5	3300	2.3	2200	1.9	1500	1.6
30×50	-	-	-	-	18000	3.8	12000	3.4	6800	2.9	4700	2.8	3300	2.3	2200	2.0
35×25	15000	2.6	12000	2.7	8200	2.4	5600	2.2	3300	1.8	2200	1.8	1500	1.5	1000	1.3
35×30	22000	3.3	18000	3.4	12000	3.0	8200	2.8	4700	2.4	2700	2.1	2200	1.9	1200	1.4
35×35	-	-	22000	3.9	15000	3.5	10000	3.1	5600	2.7	-	-	2700	2.2	1800	1.8
35×40	-	-	-	-	18000	3.9	12000	3.5	6800	3.0	4700	2.9	3300	2.4	2200	2.0
35×50	-	-	-	-	-	-	18000	4.5	10000	3.8	6800	3.6	4700	3.2	2700	2.3

WV(V)	160		180		200		250		315		350		400	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
ϕD×L(mm)	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms	uF	mArms
22×25	180	0.65	180	0.65	150	0.60	100	0.45	56	0.34	56	0.37	39	0.32
22×30	270	0.83	220	0.75	220	0.76	150	0.58	82	0.43	82	0.47	56	0.39
22×35	330	0.94	270	0.86	270	0.87	180	0.65	120	0.53	100	0.53	68	0.45
22×40	390	1.1	390	1.1	330	0.99	220	0.75	150	0.61	120	0.60	82	0.51
22×50	560	1.3	470	1.2	470	1.2	330	0.96	180	0.71	180	0.78	120	0.64
25×25	270	0.82	220	0.75	220	0.76	150	0.58	82	0.42	68	0.43	56	0.40
25×30	390	1.1	330	0.96	270	0.87	220	0.73	120	0.53	100	0.54	68	0.48
25×35	470	1.2	390	1.1	390	1.1	270	0.83	150	0.62	120	0.61	100	0.57
25×40	560	1.3	470	1.2	470	1.3	330	0.95	-	-	180	0.77	120	0.63
25×50	820	1.7	680	1.5	560	1.4	470	1.2	270	0.89	220	0.89	150	0.75
30×25	390	1.1	330	1.0	270	0.92	220	0.77	120	0.56	100	0.57	82	0.53
30×30	560	1.3	470	1.2	390	1.1	270	0.88	180	0.71	150	0.72	100	0.61
30×35	680	1.5	560	1.4	560	1.4	390	1.1	220	0.80	180	0.82	150	0.77
30×40	620	1.7	680	1.6	680	1.6	470	1.2	270	0.92	220	0.93	180	0.87
30×50	1000	2.0	1000	2.0	820	1.8	560	1.4	390	1.2	330	1.2	220	1.0
35×25	470	1.3	390	1.2	390	1.2	270	0.93	180	0.74	150	0.77	100	0.65
35×30	680	1.6	560	1.5	560	1.5	390	1.2	220	0.84	220	0.97	150	0.83
35×35	820	1.8	820	1.8	680	1.7	470	1.3	330	1.1	270	1.1	180	0.93
35×40	1000	2.0	1000	2.1	820	1.9	560	1.5	390	1.2	330	1.3	220	1.1
35×50	1500	2.6	1200	2.4	1200	2.4	820	1.9	470	1.4	470	1.6	330	1.3

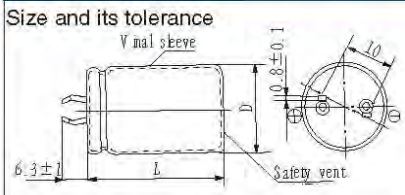
WesTech Component Co., Ltd



■ CD293(BZ) SERIES

Standard

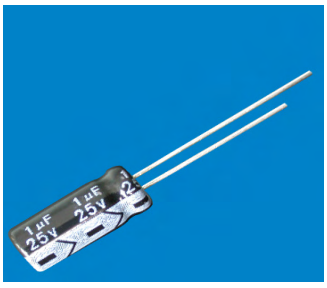
▶ Medium and high voltage, standard.

Item	Characteristics				
Size and its tolerance 	D±1.5	16	22	25	30
	L±3	25	30,35,40	40,50	40,50
Operating Temp. Range	40℃～+85℃				
Rated Working Voltage U_R	160～400V				
Nominal Capacitance Range C_R	33～470μF				
Capacitance Tolerance	-10%～50%				
Dissipation Factor tgδ (20℃, 100Hz)	U_R(V)	<350	≥350		
	tgδ	0.18	0.23		
Leakage Current	I≤0.03·C_R·U_R(μA) or 3mA (which is smaller)				
Temperature Characteristics (impedance ratio at 100Hz)	U_R(V)	160	>160		
	Z-25℃/Z+20℃	≤4	≤7		
Load Life	At +85℃ after applying rated voltage with sepecified ripple current for 1000 hours.				
	△C	±15% of initial measured value			
	DF (tgδ)	≤150% of initial specified value or 0.4(which is greater)			
	LC(IL)	≤ initial specified value			
Shelf Life	At +85℃ after storage for 500 hours then resumed 16 hours				
	△C	±20% of initial measured value			
	DF (tgδ)	≤120% of initial specified value			
	LC(IL)	≤ 200% of initial specified value			

Nominal capacitance,rated voltage,surge voltage and case size table:

U_R(V)DxL(mm)Us(V)	160	200	250	315	350	400
C_R(μF)	200	250	300	365	400	450
33						22×30
47						22×30
68			16×25	22×30	22×30	22×40
100	22×30	22×30		22×40	22×40	25×40
150	22×30	22×30	22×40	25×40	25×40	25×50
200	25×40	25×40	25×40	25×50	25×50	30×50
		22×35	25×50	30×40	30×50	25×40
330	25×40	25×50	30×40			30×45
470	25×40	30×50				30×50
	25×50					

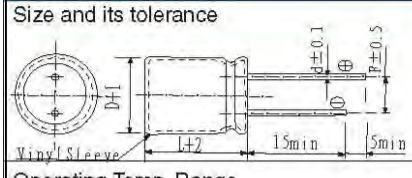
WesTech Component Co., Ltd



■CD117(SH) SERIES

High Precision Stability

- ▶Extremely low dissipation factor, high stability.
- ▶used in TV gathering focus, oscillation frequency and timer circuts.

Item	Characteristics
Size and its tolerance 	
Operating Temp. Range	-40℃～+85℃
Rated Working Voltage U_R	10V～50V$_{DC}$
Capacitance Range C_R	0.47μF～470μF
Capacitance Tol. $\Delta C/C_R$	±10%,(100Hz,20℃)
Dissipation Factor tg δ	+20℃,100 or 120Hz.
Leakage Current I_L	≤0.01·C_R·U_R or 3μA whichever is greater At +20℃,after 2 minutes application of U_R
Load Life	At +85℃ after U_R applied for 1000 hours.
Shelf Life	At+85℃,after shelf for 500 hours(without voltage applied), then restored for 16 hours at room temp.

ØD	6	8	10	13	16	18
F ± 0.5	2.5	3.5	5.0		7.5	
d ± 0.1	0.5		0.6		0.8	

U_R (V)	10	16	25	35	50
tgδ	0.10	0.08	0.08	0.07	0.07

△C	±10% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤ initial specified value

△C	±10% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤200% of initial specified value

Case Size of Standard Products

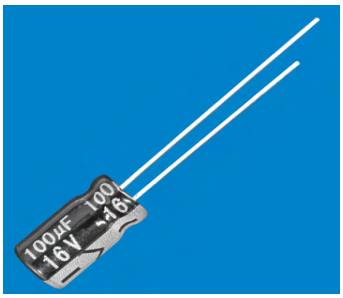
U_R(V)C_R(μF)	10	16	25	35	50
0.47					6×12
1.0				6×12	6×12
2.2			6×12	6×12	6×12
3.3		6×12	6×12	6×12	6×12
4.7	6×12	6×12	6×12	8×12	8×12
10	6×12	8×12	10×13	10×13	10×16
22	8×12	10×13	10×16	10×20	10×20
33	10×13	10×16	10×20	13×20	13×20
47	10×16	10×20	13×20	13×25	13×25
100	10×20	13×20	13×25	16×25	16×25
220	13×20	13×25	16×25	16×32	16×36
330	16×25	16×25	16×32		
470	16×36	16×36			

WesTech Component Co., Ltd

■CD110X(SX)(7mm) SERIES

7mm Super Miniature

- Super miniature size, light weight, good stable and relible performance, good uniformity.
- Widely used in electronic equipment of thin and high density assemblies, such as recorders, cameras, computers and telecommunications.

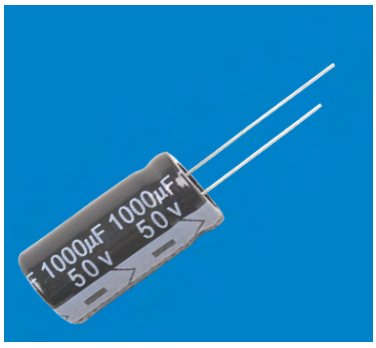


Item	Characteristics				
Size and its tolerance	D	4	5	6	8
	F ± 0.5	1.5	2.0	2.5	3.5
	d ± 0.1	0.45		0.5	
Operating Temp. Range	-40℃ ~ +105℃				
Rated Working Voltage U_R	6.3 ~ 63V_{DC}				
Capacitance Range C_R	0.1 ~ 470μ F(+20℃,100 or 120Hz)				
Capacitance Tol. △ C/C_R	±20%, %(+20℃,100 or 120Hz)$_{+30\ -10}$				
Dissipation Factor tgδ	U_R (V) At +20℃,100 or 120Hz tgδ 6.3 0.22 10 0.20 16 0.16 25 0.14 35 0.12 63 0.10 50 0.10				
Leakage Current I_L	At+20℃ after 2 minutes application of U_R . A grade ≤ 0.01·C_R·U_R or 3μ A whichever is greater				
Load Life	At +85℃ after U_R applied for 1000 hours . +85℃,UR1000: ±20% of initial measured value ≤ 200% of initial specified value ≤ initial specified value LC(I_L) △ C DF(tgδ)				
Shelf Life	At +85℃,after shelf for 500 hours(without voltage applied) and then restored for 16 hours at room temp. ±20% of initial measured value ≤ 200% of initial specified value ≤ 200% of initial specified value LC(I_L)△ C DF(tgδ)				

Case Size of Standard

U_R(V) C_R(μ F)	6.3	10	16	25	35	50	63
0.1 ~ 3.3						4×7	4×7
4.7					4×7	4×7	5×7
6.8					4×7	4×7	5×7
10			4×7	4×7	4×7	5×7	6×7
22			4×7	4×7	5×7	6×7	8×9
33		4×7	5×7	5×7	6×7	8×9	
47		4×7	5×7	6×7	6×7		
68		5×7	6×7	8×9	8×9		
100	5×7	5×7	6×7	8×9	8×9		
220	6×7	6×7	8×9				
330	8×9	8×9					
470	8×9						

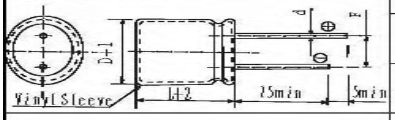
WesTech Component Co., Ltd



■CD110(PT) SERIES

Color TV Standard

- Better stable and reliable performance,good uniformity.
- D≥8mm equipped with pressure release device.
- Be used widely in DC or pulse circuit of color TV,color tubes,telecommunications and computers.

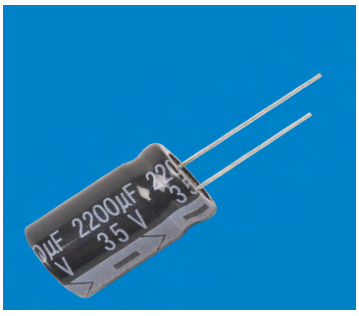
Item	Characteristics
Size and its tolerance 	ØD: 5 / 6 / 8 / 10 / 12 / 13 / 16 / 18 F ± 0.5: 2.0 / 2.5 / 3.5 / 5.0 / 7.5 d ± 0.1: 0.5 / 0.6 / 0.8
Operating Temp. Range	-40℃～+85℃(≤100VDC)　-25℃～+85℃(160、250VDC)
Rated Working Voltage　UR	6.3～250VDC
Capacitance Range　CR	0.1～10000μF(+20℃,100 or 120Hz)
Capacitance Tol.　ΔC / CR	±20%,$^{+30}_{-10}$%(+20℃,100 or 120Hz)
Dissipation Factor tg δ	At +20℃ and 100 or 120Hz,for CR>1000μF, tg δ add 0.02 per another 1000μF. UR(V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 / 160 / 250 tg δ: 0.24 / 0.22 / 0.16 / 0.14 / 0.12 / 0.10 / 0.09 / 0.08 / 0.16 / 0.18
Leakage Current IL	≤0.01·CR·UR or 3μA(UR≤100VDC) whichever is greater ≤0.03·CR·UR + 10μA(UR≥160VDC) At+20℃,after 2 minutes application of UR
Load Life	At +85℃ after UR applied for 1000 hours . ΔC: $^{+20}_{-30}$% (6.3VDC)、±20%(10-100VDC)、±15%(≥160VDC) of initial measured value DF(tg δ): ≤150% of initial specified value LC(IL): ≤ initial specified value
Shelf Life	At +85℃,after shelf for 500 hours(without voltage applied) ,then restored for 16 hours at room temp. ΔC: ±20% of initial measured value DF(tg δ): ≤150% of initial specified value LC(IL): ≤200% of initial specified value
Others	GB9608-88

Case Size of Standard Products

UR(V)CR (μF)	6.3	10	16	25	35	50	63	100	160	250
0.1～0.68						5×11	5×11	5×11		
1.0,1.5						5×11	5×11	5×11	5×11	6×12
2.2						5×11	5×11	5×11	6×12	8×12
3.3						5×11	5×11	5×11	8×12	8×12
4.7				5×11		5×11	5×11	6×11	8×12	8×14
6.8				5×11		5×11	5×11	6×11	10×15	10×15
10			5×11	5×11	5×11	5×11	5×11	6×12	10×15	10×15
15			5×11	5×11	5×11	6×11	6×11	8×12	10×15	10×20
22		5×11	5×11	5×11	5×11	6×11	6×12	8×14	10×17	13×20
33	5×11	5×11	5×11	5×11	5×11	6×12	8×12	10×15	12×20	13×25
47	5×11	5×11	5×11	5×11	6×12	8×11	8×12	10×17	13×20	16×26
68	5×11	5×11	6×11	6×12	6×12	8×12	10×13	10×20	13×25	16×32

UR(V)CR (μ F)	6.3	10	16	25	35	50	63	100	160	250
100	5×11	6×11	6×12	8×12	8×12	8×12	10×15	10×22	13×26	16×30
150	5×11	6×12	6×12	8×12	8×12	10×17	10×20	13×21	16×32	
220	5×12	6×12	8×12	8×12	8×14	10×17	12×20	13×25	16×36	
330	6×12	8×12	8×12	8×14	10×15	10×20	13×20	16×32		
470	8×12	8×12	8×14	10×15	10×17	12×20	16×26	16×36		
680	8×14	10×15	10×15	10×17	12×20	16×25	16×26			
1000	8×14	10×15	10×17	10×20	13×20	16×26	16×35			
1500	10×15	10×20	13×20	13×20	16×25	18×32				
2200	10×20	10×20	13×21	13×26	16×27	18×36				
3300	13×20	13×20	13×21	16×32	16×36	18×38				
4700	13×25	13×25	16×25	16×34	18×36	22×42				
6800	16×26	16×26								
10000	16×32									

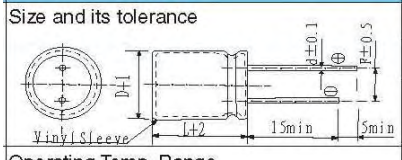
WesTech Component Co., Ltd



■ CD81(TR) (105℃) SERIES

High Temp

- Wide temperature range, stable and reliable performances
- D≥8mm equipped with pressure release device.
- Be used in DC or pulse circuit under enviroment of high temperature.

Item	Characteristics
Size and its tolerance 	
Operating Temp. Range	-40℃～+105℃(10≤100VDC)　　-25℃～+105℃(160～450VDC)
Rated Working Voltage UR	10～450VDC
Capacitance Range CR	1.0～4700μF(+20℃,100 or 120Hz)
Capacitance Tol. △C/CR	±20%, $^{+30}_{-10}$%(+20℃,100 or 120Hz)
Dissipation Factor tgδ	At +20℃and 100 or 120Hz,for CR>1000μF, tgδ add 0.02 per another 1000μF.
Leakage Current IL	≤0.01·CR·UR or 3μA(≤100VDC)whichever is greater ≤0.03·CR·UR + 10μA(≥160VDC) Measured after 2 minutes application of UR,at+20℃
Load Life	At +105℃, after UR applied for 1000 hours. +105℃, UR1000
Shelf Life	At +105℃,after shelf for 500 hours(without voltage applied) ,then restored for 24 hours at room temp. +105℃,500小时

ØD	5	6	8	10	12	13	16	18	22
F ± 0.5	2.0	2.5	3.5	5.0			7.5		10
d ± 0.1	0.5			0.6			0.8		

UR (V)	10	16	25	35	50,63	100	160～250	400,450
tgδ	0.22	0.20	0.15	0.12	0.10	0.08	0.16	0.20

△C	±25% of initial measured value
DF(tgδ)	≤200% of initial specified value
LC(IL)	≤ initial specified value

△C	±25% of initial measured value
DF(tgδ)	≤200% of initial specified value
LC(IL)	≤200% of initial specified value

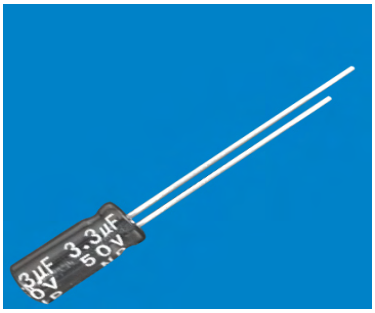
UR(VDC)	CR(μF)	Frequency (Hz) 50	100	1K	10K	100K
	1.0～10	0.7	1.0	1.6	1.85	2.0
6.3～100	22～220	0.75	1.0	1.4	1.55	1.6
	330～4700	0.8	1.0	1.15	1.25	1.3

Frequency Correction Factor for Ripple Current:

UR(V)CR (μF)	10	16	25	35	50	63	100	160	200	250	400	450
1.0					11	11	14	15	16	16	19	20
2.2					18	19	21	24	26	27	30	32
3.3					22	24	28	34	35	38	39	41
4.7					30	33	36	43	47	48	51	55
10			29	37	46	55	60	70	76	80	82	90
22		37	42	51	66	81	108	113	115	124	146	166
33	43	49	58	72	88	101	122	150	156	167	171	184
47	72	78	86	98	116	136	166	190	210	225	243	250
100	93	115	126	153	174	215	256	329	335	365		
220	136	180	230	280	310	388	490	593	628			
330	210	260	320	410	480	560	636					
470	310	360	420	520	650	800	880					
1000	480	600	760	910	1020	1220						
2200	960	1100	1210	1410	1500	1600						
3300	1160	1300	1400	1600	1810							
4700	1400	1510	1750									

UR(V)CR (μ F)	10	16	25	35	50	63	100	160	200	250	400	450
1.0					5×11	5×11	5×12	5×12	6×12	6×12	8×12	8×12
2.2					5×11	5×11	5×12	6×12	8×12	8×12	10×13	10×15
3.3					5×11	5×11	5×12	8×12	8×12	10×13	10×15	10×17
4.7					5×11	5×11	5×12	8×12	10×13	10×13	10×10	10×20
10			5×11	5×11	5×11	5×12	8×12	10×13	10×17	10×17	12×22	13×26
22		5×11	5×11	5×11	5×12	6×12	10×13	10×20	10×20	12×22	16×27	16×31
33	5×11	5×11	5×11	5×12	6×12	8×12	10×13	12×22	12×22	13×26	16×31	16×36
47	5×11	5×11	5×12	6×12	8×12	8×12	10×17	13×22	13×26	16×27	16×36	18×41
100	6×12	6×12	6×12	8×12	10×13	10×15	12×22	16×27	16×31	16×36		
220	6×12	6×12	8×12	8×12	10×17	12×22	16×27	18×36	18×41			
330	8×12	8×13	10×15	10×17	12×22	13×22	16×31					
470	8×14	8×12	10×20	12×22	13×22	16×27	18×36					
1000	10×17	10×11	12×25	13×26	16×27	16×36						
2200	13×22	13×26	13×25	16×31	18×36	22×42						
3300	13×26	16×27	16×31	18×38	22×42							
4700	16×27	16×31	16×32	22×40								

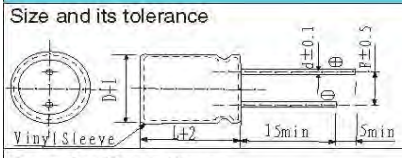
WesTech Component Co., Ltd



■ CD72(BP) SERIES

Non-Polar Speaker

- Low dissipation factor, high ripple current
- used in speaker dividing network circuits.

Item	Characteristics				
Size and its tolerance 	ØD	8	10	13	16
	F ± 0.5	3.5	5.0		7.5
	d ± 0.1	0.5	0.6		0.8
Operating Temp. Range	-40℃～+85℃				
Rated Working Voltage U_R	10～100V_{DC}				
Capacitance Range C_R	0.47μF～47μF				
Capacitance Tol. $\Delta C/C_R$	±10%(+20℃,100 or 120Hz)				
Dissipation Factor tg δ	At +20℃,100 or 120Hz +20℃100 or 120Hz				

U_R (V)	10	16	25	35	50	63	100
tg δ	0.10	0.08	0.06	0.05	0.05	0.04	0.04

Leakage Current I_L	≤0.03·C_R·U_R or 3μA whichever is greater At +20℃,after 2 minutes application of U_R.
Load Life	At +85℃, after U_R applied for 1000 hours .

△C	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	initial specified value

Shelf Life	At+85℃, after shelf for 500 hours(without voltage applied) ,then restored for 16 hours at room temp.

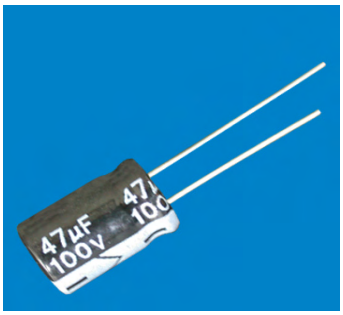
△C	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤200% of initial specified value

U_R(V) C_R(μF)	10	16	25	35	50	63	100
0.47					8×12	10×12	10×16
0.68					10×12	10×16	10×20
1.0			8×12	10×12	10×16	10×20	13×20
1.5			8×12	10×12	10×16	10×20	13×20
2.2		8×12	10×12	10×16	10×20	13×20	13×25
3.3	8×12	10×12	10×16	10×20	10×20	13×20	13×25
4.7	10×13	10×16	10×20	10×20	13×20	13×25	16×25
6.8	10×13	10×16	10×20	13×20	13×25	16×25	16×25
10	10×16	10×20	13×20	13×20	16×25	16×25	
15	10×16	10×20	13×20	13×25	16×25		
22	10×20	13×20	13×25	16×25			
33	13×20	13×25	16×25				
47	13×25	16×25					

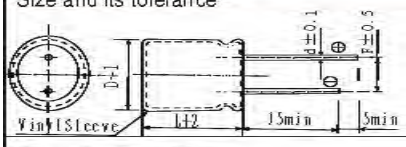
WesTech Component Co., Ltd

CD71(NP) SERIES

Non-Polar Standard



- The polarity can be reversed standard size.
- used in circuits what polarity is reversed, such as signal coupling, etc.

Item	Characteristics
Size and its tolerance	

ØD	5	6	8	10	12	13	16	18
F ± 0.5	2.0	2.5	3.5	5.0			7.5	
d ± 0.1	0.5			0.6			0.8	

Operating Temp. Range	-40℃～+85℃
Rated Working Voltage U_R	6.3V～100V_{DC}
Capacitance Range C_R	0.47μF～10000μF
Capacitance Tol. $\Delta C/C_R$	±20%, (100Hz.20℃)
Dissipation Factor tg δ	At +20℃ and 100 or 120Hz, for C_R>1000μF, tg δ add 0.02 per another 1000μF.

U_R (V)	6.3	10	16	25	35	50	63	100
tgδ	0.24	0.24	0.22	0.20	0.16	0.14	0.12	0.10

Leakage Current I_L	≤0.03·C_R·U_R or 5μA whichever is greater At +20℃, after 2 minutes application of U_R
Load Life	At +85℃ after U_R applied for 1000 hours.

ΔC	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤ initial specified value

Shelf Life	At 85℃, after shelf for 500 hours(without voltage applied), then restored for 16 hours at room temp.

ΔC	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤200% of initial specified value

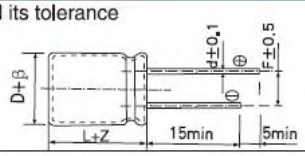
Case Size of Standard Products

U_R(V) C_R (μF)	6.3	10	16	25	35	50	63	100
0.47						5×11		5×11
1						5×11		5×11
2.2						5×11		6×12
3.3						5×11	5×11	6×12
4.7					5×11	5×11	6×12	6×12
10			5×11	5×11	5×11	6×12	6×12	8×12
22		5×11	5×11	6×12	6×12	8×12	8×12	10×16
33	5×11	5×11	5×11	6×12	8×12	8×12	10×13	13×20
47	5×11	5×11	6×12	6×12	8×12	10×13	10×16	13×20
100	6×12	6×12	8×12	8×12	10×16	10×20	13×20	16×25
220	8×12	8×12	10×13	10×16	13×20	13×25	16×25	18×36
330	8×12	10×16	10×16	13×20	13×20	16×25	16×32	
470	10×12	10×16	10×20	13×20	13×25	16×32	18×36	
1000	10×20	13×20	13×25	16×25	16×32			
2200	13×25	16×25	16×32	18×36				
3300	16×25	16×32	18×36					
4700	16×32	18×36						
6800	16×36							

WesTech Component Co., Ltd

■ CD 21S(PS)

- Low leakage current, low dissipation factor and small body
- Used in flash lamp circuits in camera

Item	Characteristics									
Size and its tolerance 	ØD	10	13	14.5	16	17	18	20	22	≥ Ø8 with safety vent ≥ Ø8 PVC sleeve PVC
	F ± 0.5	5.0		7.5				10		
	Ød ± 0.1	0.6		0.8						
	α	1.5							2.0	
	β	0.8							10	
Operating Temp. Range	-20~+55°C									
Rated Working Voltage	330Vdc									
Capacitance Range CR	20μF~370μF									
Capacitance Tol. △C/CR	-10%~+20%(100Hz.20°C)									
(20°C) Leakage current (20°C)	I≤CR(μA) 1 1minute									
	I:Leakage current CR:Ratet capacitance									
Dissipation Factor	(V)Rated voltage(v)	330								100Hz 20°C
	tg δ(MAX)	0.06								
temerature characteristics (impedance ratio at 100Hz)	(V)Rated voltage(v)	330								100Hz
	Z-20°C/Z+20°C	2								
Endurance	Charge and discharge at rated voltage at room temperature(+5℃-35℃) in every 30seconds for 5000times with discharge resistance of 0.7-1.0Ω Capacitance change; initial measured value ±10% Leakage current : initial specified value ≤150% Dissipation factor : initial specified value ≤150%									
Shelf Life	After storage for 500 hours at 70% then rasumed 16 hours +70℃500 Capacitance change ; initial measured value ±10% Leakage current : initial specified value ≤300% Dissipation factor : initial specified value ≤150%									

Case Size of Standard Products

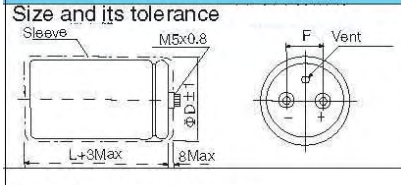
WV(V) / CR(μF)		330 VDC							
		2U							
		Ø10	Ø13	Ø14.5	Ø16	Ø17	Ø18	Ø20	Ø16
20	200	10×25	13×20						
40	400	10×30	13×25						
60	600		13×30	14.5×25					
80	800		13×35	14.5×30	16×25				
100	101			14.5×36	16×30	18×28			
120	121				16×36	18×33	18×30		
140	141				16×40	18×37	18×34	20×30	22×28
160	161					18×39	18×36	20×32	22×28
180	181					18×39	18×36	20×32	22×32
200	201					18×48	18×40	20×34	22×36
240	241						18×40	20×40	22×45
370	371								

WesTech Component Co., Ltd

■ CD13N(PK)

High Ripple Current

- Used for storing energy of electric wolder and in UPS air conditioners etc.
- High valtage, large capacitance high ripple current and the device of pressure release.

Item	Characteristics				
Size and its tolerance 	D ± 1	35	50	65	80
	L + 3	80～100	80～120	100～120	100～160
	F ± 1	12.0	21.5	26.5	32.6
Operating Temp. Range	-40℃～+85℃		-25℃～+85℃		
Rated Working Voltage U_R	160～250V		350～450V		
Nominal Capacitance Range C_R	220～15000 μF				
Capacitance Tol. $\triangle C/C_R$	-10%～+30%				
Leakage Current I_L	$I \leqslant 0.02 \cdot C_R \cdot U_R$(μF) 5mA				
Dissipation Factor tg δ	tan δ ≤ 0.25				
Load Life	At +85℃ after applying rated voltage for 1000 hours and then resumed 16 hours: △C: ≤ ±15% of initial measured value DF(tg δ): ≤175% of initial specified value LC(I_L): initial specified value				
Shelf Life	At +85℃ after storage for 500 hours and then resumed 16 hours: △C: ≤ ±15% of initial measured value DF(tg δ): ≤175% of initial specified value LC(I_L): ≤200% of initial specified value				

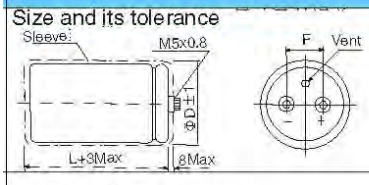
U_R(V)	160		200		250		350		400		450	
C_R(μ F) Item	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)
220									35×80	1.5	35×80	0.86
330									35×100	1.9	35×100	1.1
470							35×80	1.5	50×80	2.3	50×80	1.4
680			35×80	1.7	35×80	1.5	35×100	1.8	50×100	2.5	50×100	1.8
1000	35×80	1.7	35×100	1.9	35×100	1.9	50×80	2.3	50×120	2.8	65×100	2.4
1500	35×100	2.3	50×80	2.5	50×100	2.5	50×120	3.0	65×120	3.1	80×120	3.1
2200	50×80	2.9	50×100	3.2	50×120	3.5	65×100	3.9	80×100	3.8	80×140	4.0
3300	50×100	3.8	50×120	4.1	65×120	4.7	80×120	5.3	80×140	5.1	80×160	5.4
4700	50×120	4.8	65×120	5.2	80×120	5.7	80×140	7.0	80×160	6.7		
8800	65×120	6.3	80×140	6.6	80×150	7.3						
10000	80×100	7.8	80×160	8.6								
15000	80×160	10.6										

WesTech Component Co., Ltd

■ CD13N(PK)

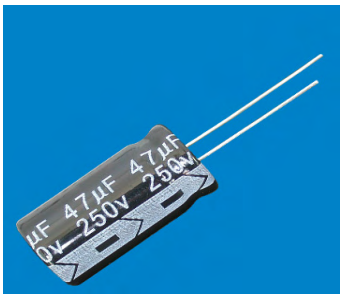
High Ripple Current

- Used for storing energy of electric wolder and in UPS air conditioners etc.
- High valtage, large capacitance high ripple current and the device of pressure release.

Item	Characteristics				
Size and its tolerance 	D ± 1	35	50	65	80
	L + 3	80～100	80～120	100～120	100～160
	F ± 1	12.0	21.5	26.5	32.6
Operating Temp. Range	-40℃～+85℃		-25℃～+85℃		
Rated Working Voltage U_R	160～250V		350～450V		
Nominal Capacitance Range C_R	220～15000 μF				
Capacitance Tol. $\Delta C/C_R$	-10%～+30%				
Leakage Current I_L	$I \leqslant 0.02 \cdot C_R \cdot U_R$(μF) 5mA				
Dissipation Factor tg δ	tan δ ≤ 0.25				
Load Life	At +85℃ after applying rated voltage for 1000 hours and then resumed 16 hours:				
	ΔC	≤ ±15% of initial measured value			
	DF(tg δ)	≤175% of initial specified value			
	LC(I_L)	initial specified value			
Shelf Life	At +85℃ after storage for 500 hours and then resumed 16 hours:				
	ΔC	≤ ±15% of initial measured value			
	DF(tg δ)	≤175% of initial specified value			
	LC(I_L)	≤200% of initial specified value			

U_R(V)	160		200		250		350		400		450	
C_R(μ F) Item	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)	DxL (mm)	(A)
220									35×80	1.5	35×80	0.86
330									35×100	1.9	35×100	1.1
470							35×80	1.5	50×80	2.3	50×80	1.4
680			35×80	1.7	35×80	1.5	35×100	1.8	50×100	2.5	50×100	1.8
1000	35×80	1.7	35×100	1.9	35×100	1.9	50×80	2.3	50×120	2.8	65×100	2.4
1500	35×100	2.3	50×80	2.5	50×100	2.5	50×120	3.0	65×120	3.1	80×120	3.1
2200	50×80	2.9	50×100	3.2	50×120	3.5	65×100	3.9	80×100	3.8	80×140	4.0
3300	50×100	3.8	50×120	4.1	65×120	4.7	80×120	5.3	80×140	5.1	80×160	5.4
4700	50×120	4.8	65×120	5.2	80×120	5.7	80×140	7.0	80×160	6.7		
8800	65×120	6.3	80×140	6.6	80×150	7.3						
10000	80×100	7.8	80×160	8.6								
15000	80×160	10.6										

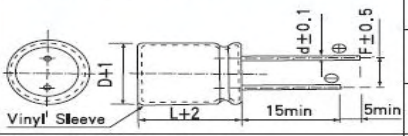
WesTech Component Co., Ltd



■CD11Z(SZ) SERIES

Middle and High Vol Tage

▶ Medium and high voltage, excellect frequency, used in engergy—saving electronic ballasts, switchrequlated power supplies ect.

Item	Characteristics						
Size and its tolerance 	φD	±0.5		±1.0			
		6.3	8	10	22	16	19
	F ± 0.5	2.5	3.5	5		7.5	
	d ± 0.1	1.5	0.6	0.6		0.8	
Operating Temp. Range	-40℃ ~ +85℃						
Rated Working Voltage U_R	160 ~ 450V						
Nominal Capacitance Range C_R	1 ~ 220 μF						
Capacitance Tol. $\triangle C/C_R$	±20%, $^{+30}_{-10}$%						
Dissipation Factor tg δ (20℃, 100Hz)	U_R(V)	≤250		≥350			
	tg δ	0.15		0.20			
Leakage Current I_L	I≤0.03·C_R·U_R+10 μA (Reading after 1 minute)						
Temperature Characteristics (impedance ratio at 100Hz)	U_R(V)	160		>160			
	Z-25℃/Z+20℃	≤4		≤7			
Load Life	At +85℃ after applying rated voltage for 1000 hours and then resumed 16 hours:						
	△C	≤±15% of initial measured value					
	DF(tg δ)	≤150% of initial specified value					
	LC(I_L)	≤initial specified value					
Shelf Life	At +85℃ after storage for 500 hours and then resumed 16 hours:						
	△C	≤±15% of initial measured value					
	DF(tg δ)	≤120% of initial specified value					
	LC(I_L)	≤200% of initial specified value					

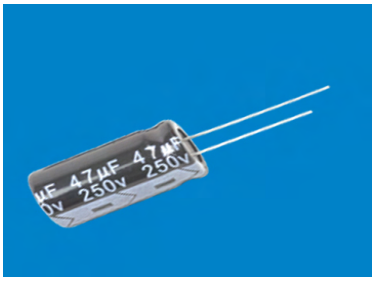
Nominal capacitance rated voltage and case size table

DxL (mm) U_R / C_R(μF)	160	200	250	350	400	450
1	6.3×12	6.3×12	8×12	8×12	10×12	10×12
2.2	8×12	8×12	10×12	10×16	10×16	10×20
3.3	10×12	10×12	10×16	10×16	10×20	12×20
4.7	10×12	10×16	10×16	10×20	12×20	12×25
10	10×16	10×20	12×20	12×25	12×25	16×25
22	12×20	12×25	13×25	16×25	16×30	16×35
33	12×25	16×25	16×25	16×35		
47	16×25	16×25	16×30	19×40		
100	16×35	19×40	19×40			
220	19×40					

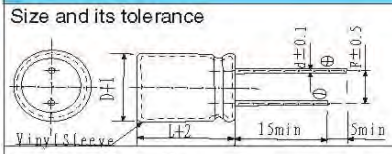
WesTech Component Co., Ltd

CD11T(MT) SERIES

Long Life



- Better stable and reliable perfomance, long life.
- D≥8mm equipped with pressure release device.
- Be used in DC or pulse circuit of colour TV sets, telecommunications and computers.

Item	Characteristics
Size and its tolerance 	
Operating Temp. Range	-40℃～+85℃(≤100VDC) -25℃～+85℃(160-400VDC)
Rated Working Voltage UR	6.3～400VDC
Capacitance Range CR	0.1～4700μF(+20℃,100 or 120Hz)
Capacitance Tol. △C/CR	±20%,$^{+30}_{-10}$%(+20℃,100 or 120Hz)
Dissipation Factor tg δ	At +20℃,100 or 120Hz,for CR>1000μF, tg δ add 0.02 per another 1000μF.
Leakage Current IL	≤0.01·CR·UR or 3μA(UR≤100VDC)whichever is greater ≤0.03·CR·UR + 10μA(UR≥160VDC) At +20℃, measured after 2 minutes application of UR.
Load Life	At+85℃ after UR applied for 2000 hours.
Shelf Life	At 85℃, after shelf for 1000 hours(without voltage applied) ,then restored for 16 hours at room temp.

∅D	5	6	8	10	12	13	16	18
F ± 0.5	2.0	2.5	3.5	5.0			7.5	
d ± 0.1	0.5			0.6			0.8	

UR (V)	10	16	25	35	50	63	100	160	250	400
tgδ	0.22	0.20	0.15	0.12	0.10	0.10	0.10	0.16	0.18	0.20

△C	±20% ($^{+20}_{-30}$% 6.3V) of initial measured value
DF(tg δ)	≤200% of initial specified value
LC(IL)	≤ initial specified value

△C	≤±20% of initial measured value
DF(tg δ)	≤200% of initial specified value
LC(IL)	≤200% of initial specified value

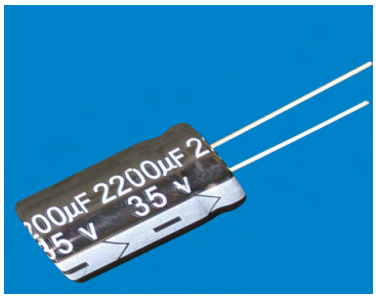
UR(V)CR (μF)	10	16	25	35	50	63	100	160	250	400
0.1～0.68					5×11		5×11			
1.0,1.5					5×11		5×11	6×12	6×12	8×12
2.2					5×11		5×11	6×12	8×12	10×13
3.3					5×11		5×11	8×12	8×12	10×15
4.7			5×11		5×11	5×11	6×11	8×12	10×13	10×17
6.8			5×11		5×11	5×11	6×11	10×13	10×15	10×20
10		5×11	5×11	5×11	5×11	5×11	6×12	10×13	10×15	12×22
15		5×11	5×11	5×11	6×11	6×11	8×12	10×15	10×20	13×26
22	5×11	5×11	5×11	5×11	6×11	6×12	8×12	10×20	12×22	16×27
33	5×11	5×11	5×11	6×11	6×12	8×12	10×13	12×22	13×26	16×31
47	5×11	5×11	6×11	6×12	8×11	8×12	10×17	13×22	16×27	16×36
68	5×11	6×11	6×12	6×12	8×12	10×13	10×20	13×26	16×31	18×41

UR(V)CR (μF)	10	16	25	35	50	63	100	160	250	400
100	6×11	6×12	6×12	8×12	10×13	10×15	12×22	16×27	16×35	
150	6×12	6×12	8×12	10×13	10×17	10×20	13×26	16×35		
220	6×12	8×12	10×13	10×14	10×20	12×22	16×27	18×36		
330	8×12	10×13	10×15	10×17	12×22	13×26	16×31			
470	10×13	10×15	10×17	12×22	13×26	16×27	18×36			
680	10×13	10×17	12×22	13×22	16×27	16×27				
1000	10×17	12×22	13×22	13×26	16×31	16×35				
1500	12×22	13×22	13×26	16×27	18×36					
2200	13×22	13×26	16×27	16×35	18×41					
3300	13×26	16×27	16×35							
4700	16×27	16×31								
6800	16×35									

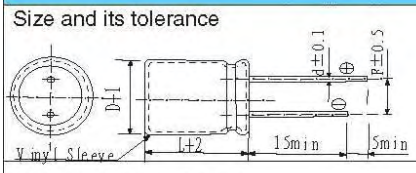
WesTech Component Co., Ltd

■CD11L(ML) SERIES

Low Leakage Current



- ▶Low leakage current, high stable and reliable performance
- ▶D≥8mm equipped with pressure release device.
- ▶Be used widely in DC or pulse circuit of colour TV sets, VCD, audio systems, telecommunications and computers.

Item	Characteristics
Size and its tolerance 	ØD: 5, 6, 8, 10, 12, 13, 16, 18 F ± 0.5: 2.0, 2.5, 3.5, 5.0, 7.5 d ± 0.1: 0.5, 0.6, 0.8
Operating Temp. Range	-40℃～+85℃
Rated Working Voltage U_R	6.3～100V_{DC}
Capacitance Range C_R	1.0～4700 μF(+20℃,100 or 120Hz)
Capacitance Tol. $\Delta C/C_R$	±20%, $^{+50}_{-10}$%(+20℃,100 or 120Hz)
Dissipation Factor tg δ	At +20℃,100 or 120Hz,for C_R>1000 μF, tg δ add 0.02 per another 1000 μF.

U_R (V)	6.3	10	16	25	35	50	63	100
tgδ	0.24	0.20	0.20	0.14	0.12	0.10	0.09	0.08

Leakage Current I_L	≤0.002·C_R·U_R or 1 μA(≥160V_{DC}) whichever is greater At+20℃ after 2 minutes application of U_R.
Load Life	At +85℃, after U_R applied for 1000 hours.

ΔC	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤ initial specified value

Shelf Life	At+85℃, after shelf for 500 hours(without voltage applied), then restored for 16 hours at room temp.

ΔC	±20% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤200% of initial specified value

Case Size of Standard Products

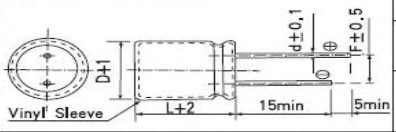
UR(V) CR (μ F)	6.3	10	16	25	35	50	63	100
1.0						5×11		5×11
2.2						5×11		5×11
3.3						5×11		5×11
4.7						5×11	5×11	6×11
10			5×11	5×11	5×11	5×11	5×11	6×12
22		5×11	5×11	5×11	5×11	6×11	6×12	8×12
33		5×11	5×11	5×11	6×11	6×12	8×12	10×13
47	5×11	5×11	5×11	6×11	6×12	8×11	8×12	10×17
100	5×11	6×11	6×12	6×12	8×12	10×13	10×15	12×22
220	6×12	6×12	8×12	10×13	8×14	10×20	12×22	16×27
330	6×12	8×12	10×13	10×15	10×17	12×22	12×26	16×31
470	8×12	10×13	10×15	10×17	12×22	13×26	16×27	18×36
1000	10×13	10×17	12×22	13×22	13×26	16×31	16×35	
2200	12×22	13×22	13×26	16×27	16×35	18×41		
3300	13×22	13×26	16×27	16×35				
4700	13×26	16×27	16×31					

WesTech Component Co., Ltd

■ CD11H(GF) SERIES

High frequency low impedance

▶High frequency, low dissipation factor, low inductance and high ripple current. Load life: 105°C, 2000 hours.

Item	Characteristics										
Size and its tolerance 	D±1	10	12	16	19	22					
	F ± 0.5	5.0		7.5		10.0					
	d ± 0.1	0.6		0.8		1.0					
Operating Temp. Range	-40°C ~ +105°C										
Rated Working Voltage	6.3 ~ 250V										
Nominal Capacitance Range C_R	0.47 ~ 6800 μF										
Capacitance Tol. $\triangle C/C_R$	±20%										
Dissipation Factor tg δ (20°C, 100Hz)	U_R	6.3	10	16	25	35	50	63	100	160	250
	tg δ	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.06	0.06
	0.02 is added to every 1000 μF increase over 1000 μF.										
Leakage Current I_L	$I \leqslant 0.03 \cdot C_R \cdot U_R$ (μA) or 3 μA (whichever is greater) (1 minute 1)										
Temperature Characteristics (Impedance rotio at 100Hz)	U_R(V)	6.3 ~ 10		16 ~ 35		50 ~ 250					
	Z-40°C/Z+20°C	4		3		2					
Load Life	At +105°C after applying rated voltage for 2000 hours and then resumed 16 hours:										
	△C	≤ ±20% of initial measured value									
	DF(tg δ)	≤200% of initial specified value									
	LC(I_L)	≤initial specified value									
Shelf Life	At +105°C after storage for 1000 hours and then resumed 16 hours:										
	△C	≤ ±20% of initial measured value									
	DF(tg δ)	≤200% of initial specified value									
	LC(I_L)	≤200% of initial specified value									

Nominal capacitance, rated voltage, impedance, rated ripple current and case size table

U_R	6.3			10			16			25			35		
C_R	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)
22													10×16	0.75	85
33										10×16	0.80	28	10×16	0.49	125
47							10×16	0.80	92	10×16	0.55	125	10×20	0.34	160
68				10×16	0.08	97	10×20	0.50	135	10×20	0.36	160	12×20	0.24	230
100	10×16	0.85	99	10×16	0.55	135	10×20	0.35	175	10×20	0.24	245	12×20	0.16	305
150	10×20	0.49	155	10×20	0.35	185	12×20	0.23	260	12×25	0.16	320	12×25	0.12	415
220	10×20	0.30	205	10×20	0.24	270	12×20	0.16	335	12×25	0.11	455	16×25	0.085	580
330	12×20	0.20	310	12×20	0.16	350	16×25	0.12	455	16×25	0.085	610	16×30	0.060	810
470	12×20	0.14	435	12×25	0.12	475	16×25	0.09	615	16×30	0.065	810	16×35	0.046	1130
680	16×25	0.10	605	16×25	0.085	660	16×30	0.065	845	16×30	0.046	1180	16×35	0.036	1370
1000	26×25	0.075	820	16×30	0.060	915	16×35	0.047	1210	19×30	0.036	1430	19×30	0.029	1710
1500	16×35	0.055	1090	19×30	0.045	1290	19×30	0.036	1490	19×40	0.029	1780	22×40	0.024	2120
2200	16×35	0.043	1320	19×30	0.034	1530	19×30	0.028	1800	19×40	0.024	2120			
3300	19×30	0.034	1530	19×35	0.026	1960	19×40	0.023	2160						
4700	19×35	0.028	1890	19×40	0.023	2170									
6800	22×40	0.024	2130												

U_R	50			63			100			160			250		
C_R	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)	DxL	Z 100KHz	(mA)
0.47	10×12	23.0	11				10×12	43.0	8	10×16	64.5	12	10×16	86.0	12
0.1	10×12	00.1	18				10×12	17.0	13	10×16	25.5	17	10×16	34.0	17
1.5	10×12	7.50	22				10×12	10.0	17	10×16	15.0	23	10×16	20.0	25
2.2	10×12	5.00	27				10×12	6.60	21	10×20	9.90	25	10×20	13.2	29
3.3	10×12	3.30	33				10×12	4.10	27	12×25	6.15	36	12×20	8.20	42
4.7	10×12	2.20	40				10×16	1.80	34	12×25	4.20	43	12×20	6.11	50
6.8	10×12	1.80	45				10×20	1.90	41	12×25	2.85	65	12×25	4.22	65
10	10×12	1.40	57	10×16	1.06	67	10×20	1.20	52	12×25	1.80	70	16×25	2.88	88
							10×25								
15	10×16	0.93	72	10×20	0.73	92	12×20	0.81	65	16×30	1.28	120	16×35	1.92	120
22	10×16	0.65	100	10×20	0.52	110	12×20	0.55	122	16×30	0.08	130	16×35	1.30	155
33	10×20	0.43	135	10×20	0.35	170	12×25	0.38	169	16×25	0.58	180	16×35	0.87	190
									252	16×35					
47	10×20	0.30	195	12×20	0.25	215	16×25	0.20	326	19×30	0.41	220	19×30	0.61	230
68	12×20	0.20	255	16×25	0.17	315	16×30	0.21	438	19×30	0.28	260	22×40	0.42	280
100	12×25	0.14	410	16×25	0.12	495	16×30	0.15	553	22×40	0.18	330	22×40	0.34	340
150	16×30	0.10	470	16×30	0.090	665	19×30	0.11	730						
220	16×30	0.075	760	16×30	0.065	835	19×30	0.087	1160						
330	16×30	0.055	995	16×35	0.049	1090	19×35	0.062							
470	19×30	0.044	1190	19×30	0.039	1420									
680	19×30	0.036	1530	22×40	0.032	1700									
1000	19×35	0.030	1830												

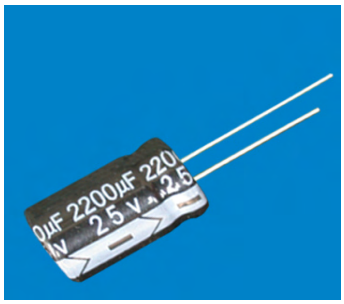
impedance

rated ripple current (+105℃,100Hz)

WesTech Component Co., Ltd.

CD11(GS) SERIES

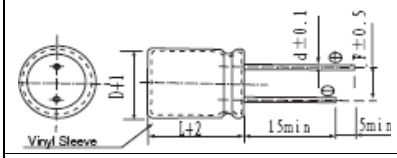
Miniature Standard



▶Widely used in DC or pulse circuit of TV,VCD(DVD), systems,telecommunications and computers

Miniature Standard,good stable and reliable performances.

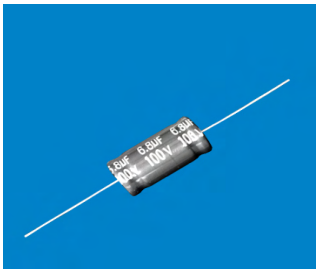
D≥ 8mm equipped with pressure release device.

Item	Characteristics											
Size and its tolerance 	D	5	6	8	10	12	13	16	18	22	25	26
	F ± 0.5	2.0	2.5	3.5	5.0			7.5		10	12.5	
	d ± 0.1	0.5			0.6			0.8				
Operating Temp. Range	-40℃ ~ +85℃											
Rated Working Voltage	6.3 ~ 450VDC											
Capacitance Range	0.1 ~ 10000μ F(+20℃,100 or 120HZ)											
Capacitance Tol.	±20%, %(+20℃,100 or 120Hz)+30 -10											
Dissipation Factor tgδ	+20℃, 100 or 120Hz,1000μ F , 1000μ Ftgδ 0.02。 UR (V) At +20℃ and 100 or 120Hz,for CR>1000μ F , tgδ add 0.02 per another 1000μ F. (A grade) (B grade) 6.3 0.24 10 0.22 16 0.20 25 0.15 35 0.12 100 0.08 160 ~ 250 0.16 0.20 50,63 400,450 0.10 GB5995-86											
Leakage Current I L	A grade ≤ 0.03·CR·UR or 5μ A (≤ 100VDC) whichever is greater ≤ 0.03·CR·UR + 10μ A (≥ 160VDC) B grade GB5995-86 At+20℃,after 2 minutes application of UR											
Load Life	At +85℃ after UR applied for 1000 hours. (6.3VDC)、±20%(10-100VDC)、±15%(≥ 160VDC) of initial measured value ≤ 200% (≤ 100VDC)、150% (≥ 160VDC) of initial specified value ≤ initial specified value LC(I L) △ C DF(tgδ) +20 -30											
Shelf Life	After shelf for 500 hours(without voltage applied) at +85℃,then restored for 16 hours at room temp. (6.3VDC)、±20%(10-100VDC)、±15%(≥ 160VDC) of initial measured value ≤ 200% (≤ 100VDC)、150% (≥ 160VDC) of initial specified value ≤ 200% of initial specified value LC(I L) △ C DF(tgδ) +20 -30											

UR(V) / CR(μF)	6.3	10	16	25	35	50	63	100
0.1～0.68						5×11	5×11	5×11
1.0						5×11	5×11	5×11
2.2						5×11	5×11	5×11
3.3						5×11	5×11	5×11
4.7					5×11	5×11	5×11	5×11
10			5×11	5×11	5×11	5×11	5×11	6×12
22	5×11	5×11	5×11	5×11	5×11	5×11	6×11	8×14
33	5×11	5×11	5×11	5×11	5×11	6×12	8×12	10×13
47	5×11	5×11	5×11	5×11	6×11	6×12	8×12	10×15
100	5×11	5×11	5×11	6×12	8×11	8×12	8×12	10×20
220	5×12	5×12	6×12	8×12	8×14	10×15	10×17	12×25
330	6×12	6×12	8×12	8×12	10×15	10×17	12×20	16×25
470	6×12	8×12	8×12	8×14	10×17	10×20	13×20	16×30
1000	8×12	8×12	10×15	10×18	13×20	13×26	16×31	19×40
2200	10×15	10×15	12×20	13×21	16×27	16×32	18×41	25×40
3300	10×20	12×20	13×21	16×27	16×36	18×36	22×42	35×50
4700		13×21	13×26	16×27	18×36	22×40	22×50	35×50
6800		16×25	16×26	16×36	19×40	22×50	25×50	35×60
10000		16×30	19×30	19×40	22×40	25×50	30×50	35×70

UR(V)CR(μ F)	160	200	250	400	450
0.1~0.68					
1.0	5×12	6×12	6×12	8×12	8×12
2.2	6×12	8×12	8×12	8×12	8×14
3.3	6×12	8×12	8×12	8×14	8×14
4.7	8×12	8×12	8×14	10×20	10×20
10	8×14	10×15	10×17	12×20	12×20
22	10×15	10×20	12×20	12×25	16×25
33	10×20	12×20	12×25	18×20	16×30
47	13×21	12×20	13×25	18×27	18×30
100	13×26	16×27	16×30	22×35	22×40
220	16×36	18×36	22×30	25×40	25×50
330	22×35	22×40	25×40	30×40	30×50
470	22×40	22×50	25×50	30×50	35×50

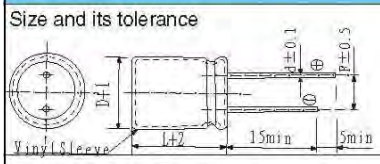
WesTech Component Co., Ltd



■ AK20(AB) SERIES

Axial Bi-polar

▶ Specialy designed for use in speaker dividiny net work for high ripple current.

Item	Characteristics				
Size and its tolerance 	ØD	10	13	16	18
	F ± 0.5	5.0		7.5	
	d ± 0.1	0.6		0.8	
Operating Temp. Range	-40℃～+85℃				
Rated Working Voltage U_R	10V～100V$_{DC}$				
Capacitance Range C_R	0.47 μF～47 μF				
Capacitance Tol. $\Delta C/C_R$	±10%, ±20%(+20℃100 or 120Hz)				
Dissipation Factor tg δ	+20℃,100 or 120Hz.				

U_R (V)	10	16	25	35	50	63	100
tgδ	0.08	0.06	0.05	0.04	0.04	0.03	0.03

Leakage Current I_L	≤100 μA At+20℃,after 5 minutes application of U_R
Load Life	At +85℃, after U_R applied for 1000 hours (polarity inverson after discharge per 250 hours):

ΔC	±15% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤ initial specified value

Shelf Life	At+85℃,after shelf for 500 hours(without voltage applied),then restored for 16 hours at room temp.

ΔC	±15% of initial measured value
DF(tg δ)	≤150% of initial specified value
LC(I_L)	≤ 200% of initial specified value

Case Size of Standard Products

C_R (μF) \ U_R (V)	50V	100V
1 μF	8×16	8×16
	10×19	10×19
1.5 μF	8×16	8×16
	10×19	10×19
2.2 μF	8×16	8×16
	10×19	10×19
3.3 μF	8×16	8×16
	10×19	10×19
4.7 μF	8×16	8×16
	10×19	10×19
6.8 μF	10×19	10×19
	12×23	12×23
10 μF	12×23	12×23
15 μF	12×23	12×23
22 μF	12×23	12×23
	13×31	13×31
	16×32	16×32
33 μF	13×31	13×31
	16×32	16×32
40 μF	16×32	16×32
47 μF	16×32	16×32
68 μF	16×32	16×32
100 μF	16×32	16×32
	18×40	18×40
150 μF	18×40	18×40
220 μF	18×40	18×40