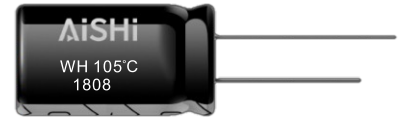


WH series

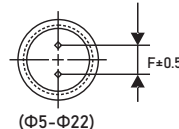
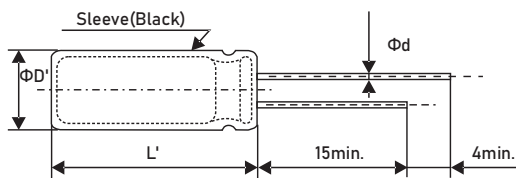


- Endurance: 2,000 hours at 105°C
- Wide temperature range from -40°C to +105°C
- Standard series for general purpose
- RoHS Compliant

SPECIFICATIONS

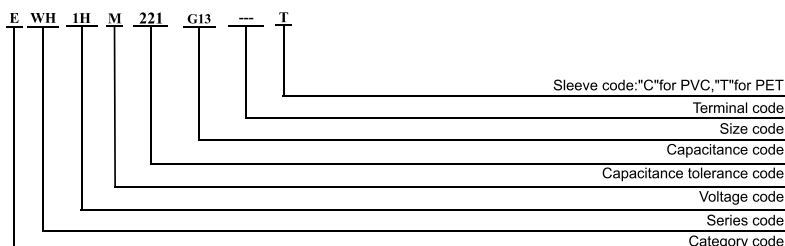
Items	Characteristics													
Category Temperature Range	-40~+105°C(6.3~100Vdc)						-25~+105°C(160~500Vdc)							
Rated Voltage Range	6.3~500Vdc													
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)													
Leakage Current	6.3 to 100Vdc						160~500Vdc						I: leakage current(μA), C: Nominal capacitance(μF) V: Rated voltage(V) (at 20°C)	
	I ≤0.03CV or 4μA(at 1 minute) I ≤0.01CV or 3μA(at 2 minutes) whichever is greater						CV	After 1 minute		After 5 minutes				
							CV ≤1,000	I ≤0.1CV+40μA		I ≤0.03CV+15μA				
							CV > 1,000	I ≤0.04CV+100μA		I ≤0.02CV+25μA				
Dissipation Factor (tanδ)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	350~450	(at 20°C,120Hz)		
	Dissipation Factor(Max.)	0.28	0.24	0.20	0.18	0.16	0.14	0.12	0.10	0.20	0.24			
	When nominal capacitance exceeds 1,000 μF, add 0.02 to the value above for each 1,000 μF increase.													
Temperature Characteristics (Max.Impedance Ratio)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	350~450	500		
	Z(-25°C)/ Z(+20°C)	5	4	3	2				3	6	8	(120Hz)		
	Z(-40°C)/ Z(+20°C)	12	10	8	5	4	3		-					
Endurance	The specifications listed below shall be satisfied when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for 2,000 hours at 105°C.													
	Capacitance Change	≤±20% of the initial value												
	Dissipation Factor	≤200% of the initial specified value												
	Leakage Current	≤The initial specified value												
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after leaving them under no load at 105°C for 1,000 hours.													
	Capacitance Change	≤±20% of the initial value												
	Dissipation Factor	≤200% of the initial specified value												
	Leakage Current	≤200% of the initial specified value												

DIMENSIONS [mm]



ØD	5	6.3	8		10	12.5/13	16/18	20	22※
Ød	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.0	2.5	3.5		5.0	5.0	7.5	10	10
ØD'	ØD+0.5max.								
L'	L+2max.								
※	22×55/22×60 Ød=1.0, L'=L+3max.								

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Cap. (μF)	Freq. (Hz)					
	50	120	300	1k	10	100k
Cap. <10	0.85	1.00	1.35	1.75	2.30	2.50
10≤Cap. <100	0.75	1.00	1.25	1.50	1.75	1.80
100≤Cap. <1,000	0.80	1.00	1.15	1.30	1.40	1.50
Cap. ≥ 1,000	0.85	1.00	1.03	1.05	1.08	1.08

WHseries

STANDARD RATINGS

WV (Vdc)	Cap (µF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
6.3	33	5×11	54	EWHOJM330D11 --T
	47	5×11	64	EWHOJM470D11 --T
	100	5×11	94	EWHOJM101D11 --T
	220	5×11	140	EWHOJM221D11 --T
	330	6.3×11	190	EWHOJM331E11 --T
	470	6.3×11	230	EWHOJM471E11 --T
	1,000	8×12	380	EWHOJM102F12 ---T
	2,200	10×20	710	EWHOJM222G20 ---T
	3,300	10×20	840	EWHOJM332G20 ---T
	4,700	12.5×20	1,090	EWHOJM472W20 ---T
	6,800	12.5×25	1,350	EWHOJM682W25 ---T
	10,000	16×25	1,650	EWHOJM103L25 ---T
	15,000	16×35	2,010	EWHOJM153L35 ---T
	22,000	18×40	2,350	EWHOJM223M40 ---T
10	22	5×11	46	EWH1AM220D11 ---T
	33	5×11	57	EWH1AM330D11 ---T
	47	5×11	68	EWH1AM470D11 ---T
	100	5×11	100	EWH1AM101D11 ---T
	220	6.3×11	170	EWH1AM221E11 ---T
	330	6.3×11	200	EWH1AM331E11 ---T
	470	8×11	250	EWH1AM471F11 ---T
	1,000	10×13	460	EWH1AM102G13 ---T
	2,200	10×20	760	EWH1AM222G20 ---T
	3,300	12.5×20	1,000	EWH1AM332W20 ---T
	4,700	12.5×25	1,260	EWH1AM472W25 ---T
	6,800	16×25	1,570	EWH1AM682L25 ---T
	10,000	16×35	1,890	EWH1AM103L35 ---T
	15,000	18×35	2,180	EWH1AM153M35 ---T
16	10	5×11	34	EWH1CM100D11 ---T
	22	5×11	51	EWH1CM220D11 ---T
	33	5×11	63	EWH1CM330D11 ---T
	47	5×11	75	EWH1CM470D11 ---T
	100	5×11	110	EWH1CM101D11 ---T
	220	6.3×11	180	EWH1CM221E11 ---T
	330	8×11	260	EWH1CM331F11 ---T
	470	8×12	310	EWH1CM471F12 ---T
	1,000	10×16	560	EWH1CM102G16 ---T
	2,200	12.5×20	920	EWH1CM222W20 ---T
	3,300	12.5×25	1,170	EWH1CM332W25 ---T
	4,700	16×25	1,480	EWH1CM472L25 ---T
	6,800	16×30	1,780	EWH1CM682L30 ---T
	10,000	18×35	2,060	EWH1CM103M35 ---T
25	4.7	5×11	25	EWH1EM4R7D11 --T
	10	5×11	36	EWH1EM100D11 --T
	22	5×11	54	EWH1EM220D11 --T
	33	5×11	67	EWH1EM330D11 --T
	47	5×11	80	EWH1EM470D11 --T
	100	6.3×11	130	EWH1EM101E11 ---T
	220	8×11	230	EWH1EM221F11 ---T
	330	8×12	310	EWH1EM331F12 ---T
	470	10×13	380	EWH1EM471G13 ---T
	1,000	10×20	680	EWH1EM102G20 ---T

WV (Vdc)	Cap (µF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
25	2,200	12.5×25	1,090	EWH1EM222W25 --T
	3,300	16×25	1,400	EWH1EM332L25 --T
	4,700	16×30	1,710	EWH1EM472L30 --T
	6,800	18×35	2,040	EWH1EM682M35 --T
	35	4.7	5×11	28
10		5×11	41	EWH1VM100D11 --T
22		5×11	61	EWH1VM220D11 --T
33		5×11	75	EWH1VM330D11 --T
47		5×11	90	EWH1VM470D11 --T
100		6.3×11	150	EWH1VM101E11 --T
220		8×12	270	EWH1VM221F12 --T
330		10×13	350	EWH1VM331G13 --T
470		10×16	460	EWH1VM471G16 --T
1,000		12.5×20	810	EWH1VM102W20 --T
2,200		16×25	1,260	EWH1VM222L25 --T
3,300		16×35	1,610	EWH1VM332L35 --T
4,700		18×35	1,910	EWH1VM472M35 --T
50		0.1	5×11	1.3
	0.22	5×11	2.9	EWH1HMR22D11 ---T
	0.33	5×11	4.3	EWH1HMR33D11 ---T
	0.47	5×11	6.2	EWH1HMR47D11 ---T
	1	5×11	13	EWH1HMO10D11 --T
	2.2	5×11	20	EWH1HM2R2D11 ---T
	3.3	5×11	25	EWH1HM3R3D11 ---T
	4.7	5×11	30	EWH1HM4R7D11 ---T
	10	5×11	40	EWH1HM100D11 --T
	22	5×11	65	EWH1HM220D11 --T
	33	6.3×11	90	EWH1HM330E11 --T
	47	6.3×11	110	EWH1HM470E11 --T
	100	8×11	180	EWH1HM101F11 --T
	220	10×13	300	EWH1HM221G13 --T
	330	10×16	410	EWH1HM331G16 --T
	470	10×20	530	EWH1HM471G20 --T
	1,000	12.5×25	950	EWH1HM102W25 ---T
2,200	16×35	1,470	EWH1HM222L35 ---T	
3,300	18×35	1,770	EWH1HM332M35 ---T	
63	10	5×11	46	EWH1JM100D11 --T
	22	5×11	71	EWH1JM220D11 --T
	33	6.3×11	100	EWH1JM330E11 --T
	47	6.3×11	120	EWH1JM470E11 --T
	100	10×13	215	EWH1JM101G13 --T
	220	10×16	335	EWH1JM221G16 --T
	330	10×20	510	EWH1JM331G20 --T
	470	12.5×20	640	EWH1JM471W20 --T
	1,000	16×25	930	EWH1JM102L25 --T
	100	0.1	5×11	1.5
0.22		5×11	3.4	EWH1KMR22D11 --T
0.33		5×11	5	EWH1KMR33D11 --T
0.47		5×11	7.1	EWH1KMR47D11 --T
1		5×11	15	EWH1KM010D11 --T
2.2		5×11	21	EWH1KM2R2D11 --T
3.3		5×11	29	EWH1KM3R3D11 --T

Radial Type

WH series

STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
100	4.7	5×11	32	EWH1KM4R7D11 --T
	10	6.3×11	54	EWH1KM100E11 ---T
	22	8×11	93	EWH1KM220F11 --T
	33	8×12	130	EWH1KM330F12 --T
	47	10×13	165	EWH1KM470G13 ---T
	100	10×20	265	EWH1KM101G20 ---T
	220	12.5×25	440	EWH1KM221W25 ---T
	330	16×25	540	EWH1KM331L25 ---T
	470	16×30	715	EWH1KM471L30 ---T
	1,000	18×40	985	EWH1KM102M40 --T
160	3.3	6.3×9	28	EWH2CM3R3E09 --T
	4.7	6.3×9	34	EWH2CM4R7E09 --T
	10	6.3×12	60	EWH2CM100E12 --T
	10	8×9	60	EWH2CM100F09 ---T
	22	8×12	88	EWH2CM220F12 ---T
	22	10×12	98	EWH2CM220G12 --T
	33	10×12	140	EWH2CM330G12 --T
	33	10×16	158	EWH2CM330G16 --T
	47	10×14	142	EWH2CM470G14 --T
	47	10×20	182	EWH2CM470G20 --T
	68	10×20	240	EWH2CM680G20 --T
	100	12.5×20	300	EWH2CM101W20 --T
	100	16×20	316	EWH2CM101L20 --T
	220	16×25	530	EWH2CM221L25 --T
	330	18×25	600	EWH2CM331M25 ---T
	470	18×35	820	EWH2CM471M35 ---T
200	1	6.3×7	12	EWH2DM010E07 --T
	2.2	6.3×7	18	EWH2DM2R2E07 --T
	3.3	6.3×9	28	EWH2DM3R3E09 --T
	4.7	6.3×9	40	EWH2DM4R7E09 --T
	10	8×9	70	EWH2DM100F09 ---T
	10	8×12	78	EWH2DM100F12 ---T
	22	8×16	110	EWH2DM220F16 ---T
	22	10×12	110	EWH2DM220G12 --T
	33	10×16	166	EWH2DM330G16 --T
	33	10×20	185	EWH2DM330G20 --T
	47	10×20	200	EWH2DM470G20 --T
	68	12.5×20	290	EWH2DM680W20 --T
	82	12.5×20	300	EWH2DM820W20 --T
	100	12.5×25	340	EWH2DM101W25 ---T
	100	13×20	305	EWH2DM101K20 --T
	100	16×20	325	EWH2DM101L20 --T
	150	16×25	446	EWH2DM151L25 --T
	180	16×25	530	EWH2DM181L25 --T
	220	18×25	620	EWH2DM221M25 ---T
	330	18×30	720	EWH2DM331M30 ---T
470	18×40	840	EWH2DM471M40 ---T	
250	2.2	6.3×9	21	EWH2EM2R2E09 --T
	3.3	6.3×9	30	EWH2EM3R3E09 --T
	4.7	6.3×12	38	EWH2EM4R7E12 --T
	4.7	8×9	45	EWH2EM4R7F09 --T
	10	8×12	70	EWH2EM100F12 --T

WV (Vdc)	Cap (μF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
250	10	10×12	75	EWH2EM100G12 ---T
	22	8×16	100	EWH2EM220F16 ---T
	22	10×16	116	EWH2EM220G16 ---T
	33	10×20	150	EWH2EM330G20 ---T
	33	12.5×16	165	EWH2EM330W16 --T
	47	12.5×20	232	EWH2EM470W20 --T
	100	16×25	370	EWH2EM101L25 ---T
	150	18×25	455	EWH2EM151M25 ---T
	220	18×30	600	EWH2EM221M30 --T
	330	18×35	705	EWH2EM331M35 --T
	350	1	6.3×9	13
2.2		6.3×9	23	EWH2VM2R2E09 --T
3.3		8×9	31	EWH2VM3R3F09 --T
4.7		8×9	45	EWH2VM4R7F09 --T
10		10×12	68	EWH2VM100G12 --T
22		10×20	135	EWH2VM220G20 --T
33		12.5×20	184	EWH2VM330W20 --T
47		16×20	225	EWH2VM470L20 --T
68		16×25	336	EWH2VM680L25 --T
100		18×30	398	EWH2VM101M30 --T
400		1	6.3×9	14
	2.2	6.3×9	25	EWH2GM2R2E09 ---T
	2.2	8×9	30	EWH2GM2R2F09 --T
	3.3	6.3×12	33	EWH2GM3R3E12 ---T
	3.3	8×9	34	EWH2GM3R3F09 --T
	4.7	8×9	45	EWH2GM4R7F09 --T
	4.7	8×12	48	EWH2GM4R7F12 --T
	10	8×12	85	EWH2GM100F12 --T
	10	8×16	92	EWH2GM100F16 --T
	10	10×12	92	EWH2GM100G12 --T
	22	10×20	160	EWH2GM220G20 --T
	33	10×30	255	EWH2GM330G30 --T
	33	16×20	258	EWH2GM330L20 --T
	39	10×35	300	EWH2GM390G35 --T
	47	10×40	305	EWH2GM470G40 --T
	47	16×20	290	EWH2GM470L20 --T
	56	10×45	350	EWH2GM560G45 --T
	56	12.5×30	320	EWH2GM560W30 --T
	68	12.5×35	435	EWH2GM680W35 --T
	68	16×25	420	EWH2GM680L25 --T
	68	18×20	420	EWH2GM680M20 --T
82	12.5×40	480	EWH2GM820W40 --T	
82	18×25	474	EWH2GM820M25 --T	
100	12.5×45	510	EWH2GM101W45 --T	
100	16×30	492	EWH2GM101L30 --T	
100	18×30	532	EWH2GM101M30 --T	
120	18×30	550	EWH2GM121M30 --T	
150	18×35	610	EWH2GM151M35 --T	
150	20×30	620	EWH2GM151N30 --T	
180	18×40	668	EWH2GM181M40 ---T	
180	20×35	676	EWH2GM181N35 --T	
180	22×30	672	EWH2GM181O30 --T	

WHseries

STANDARD RATINGS

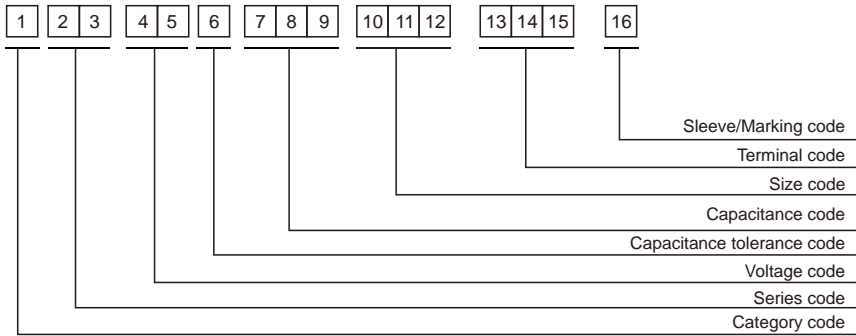
WV (Vdc)	Cap (μF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
400	220	18×45	768	EW2GM221M45--T
	220	20×40	772	EW2GM221N40--T
	220	22×35	764	EW2GM221O35--T
	250	20×45	820	EW2GM251N45--T
	250	22×40	820	EW2GM251O40--T
	270	18×50	856	EW2GM271M50--T
	270	20×50	868	EW2GM271N50--T
	270	22×46	864	EW2GM271O46--T
	300	18×55	904	EW2GM301M55--T
	300	20×55	916	EW2GM301N55--T
	300	22×50	912	EW2GM301O50--T
	330	18×60	952	EW2GM331M60--T
	330	22×55	952	EW2GM331O55--THO
	350	20×60	984	EW2GM351N60--T
	390	22×60	1,012	EW2GM391O60--THO
	420	120	18×30	558
150		18×35	632	EW2TM151M35---T
150		20×30	640	EW2TM151N30---T
180		18×40	690	EW2TM181M40---T
180		20×35	698	EW2TM181N35---T
180		22×30	694	EW2TM181O30---T
220		18×45	793	EW2TM221M45---T
220		20×40	798	EW2TM221N40---T
220		22×35	789	EW2TM221O35---T
250		20×45	847	EW2TM251N45---T
250		22×40	847	EW2TM251O40---T
270		18×50	884	EW2TM271M50---T
270		20×50	897	EW2TM271N50---T
270		22×46	893	EW2TM271O46---T
300		18×55	934	EW2TM301M55---T
300		20×55	946	EW2TM301N55---T
300	22×50	942	EW2TM301O50---T	
330	18×60	983	EW2TM331M60---T	
330	22×55	983	EW2TM331O55---THO	
350	20×60	1,017	EW2TM351N60---T	
390	22×60	1,045	EW2TM391O60---THO	
450	1	6.3×9	14	EW2WM010E09--T
	1	6.3×12	16	EW2WM010E12--T
	2.2	6.3×12	20	EW2WM2R2E12--T
	2.2	8×9	22	EW2WM2R2F09--T
	2.2	8×12	25	EW2WM2R2F12--T
	3.3	8×9	22	EW2WM3R3F09--T
	3.3	8×12	32	EW2WM3R3F12--T
	4.7	8×12	44	EW2WM4R7F12--T
	4.7	10×12	48	EW2WM4R7G12---T
	10	10×16	85	EW2WM100G16--T
	10	10×20	90	EW2WM100G20--T
	22	12.5×20	150	EW2WM220W20--T
	22	16×20	185	EW2WM220L20--T
	27	10×30	195	EW2WM270G30--T
	33	10×35	210	EW2WM330G35--T
	33	16×20	200	EW2WM330L20--T

WV (Vdc)	Cap (μF)	Size ΦD×L(mm)	Rated Ripple Current (mA _{rms} /105°C, 120Hz)	Part Number
450	39	10×40	250	EW2WM390G40--T
	47	10×45	330	EW2WM470G45--T
	47	12.5×30	320	EW2WM470W30--T
	47	16×25	335	EW2WM470L25--T
	56	12.5×35	360	EW2WM560W35--T
	68	12.5×40	400	EW2WM680W40--T
	68	18×25	400	EW2WM680M25---T
	82	12.5×45	460	EW2WM820W45--T
	82	16×30	460	EW2WM820L30--T
	82	18×30	472	EW2WM820M30---T
	100	16×35	480	EW2WM101L35--T
	100	18×35	530	EW2WM101M35--T
	100	20×30	517	EW2WM101N30---T
	120	20×35	578	EW2WM121N35---T
	120	22×30	560	EW2WM121O30---T
	150	18×40	610	EW2WM151M40--T
	150	22×35	621	EW2WM151O35---T
	180	18×45	694	EW2WM181M45--T
	180	20×40	703	EW2WM181N40--T
	200	18×50	759	EW2WM201M50--T
	200	20×45	767	EW2WM201N45--T
	200	22×40	759	EW2WM201O40--T
	220	18×55	819	EW2WM221M55--T
	220	20×50	828	EW2WM221N50--T
	250	18×60	879	EW2WM251M60--T
	250	20×55	888	EW2WM251N55--T
	250	22×46	892	EW2WM251O46--T
	270	20×60	948	EW2WM271N60--T
	270	22×50	953	EW2WM271O50--T
	330	22×55	1,026	EW2WM331O55--THO
	350	22×60	1,047	EW2WM351O60--THO
	500	4.7	10×12	47
4.7		10×16	50	EW2HM4R7G16--T
10		10×20	90	EW2HM100G20--T
10		12.5×20	115	EW2HM100W20---T
15		12.5×20	130	EW2HM150W20---T
15		12.5×25	140	EW2HM150W25---T
22		13×25	170	EW2HM220K25--T
22		16×20	180	EW2HM220L20--T
22		16×25	185	EW2HM220L25--T
33		16×25	200	EW2HM330L25--T
33		18×25	215	EW2HM330M25--T
47		18×25	300	EW2HM470M25--T
68		18×30	380	EW2HM680M30--T
68		18×35	390	EW2HM680M35--T
82		18×35	450	EW2HM820M35--T
82		18×40	490	EW2HM820M40--T
100	18×40	520	EW2HM101M40--T	
100	22×35	535	EW2HM101O35--T	
120	22×40	550	EW2HM121O40--T	

※ Specifications subject to change without notice

Radial Type

Part Numbering System



Category code

Type	Code
	1
Aluminum electrolytic capacitor	E

Voltage code

WV (V _{dc})	Code	
	4	5
2.5	0	E
3	0	D
4	0	G
6.3	0	J
6.8	0	C
7	0	Q
7.5	0	A
10	1	A
12	1	T
16	1	C
25	1	E
35	1	V
40	1	G
50	1	H
63	1	J
80	1	B
100	1	K
120	2	B
160	2	C
180	2	L
200	2	D
220	2	N
250	2	E
315	2	F
350	2	V
380	2	P
400	2	G
420	2	T
450	2	W
500	2	H
550	2	J
600	2	K

Capacitance tolerance code

Tol. (%)	Code
	6
-10~+10	K
-20~+20	M
-10~+30	Q
-10~+20	V
0~+20	A
-5~+20	C
-10~-20	B
-5~-+5	D
0~+10	E
-5~-20	F
-15~-+5	N

Capacitance code

Cap (μF)	Code		
	7	8	9
0.10	R	1	0
0.22	R	2	2
0.33	R	3	3
0.47	R	4	7
0.68	R	6	8
1	0	1	0
2.2	2	R	2
3.3	3	R	3
4.7	4	R	7
6.8	6	R	8
10	1	0	0
22	2	2	0
33	3	3	0
47	4	7	0
68	6	8	0
100	1	0	1
220	2	2	1
330	3	3	1
470	4	7	1
680	6	8	1
1000	1	0	2
2200	2	2	2
3300	3	3	2
4700	4	7	2
6800	6	8	2
10000	1	0	3
22000	2	2	3
33000	3	3	3
68000	6	8	3

Series code

Series name	Code	
	2	3
WH	W	H
CD11GE	G	E
CD11GES	G	X
CD11GAS	G	W
CD11GHS	G	S
NR	N	R

Size code

D (mm)	Code	L (mm)	Code	
	10		11	12
4	C	5	0	5
5	D	7	0	7
6.3	E	11	1	1
8	F	12	1	2
10	G	16	1	6
11	H	20	2	0
12	J	25	2	5
12.5	W	30	3	0
13	K	35	3	5
14	X	40	4	0
16	L	46	4	6
18	M	50	5	0
19	Z	60	6	0
20	N	80	8	0
22	O	100	A	0
25	P	115	B	5
30	Q	120	C	0
35	R	130	D	0
40	Y	140	E	0
51.6	S	160	G	0
64.3	T	200	K	0
76.9	U	220	M	0
91	V	236	N	6
100	A	250	P	0

Terminal code

Specification	Code	Size	
	13	14	15
Bulk packing	O	-	-
Taping (SMD Type)	D	0	0
4~8 Taping F=5.0mm	P	5	0
10~12.5 Taping F=5.0mm	B	5	0
Lead Cut L=3.5mm	C	3	5
Lead Cut L=11.0mm	C	B	0
Lead Forming & Cut L=4.5mm	F	-	-
Kink & Cut L=4.5mm	J	-	-
Snap-in type Terminal 4.0mm in length	K	-	-
Three Terminals	T	-	-
Ring clip mounting standard design	A	0	0
Ring clip mounting special design	S	-	-

Sleeve/Marking code

Sleeve/Marking	Code
	16
PVC	C
PET	T
Dark blue	B
Bright red	R
Sky-blue	S
Light blue	T
Pink	Z
Black	H
Purple-blue	V
Red	O

Lead Forming

Taping Specifications (Unit: mm)

Fig.1 code: X

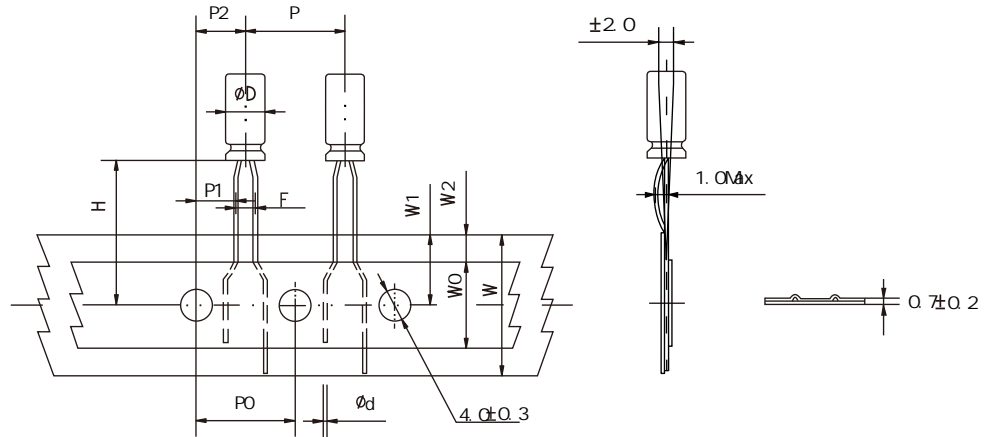


Fig.2 code: B

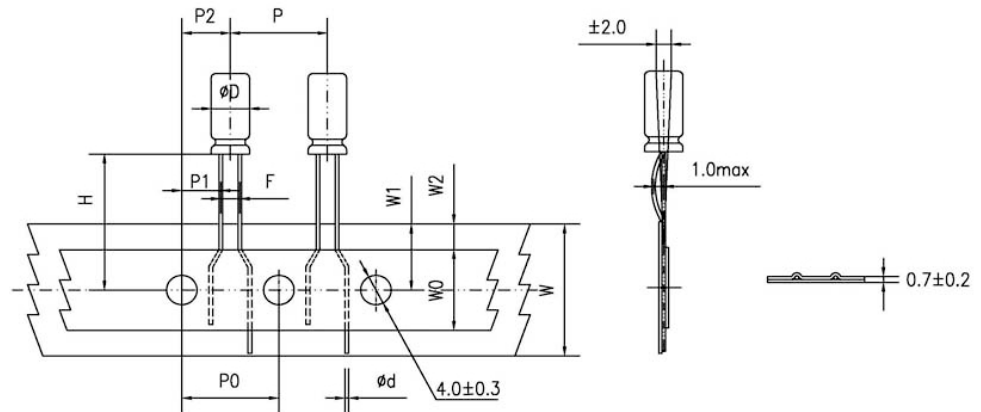


Fig.3 code: B

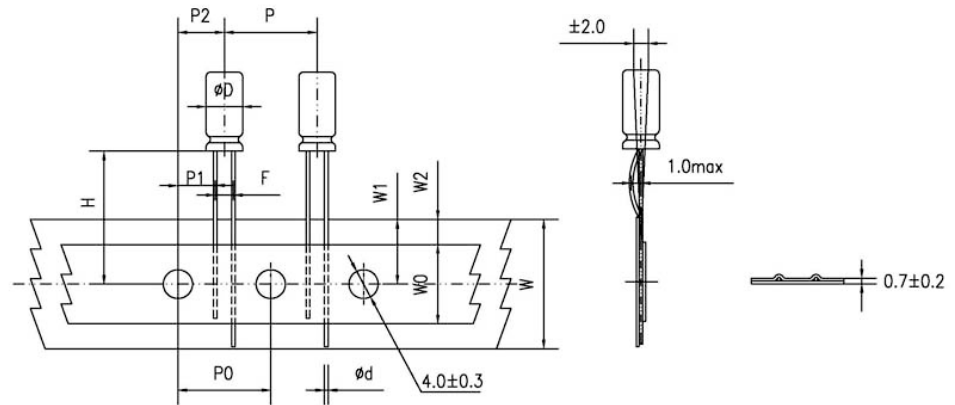
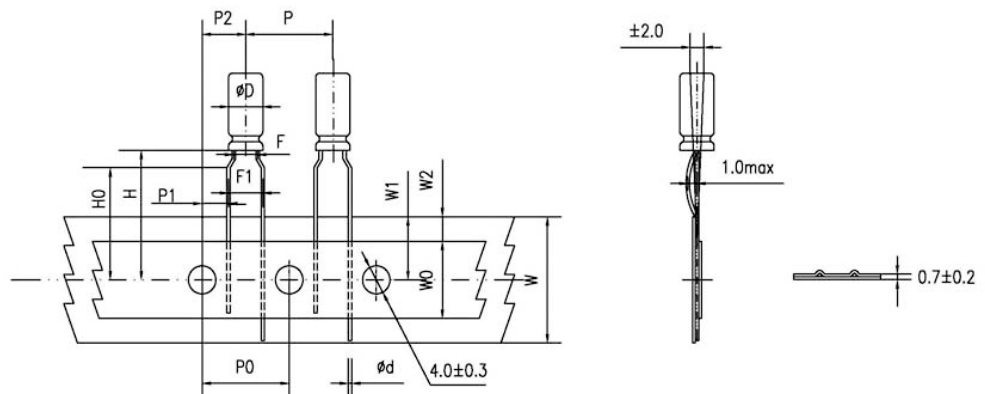


Fig.4 code: P



Lead Forming

Specification Fig.1 & Fig.2 & Fig.3

(mm)

Items	Symbol	Case size										Tolerance		
		4x5 4x7		5x5 5x7		5x11		6.3x5	6.3x7 6.3x9 6.3x11 6.3x12	8x5/7 8x9/11 8x11.5 8x12	8x16 8x20		10x9 10x12 10x13/16 10x20/25	12.5x16 12.5x20 13x20
Pin Code		X	B	X	B	X	B	B	B	B	B	B	B	
Lead wire diameter	d	0.45		0.45		0.5		0.45	0.5	0.45/0.5	0.6	0.6	0.6	±0.05
Pitch of body	P	12.7		12.7		12.7		12.7	12.7	12.7	12.7	12.7	15	±1.0
Feed hole pitch	P0	12.7		12.7		12.7		12.7	12.7	12.7	12.7	12.7	15	±0.2
Distance from hole center to lead	P1	5.1	5.6	5.1	5.35	5.1	5.35	5.1	5.1	4.6	4.6	3.85	5.0	±0.7
Distance from feed hole center to body center	P2	6.35		6.35		6.35		6.35	6.35	6.35	6.35	6.35	7.5	±1.0
Lead-to-lead distance	F	2.5	1.5	2.5	2.0	2.5	2.0	2.5	2.5	3.5	3.5	5.0	5.0	±0.5
Height of body from tape center	H	18.5		18.5		18.5		18.5	18.5	18.5	18.5	18.5	18.5	±0.75
Base tape width	W	18.0		18.0		18.0		18.0	18.0	18.0	18.0	18.0	18.0	±0.5
Adhesive tape width	W0	6.0		6.0		6.0		6.0	8.0	8.0	8.0	11.0	11.0	min
Hole position	W1	9.0		9.0		9.0		9.0	9.0	9.0	9.0	9.0	9.0	+0.75 -0.5
Hole down tape position	W2	1.5		1.5		1.5		1.5	1.5	1.5	1.5	1.5	1.5	max

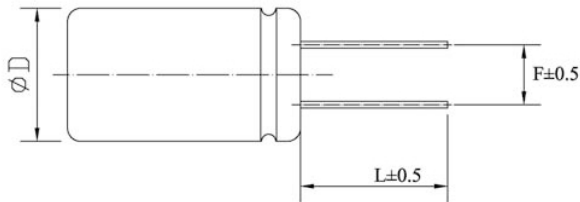
Specification Fig.4

(mm)

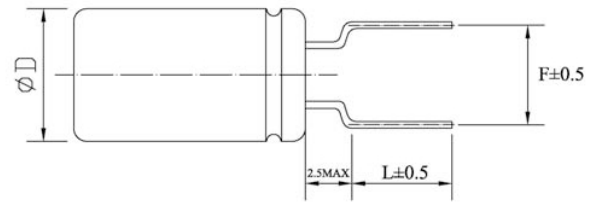
Items	Symbol	Case size									Tolerance
		4x5 4x7	5x5	5x7	5x11	6.3x5	6.3x7 6.3x9	6.3x11 6.3x12	8x5/7 8x9/11 8x11.5/12	8x16 8x20	
Pin Code		P	P	P	P	P	P	P	P	P	
Lead wire diameter	d	0.45	0.45	0.45	0.5	0.45	0.5	0.5	0.45/0.5	0.6	±0.05
Pitch of body	P	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	±1.0
Feed hole pitch	P0	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	±0.2
Distance from hole center to lead	P1	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	±0.7
Distance from feed hole center to body center	P2	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	±1.0
Lead-to-lead distance	F	1.5	2.0	2.0	2.0	2.5	2.5	2.5	3.5	3.5	±0.5
Lead to lead distance	F1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	+0.8 -0.2
Height of body from tape center	H	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	±0.75
Lead wire clinch height	H0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	±0.5
Base tape width	W	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	±0.5
Adhesive tape width	W0	6.0	6.0	6.0	6.0	6.0	6.0	8.0	8.0	8.0	min
Hole position	W1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	+0.75 -0.5
Hole down tape position	W2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	max

Lead Forming
Lead Forming & Cut

Code:C
RANGE: 4~ 18



Code:F
RANGE: 4~ 8

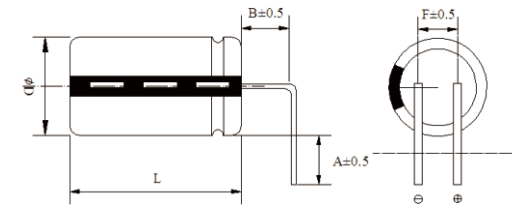


(mm)

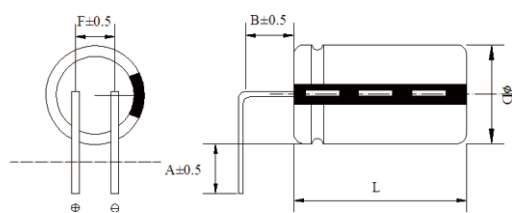
D	F	L	D	F	L
4	1.5	3.0~12.0	4	5.0	3.5, 4.5, 5.0, 7.0
5	2.0	3.0~12.0	5	5.0	3.5, 4.5, 5.0, 7.0
6.3	2.5	3.0~12.0	6.3	5.0	3.5, 4.5, 5.0, 7.0
8	3.5	3.0~12.0	8	5.0	3.5, 4.5, 5.0, 7.0
10	5.0	3.0~12.0	-	-	-
12.5	5.0	3.0~12.0	-	-	-
16	7.5	3.0~12.0	-	-	-
18	7.5	3.0~12.0	-	-	-

Code:R/L
RANGE: 10~ 18

Right horizontal forming



Left horizontal forming



(mm)

D	F	A	B
10~12.5	5.0	2.5, 3.0, 3.5, 4.0, 4.5, 5.0	1.5, 2.5
16~18	7.5	2.5, 3.0, 3.5, 4.0, 4.5, 5.0	1.5, 2.5