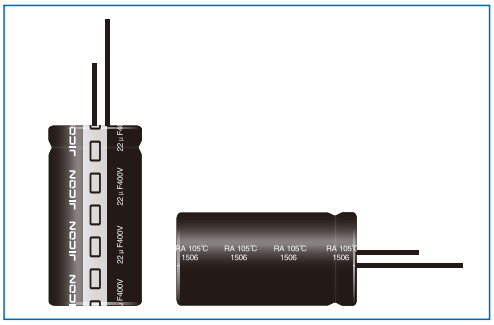
RA 系列 SERIES

- 2000～3000hours at 105℃
- Solvent resistant type except 315to450
- RoHS Compliant



◆ SPECIFICATION

Items	Characteristics
Operating Temperature Range(℃)	-40 ~ +105° C (6.3 ~ 100V), -25 ~ +105° C (160 ~ 450V)
Voltage range (V)	6.3~450V
Capacitance Range (μF)	0.1~22000uF
Capacitance Tolerance	±20% (at 20℃,120Hz)
Leakage Current (μA)	6.3 ~ 100V: After 2 minute's at 20℃ application of rated voltage, leakage current is not more than 0.02CV or 4(μA), whichever As greater. 160 ~ 450V: After 5 minute's at 20℃ application of rated voltage, leakage current is not more than 0.02CV+15μA

Dissipation Factor(Tan δ)

WV(V)	6.3	10	16	25	35	50	63	100	160～250V	350～400V	450
Tan δ (max)	0.34	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.24	0.24

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. A(at 20℃,120Hz)

Low Temperature Characteristics

Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160～250V	350～400V	450
$Z_{-25℃}/Z_{+20℃}$	5	4	3	2	2	2	2	2	3	6	6
$Z_{-40℃}/Z_{+20℃}$	12	10	8	5	4	3	3	3	4	6	-

(at 120Hz)

Load Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated rippled current is applied for2000~3000hours

Capacitance change	Within ±20%initial value
D.F.(Tan δ)	Not more than 200% of specified value
leakage current	Not more than specified value

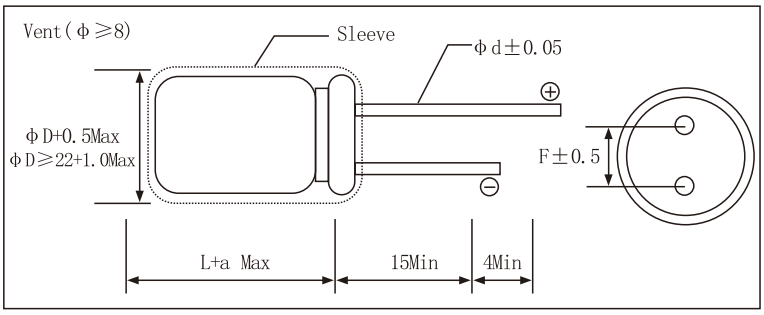
Case Dia.	life
ΦD≤8	2000
ΦD>8	3000

Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied .Before the measurement ,the capacitor shall be preconditioned by applying voltage according to Item 4.1 of jis c 5101-4

Rated voltage	6.3 to 100V	160 to 450V
Capacitance change	Within ±25%initial value	Within ±20%initial value
D.F.(Tan δ)	Not more than 200% of specified value	Not more than 200% of specified value
leakage current	Not more than 200% of specified value	Not more than 200% of specified value

◆ DIMENSIONS(mm)



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8
a	1.5	1.5	1.5	1.5	1.5	2.0	2.0

◆ FREQUENCY COEFFICIENT

Frequency / Rated Voltage(μF)	50Hz	120Hz	300Hz	1KHz	10KHz	100KHz
0.1~4.7	0.65	1.00	1.35	1.75	2.30	2.50
10~47	0.75	1.00	1.25	1.50	1.75	1.80
100~1000	0.80	1.00	1.15	1.30	1.40	1.50
2200~	0.85	1.00	1.03	1.05	1.08	1.08

RA 系列 SERIES

◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capaci-tance	Rated Ripple Current 105℃120Hz	Size ΦD×L
(V)	(μF)	(mA rms)	(mm)
6.3 (8) 0J	33	54	5×11
	47	64	5×11
	100	94	5×11
	220	140	5×11
	330	190	6.3×12
	470	230	6.3×12
	1000	380	8×12
	2200	710	10×20
	3300	840	10×20
	4700	1090	13×20
	6800	1350	13×25
	10000	1650	16×25
	15000	2010	16×35.5
	22000	2350	18×40
10 (13) 1A	22	46	5×11
	33	57	5×11
	47	68	5×11
	100	100	5×11
	220	170	6.3×12
	330	200	6.3×12
	470	250	8×12
	1000	460	10×12.5
	2200	760	10×20
	3300	1000	13×20
	4700	1260	13×25
	6800	1570	16×25
	10000	1890	16×35.5
	15000	2180	18×35.5
16 (20) 1C	10	34	5×11
	22	51	5×11
	33	63	5×11
	47	75	5×11
	100	110	5×11
	220	180	6.3×12
	330	260	8×12
	470	310	8×12
	1000	560	10×16
	2200	920	13×20
	3300	1170	13×25
	4700	1480	16×25
	6800	1780	16×31.5
	10000	2060	18×35.5
25 (32) 1E	4.7	25	5×11
	10	36	5×11
	22	54	5×11
	33	67	5×11
	47	80	5×11
	100	130	6.3×12
	220	230	8×12
	330	310	8×12
	470	380	10×12.5
	1000	680	10×20
	2200	1090	13×25
	3300	1400	16×25
	4700	1710	16×31.5
	6800	2040	18×35.5

UR (Surge Voltage) Code	Rated Capaci-tance	Rated Ripple Current 105℃120Hz	Size ΦD×L
(V)	(μF)	(mA rms)	(mm)
35 (44) 1V	4.7	28	5×11
	10	41	5×11
	22	61	5×11
	33	75	5×11
	47	90	5×11
	100	150	6.3×12
	220	270	8×12
	330	350	10×12.5
	470	460	10×16
	1000	810	13×20
	2200	1260	16×25
	3300	1610	16×35.5
	4700	1910	18×35.5
50 (63) 1H	0.1	1.3	5×11
	0.22	2.9	5×11
	0.33	4.3	5×11
	0.47	6.2	5×11
	1	13	5×11
	2.2	20	5×11
	3.3	25	5×11
	4.7	30	5×11
	10	40	5×11
	22	65	5×11
	33	90	5×11
	47	110	6.3×12
	100	180	8×12
	220	300	10×12.5
	330	410	10×16
	470	530	10×20
	1000	950	13×25
	2200	1470	16×35.5
	3300	1770	18×35.5
63 (79) 1J	10	46	5×11
	22	71	5×11
	33	100	6.3×12
	47	120	6.3×12
	100	215	10×12.5
	220	335	10×16
	330	510	10×20
	470	640	13×20
	1000	930	16×25
100 (125) 2A	0.1	1.5	5×11
	0.22	3.4	5×11
	0.33	5.0	5×11
	0.47	7.1	5×11
	1	15	5×11
	2.2	21	5×11
	3.3	29	5×11
	4.7	32	5×11
	10	54	6.3×12
	22	93	8×12
	33	130	8×12
	47	165	10×12.5
	100	265	10×20
	220	440	13×25
	330	540	16×25
	470	715	16×31.5
	1000	985	18×40

RA 系列 SERIES

◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capaci-tance	Rated Ripple Current 105℃120Hz	Size ΦD×L
(V)	(μF)	(mA rms)	(mm)
160 (200) 2C	3.3	28	6.3×12
	4.7	34	6.3×12
	10	67	10×12.5
	22	120	10×20
	33	145	10×20
	47	195	13×20
	100	335	16×25
	220	540	16×31.5
	330	705	18×35.5
200 (250) 2D	3.3	28	6.3×12
	4.7	39	8×12
	10	74	10×16
	22	120	10×20
	33	160	13×20
	47	195	13×20
	100	335	16×25
	220	575	18×35.5
250 (300) 2E	2.2	23	6.3×12
	3.3	32	8×12
	4.7	39	8×12
	10	74	10×16
	22	130	13×20
	33	160	13×20
	47	210	13×25
	100	365	16×31.5
	220	585	18×40

UR (Surge Voltage) Code	Rated Capaci-tance	Rated Ripple Current 105℃120Hz	Size ΦD×L
(V)	(μF)	(mA rms)	(mm)
350 (400) 2V	0.47	11	6.3×12
	1	15	6.3×12
	2.2	26	8×12
	3.3	38	10×12.5
	4.7	50	10×16
	10	80	10×20
	22	130	13×20
	33	195	16×25
	47	230	16×25
	100	375	18×31.5
400 (450) 2G	1	15	6.3×12
	2.2	26	8×12
	3.3	38	10×12.5
	4.7	50	10×16
	10	80	10×20
	22	145	13×25
	33	195	16×25
	47	250	16×31.5
	100	350	16×40
	120	550	18×40
450 (500) 2W	2.2	23	10×12.5
	3.3	31	10×16
	4.7	40	10×20
	10	65	13×20
	22	115	16×25
	33	155	16×31.5
	47	185	16×35.5
	68	205	18×36

Customer products are available on request