General Purpose	
Product Name :	Aluminum Electrolytic Capacitors
Goods of Description :	These capacitors are designed primarily for use coupling, decoupling, and filters for electronic circuits of low voltage. They have found widespread acceptance only in the radio and television industry, but also in industrial electronics.
Features :	Standard series for general purpose

Specification :

ALUMINUM ELECTROLYTIC CAPACITORS HR SERIES

Specification

Items	Performance	
Capacitance Tolerance	± 20% (at 120Hz, 25 ℃)	
Rated Voltage Range	6.3 to 100 VDC	160 to 450 VDC
Capacitance Range	0.1 to 15000 uF	0.47 to 220 uF
Operating Temperature Range	-40 to + 85 ℃	-25 to + 85 ℃
Leakage Current (at 25 ℃)	After 3 minutes application of working voltage. I=Leakage current (uA), C=Rated capacitance (uF), V=Rated voltage (V)	

Dissipation Factor (Tan δ at 120Hz, 25

Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450

℃)	Tan δ (max)	0.24	0.2	0.17	0.15	0.12	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.25	0.25
	For capacitance >1000 uF, add 0.02 per 1000 uF increase.														

Low Temperature Characteristics (at 120Hz)

Impedance ration max.

Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
-25 ℃ /25 ℃	4	3	2	2	2	2	2	2	8	8	8	12	12	12
-40 ℃ /25 ℃	10	8	6	4	3	3	3	3						

Load Life

After 1000 hours application of W.V. at 105 ℃

the capacitor shall meet the following limites.

Capacitance change : ≦± 25% of initial value

Dissipation factor : ≦ 200% of initial specified value

Leakage Current : ≦ Initial specified value

Shelf Life

After storage for 500 hours at 105 ℃ , with no voltage applied and being stabilized at + 25 ℃ , Capacitor shall meet the limite specified in load life.

Ripple Current & Frequency Multipliers

Freq.(Hz) Cap.(uF)	60 (50)	120	1K	10K	100K
Under 100	0.60	0.90	1.00	1.10	1.10
100 to 1000	0.65	0.90	1.00	1.00	1.00
1000 up above	0.70	0.90	1.00	1.00	1.00

Ripple Current & Temperature Multipliers

Temperature (℃)	85	105
Multiplier	1.10	0.90

Standards

Satisfied Characteristic W of JIS C

Application :

*Designed in high CV value with small size and suitable for consumer electronics
products use
*Life guaranteed 2,000 hours/85 ℃

Type :

VDC uF	DIMENSION & PERMISSIBLE RIPPLE CURRENT													
	6.3V		10V		16V		25V		35V		50V		63V	
	ψ	mA	ψ	mA	ψ	mA	ψ	mA	ψ	mA	ψ	mA	ψ	mA

	D*L		D*L		D*L		D*L		D*L		D*L		D*L	
0.47											5*11 .5	8		
1											5*11 .5	10	5*11 .5	10
2.2											5*11 .5	18	5*11 .5	18
3.3											5*11 .5	20	5*11 .5	20
4.7											5*11 .5	28	5*11 .5	30
10											5*11 .5	40	5*11 .5	43
22							5*11 .5	48	5*11 .5	55	5*11 .5 6.3* 11	58	6.3* 11	65
33					5*11 .5	55	5*11 .5	60	6.3* 11	68	6.3* 11 8*11	68 70	6.3* 11 8*11	70 85
47			5*11 .5	55	5*11 .5	60	5*11 .5	65	6.3* 11	75	6.3* 11 8*11	80 85	8*11	100
100	5*11 .5	85	5*11 .5	90	6.3* 12	95	6.3* 12 8*11	95 110	8*11	125	8*14 10*1 5	125 135	8*16 10*1 7	135 145
220	6.3* 11	130	8*11	135	6*12 8*11	130 145	8*11 8*14	150 170	8*14 10*1 2	190 230	10*1 7 10*2 0	340	13*2 1	345
330	6.3* 11	180	8*11	185	8*11 8*14	195 210	8*14	250	10*1 2 10*1 7	300 350	13*2 1	400	13*2 6	450
470	8*11	300	8*11	300	8*14	300	10*1 7	320	10*2 1	400	13*2 1	480	13*2 6	530
100 0	8*12	380	8*14 10*1 2	380 400	10*1 7 10*2 0	490	10*2 0 13*2 1	550 600	13*2 6	680	16*2 6	720	16*3 2	800
220 0	10*1 7	600	10*2 0 13*2	620 650	13*2 1 13*2	700	13*2 6 16*2	700 850	16*2 6	960	18*3 6 22*2	100 0 110	22*3 6	135 0

			6		6		6				8	0		
3300	13*21	710	13*26	720	13*26 16*26	800 850	16*32	950	18*36	1100	22*36	1300		
4700	13*26	940	13*26 16*26	940 950	16*26	1000	18*36	1100	22*36	1300	25*42	1500		
6800	16*26	1000	16*36	1100	18*36	1200	22*36	1400	22*40	1800	30*46	2000		
10000	16*32	1200	18*36	1300	22*36	1450	22*40	1650	25*42	2000				
15000			22*36	1900	22*40	2100	25*42	2400						

VDC uF	100V		160V		200V		250V		350V		400V		450V	
	ψ D*L	mA	ψ D*L	mA	ψ D*L	mA	ψ D*L	mA	ψ D*L	mA	ψ D*L	mA	ψ D*L	mA
1	5*11.5	14	5*11.5	12	6.3*11	12	6.3*11	12	8*11	13	8*11	13	8*11	14
2.2	5*11.5	22	6.3*12	20	8*11	20	8*11	22	10*12	20	10*12	20	10*12	22
3.3	5*11.5	25	6.3*11 8*11	25 27	8*11	30	8*11	35	10*12	30	10*15	30	10*15	35
4.7	5*11.5	30	8*11	32	8*11	36	10*12	40	10*15	35	10*12.5 10*15	35	10*20	40
10	6.3*11	55	10*12	50	10*12	55	10*16	60	10*20	55	10*17 10*20	60	13*21	60
22	8*11	80	10*16	85	10*20	100	10*20	110	13*21	100	13*26	100	16*26	110
33	10*12.5	110	10*21	115	13*21	125	13*21	135	16*26	130	16*26	140	16*26	120
47	10*16	140	13*21	145	13*21	165	13*26	175	16*26	175	16*33	200	18*27	220
100	10*20	240	16*26	245	16*26	250	16*32	275	18*37	275	18*41	300	22*38	320
220	13*26	450	16*36	450	18*37 22*2	480 50	22*38	560						

					7	0								
330	16*26	550	22*38	570	22*38	600	22*42	660						
470	16*32	700	22*38	700	25*41	750								
1000	18*41	1000												