

SVENSKA ELEKTRISKA KOMMISSIONEN (SEK)

CECC-30301-021

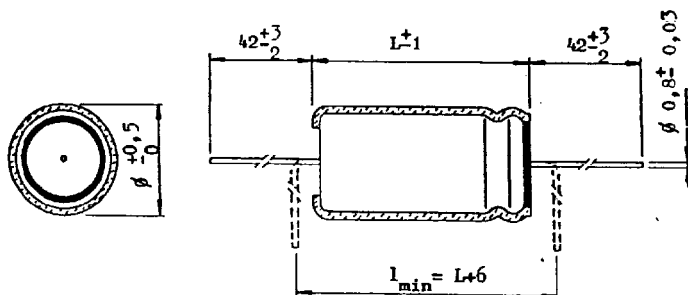
ELECTRONIC COMPONENTS OF ASSESSED
QUALITY IN ACCORDANCE WITH:SS CECC 30000
SS CECC 30300Manufacturer's detail specification
May 1979

Issue 3. June 1988.

RIFA AB

DETAIL SPECIFICATION FOR ALUMINIUM ELECTROLYTIC CAPACITORS WITH NON SOLID
ELECTROLYTE

TYPICAL CONSTRUCTION:

Cylindrical
Polar
Metallic, insulated case
Axial wire terminationsInsulating plastic sleeve

Circuit diagram

QUICK REFERENCE DATA:

RATED CAPACITANCE RANGE:

2.2 μ F to 4700 μ F

CAPACITANCE TOLERANCE:

-10/+30% Standard
 $\pm 20\%$ Special

RATED VOLTAGE RANGE:

6.3V d.c to 100V d.c.

CLIMATIC CATEGORY:

40/105/56

See the relevant Qualified Products List for the
availability of components qualified to this detail
specification.

GRADE: Long Life use

ASSESSMENT LEVEL:

Full, plus additional

1. DIMENSIONS

Table 1

See next page

1. DIMENSIONSTable 1

CASE SIZE REFERENCE	DIMENSIONS IN mm		
	ØD mm	L mm	Typical weight g
A	10	20	2.4
B	10	29	3.4
D	13	29	5.2
E	14	37	6.4
F	16	29	7.2
G	16	37	10.0
J	20	37	14.0
L	20	46	17.0

2. SPECIFIED METHOD OF MOUNTING FOR VIBRATION AND BUMP TESTING:

Case sizes A, B, D and E shall be clamped by their terminations only.
Case sizes F, G, J and L shall be mounted by clamping both the body and the terminations.

3. RATINGS, CHARACTERISTICS

Grade	Long life use
Capacitance range	See table 2A
Capacitance tolerances in percent	-10/+30, code Q, Standard ±20, code M, Special
Rated voltage range	6.3V d.c. to 100V d.c.
Rated temperature	+105°C

Rated ripple current	See table 2B
Tangent of loss angle	See table 2B
Leakage current	See other characteristics
Impedance	See table 2B
Climatic category	40/105/56

Table 2A

Values of capacitance and of voltage related to case sizes.

Rated capacitance uF	Rated voltages and voltage codes						
	6.3V Code D	10V Code E	16V Code G	25V Code H	40V Code K	63V Code M	100V Code P
2.2						A	
3.3						A	
4.7						A	A
6.8						A	
10						A	A
15						A	A
22					A	A	B
33				A	A	B	B
47				A	A	B	D
68			A	A	B	B	E
100		A	A	A	B	D	F
150	A	A	A	B	D	D	G
220	A	A	B	D	D	F	J
330	B	B	D	D	E, F	G	L
470	B	D	D	E, F	F	J	
680	D	D	D	F	G	J	
1000	D	D	E, F	G	J		
1500	E, F	F	G	J	L		
2200	F	G	J	L			
3300	G	J	L				
4700	J	L					

Table 2B

4(15)

Tan δ , impedance, rated ripple current and ESR.

U_R V	C_R μF	Case size	Maximum tangent of loss angle at 100Hz	Maximum impedance at 20°C, 100kHz or 10kHz* m Ω	Maximum rated ripple current at 100°C mA at 100Hz **	Maximum ESR at f _{**} m Ω
6.3	150	A	0.20	1200	160	1100
	220	A		830	200	760
	330	B		560	280	515
	470	B		380	350	360
	680	D		290	450	265
	1000	D		180	540	165
	1500	E		120*	750	110
	1500	F		120*	690	115
	2200	F		100*	820	90
	3300	G		65*	1050	60
	4700	J		45*	1400	45
10	100	A	0.20	1430	140	1260
	150	A		950	180	850
	220	A		650	210	580
	330	B		420	325	390
	470	D		310	400	275
	680	D		215	480	200
	1000	D		150	580	145
	1500	F		105*	920	90
	2200	G		70*	1050	65
	3300	J		50*	1260	50
	4700	L		40*	1660	40
16	68	A	0.12	1430	130	1315
	100	A		840	160	840
	150	A		700	200	640
	220	B		420	280	410
	330	D		320	370	285
	470	D		210	440	190
	680	D		170	530	150
	1000	E		100	720	90
	1000	F		100	680	95
	1500	G		70*	930	65
	2200	J		60*	1140	50
	3300	L		50*	1540	40
25	33	A	0.12	1470	100	1380
	47	A		840	120	840
	68	A		840	150	795
	100	A		580	180	540
	150	B		380	260	360
	220	D		270	360	255
	330	D		180	420	165
	470	E		130	570	120
	470	F		130	520	120
	680	F		100	650	90
	1000	G		60	850	60
	1500	J		45*	1060	40
	2200	L		40*	1420	35

* Measurement frequency 10 kHz

** When test is performed at 50Hz the values in the table shall be multiplied by 0.8.

*** f = resonance frequency

Table 2B (continued)

U_R V	C_R	Case size	Maximum tangent of loss angle at 100Hz	Maximum impedance at 20°C, 100kHz or 10kHz $m\Omega$	Maximum rated ripple current at 100°C mA at 100Hz**	Maximum ESR at f_r *** $m\Omega$
40	22	A	0.08	1600	90	1480
	33	A		840	110	820
	47	A		770	130	710
	68	B		420	195	410
	100	B		360	230	340
	150	D		260	300	240
	220	D		170	370	150
	330	E		110	510	100
	330	F		110	500	105
	470	F		90	560	80
	680	G		60	760	55
	1000	J		50	940	45
	1500	L		40*	1260	35
63	2.2	A	0.08	1600	34	1050
	3.3	A		1600	43	825
	4.7	A		1600	48	1400
	6.8	A		1600	58	960
	10	A		980	70	915
	15	A		840	83	840
	22	A		840	100	840
	33	B		420	130	420
	47	B		420	180	420
	68	B		320	220	300
	100	D		210	290	195
	150	D		140	350	130
	220	F		100	440	95
	330	G		70	600	65
	470	J		60	740	50
	680	J		40	890	35
100	4.7	A	0.08	6400	43	6000
	10	A		4500	60	4200
	15	A		3050	80	2850
	22	B		2000	120	1950
	33	B		1350	150	1260
	47	D		950	200	885
	68	E		660	250	615
	100	F		450	280	420
	150	G		310	380	285
	220	J		210	460	195
	330	L		140	630	135

* Measurement frequency 10kHz

** When test is performed at 50Hz the values in the table shall be multiplied by 0.8.

*** f_r = resonance frequency