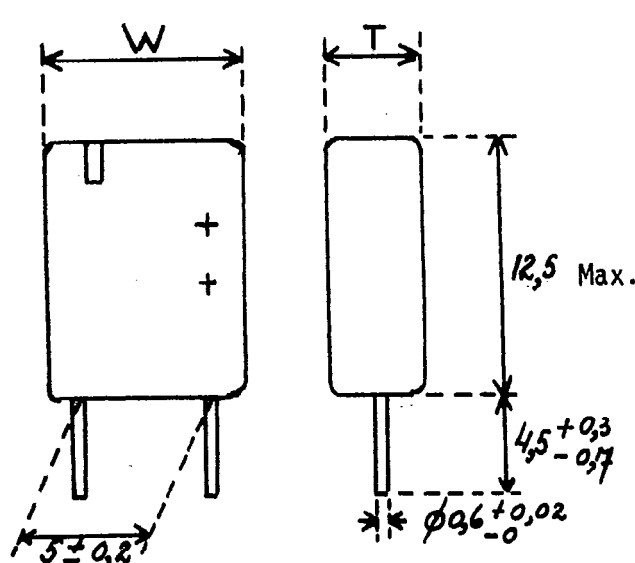


Electronic Component of Assessed Quality in accordance with: CECC 30 000, 2nd edition	NEN - CECC 30 302 - 002 1st edition, February 1979
Detail specification for Aluminium electrolytic capacitors with solid electrolyte.	
Typical construction : Polar Insulated Radial, wire terminations Intended for printed circuits.	
Outline drawing and dimensions (millimetres) (see note 1 and table 1) 	Quick reference data: Rated cap. range: 0,1 - 68 μF Cap. tol. : -20% to +40%, + 20% $\pm$ 10% Rated voltage range: 6,3V to 40V Climatic category : 55/125/56 Application grade : general purpose
See the Qualified Products List for the availability of components made to this detail specification.	

Note 1 : Other shapes are permitted within the dimensions given.

Note 2 : For ordering information, see clause 6.

1. DIMENSIONSTable 1

Case size reference	T max. mm	W max. mm
1	3,5	8,0
2	4,5	8,0
3	5,0	8,0
4	6,0	8,0

2. SPECIFIED METHOD OF MOUNTING FOR VIBRATION AND BUMP TESTING

Vibration and bump tests shall be made in accordance with IEC 68-2-6, procedure B4. The components shall be mounted on a printed wiring board.

3. RATING AND CHARACTERISTICS

3.1	Application grade	General purpose
3.2	Rated capacitance range (E6-series)	See Table 2
3.3	Preferred tolerance on rated capacitance	-20 to +40% ; $\pm 20\% \pm 10\%$ 
3.4	Rated voltage range (R5-series)	See Table 2
3.5	Category voltage U_C	See Table 2
3.6	Category temperature range	-55 to +125°C
3.7	Rated temperature	85°C
3.8	Endurance test conditions	See page 8
3.9	Climatic category	55/125/56
3.10	Leakage current (after 5 min.) in μA	See Table 3
3.11	Bump test severity	1000 bumps, acceleration 40 g
3.12	Vibration test severity	10 to 55 Hz, 0,75mm or 10 g
3.13	Low air pressure	8,5 kPa (85 mbar)
3.14	Rated ripple current	See Table 3
3.15	Tangent of loss angle	See Table 3

Table 2

Values of capacitance and voltage related to case sizes.

Rated voltage (U_R) →	6,3	10	16	25	40
Category voltage (U_C) →	6,3	10	16	25	25
Rated capacitance in μF					
0,1					1
0,15					1
0,22					1
0,33					1
0,47					2
0,68				1	2
1,0				1	3
1,5				1	4
2,2			1	2	
3,3			1	2	
4,7		1	2	3	
6,8		1	2	4	
10	1	2	3		
15	1	2	4		
22	2	3			
33	3	4			
47	4				
68	4				

Table 3

Tangent of loss angle ($\tan \delta$), leakage current and ripple current

U_R (V)	Case size	C_R (μF)	Max. tangent of loss angle 100Hz	Max. leakage current at U_R (μA)	Max. r.m.s. ripple current (mA) 100Hz
6.3	1	10	0,15	3	60
	1	15	0,15	5	70
	2	22	0,15	7	90
	3	33	0,15	11	110
	4	47	0,15	15	140
	4	68	0,15	22	180
10	1	4,7	0,15	3	40
	1	6,8	0,15	4	50
	2	10,0	0,15	5	60
	2	15,0	0,15	8	75
	3	22,0	0,15	11	95
	4	33,0	0,15	17	125
16	1	2,2	0,10	2	35
	1	3,3	0,10	3	40
	2	4,7	0,10	4	50
	2	6,8	0,10	6	60
	3	10,0	0,10	8	80
	4	15,0	0,10	12	100
25	1	0,68	0,10	2	20
	1	1,0	0,10	2	25
	1	1,5	0,10	2	30
	2	2,2	0,10	3	35
	2	3,3	0,10	4	45
	3	4,7	0,10	6	55
	4	6,8	0,10	9	70
40	1	0,1	0,10	2	7,5
	1	0,15	0,10	2	10
	1	0,22	0,10	2	12,5
	1	0,33	0,10	2	15,0
	2	0,47	0,10	2	17,5
	2	0,68	0,10	2	20
	3	1,0	0,10	2	25
	4	1,5	0,10	3	30

4. RELATED DOCUMENTS

CECC 30 000 (1978)	Generic specification	Fixed capacitors
CECC 30 300 (1977)	Sectional specification	Aluminium electrolytic capacitors
CECC 00006 (1973)	: Basic environmental testing procedures.	
CECC 00007 (1978)	: Sampling plans and procedures for inspection by attributes.	

5. MARKING

The following marking information shall be given on the capacitor :

- Rated capacitance
- Rated voltage
- Polarity indication
- Tolerance on rated capacitance
- Category voltage if different from U_R .

6. ORDERING INFORMATION

When ordering components to this specification the following information shall be given:

- National number of this detail specification
- Rated capacitance
- Tolerance on rated capacitance
- Rated voltage.

7. CERTIFIED TEST RECORDS (CTR)

Not required.

8. QUALIFICATION APPROVAL AND QUALITY CONFORMANCE INSPECTION

- 8.1 Test schedule for qualification approval.
See Table 4 of this detail specification.
- 8.2 Test schedule for quality conformance inspection.
See Table 5 of this detail specification for lot by lot inspection.
See Table 6 of this detail specification for periodic tests.