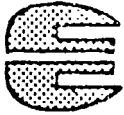
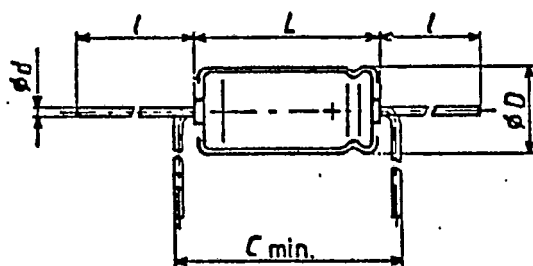


This Specification contains a small amount of data which may not be legible. It has been acquired directly from the manufacturer or standards organization and Technical Indexes/IHS have not been able to obtain a better copy.

If the quality of this Specification is not fit for your intended purpose, please contact the relevant manufacturer or standards organization to clarify the details you require.

NEDERLANDS ELEKTROTECHNISCH COMITÉ	Page 1 of 16	CECC 30 302 Issue 1	
Electronic Component of Assessed Quality in accordance with: CECC 30 000, 2nd edition	NEN-CECC 30 302-001 2nd edition, December 1983		
Detail specification for aluminium electrolytic capacitors with solid electrolyte.			
Typical construction : Cylindrical, Polar, Metallic case, Insulated, Axial wire terminations.			
Outline and dimensional data (see note 1 and table 1)		Quick reference data:	
		Rated cap. range : 2,2 - 330 μ F Cap. tol. : $\pm 10\%$ or $\pm 20\%$ Rated voltage range: 6,3 V to 40 V Climatic category : 55/125/56 Application grade : long life	
See the relevant Qualified Products List for the availability of components made to this detail specification.			

For ordering information, see clause 6.

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

Note 2 : These capacitors are suitable for use in printed wiring applications.

Note 3 : All dimensions are in millimeters.

1 Dimensions

Table 1 - Dimensions in mm

case size reference	D max.	L max.	C min.	d	z
1	7,0	18	20,0	$0,8 \begin{matrix} + 0,08 \\ - 0,05 \end{matrix}$	>32
2	7,0	24	27,5		
2a	7,6	24	27,5		
3	8,5	24	27,5		
4	10,5	24	27,5		
5	10,5	32	35		
6	13,0	32	35		

2 Specified method of mounting for vibration and bump testing

Vibration and bump tests shall be made in accordance with IEC Publication 68-2-6, procedure B4.

The components shall be mounted in accordance with sub-clause 3.1.1.a : "Clamping both the body and the leads".

3 Rating and characteristics

3.1	Application grade	Long life
3.2	Rated capacitance range (E6-series)	See table 2
3.3	Preferred tolerance on rated capacitance	$\pm 10\%$ or $\pm 20\%$
3.4	Rated voltage range U_R (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	$\leq 0,1 C_R U_R$
3.11	Bump test severity	4000 bumps, acceleration 40 g
3.12	Vibration test severity	10 to 500 Hz, 0,75 mm 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
3.16	Impedance	See table 3

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Table 2 - Values of capacitance and voltage related to case sizes

capacitance μF	voltage				
	U_R 6,3	10	16	25	40
	U_C 4,0	6,3	10	16	25
2,2					1
3,3					1
4,7				1	2/2a
6,8				2/2a	2/2a
10			1	2/2a	3/2a
15		1	2/2a	3/2a	4
22	1	2/2a	3/2a	3/2a	4
33	2/2a	2/2a	3/2a	4	5
47	2/2a	3/2a	4	5	6
68	3/2a	4	5	6	
100	4	4	6		
150	4	5			
220	5	6			
330	6				

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Table 3 - Tangent of loss angle ($\tan \delta$), impedance and ripple current

U_R V	case size x	C_R μF	max. $\tan \delta$ at 20 °C, 100Hz	max. impedance at 20 °C, 100kHz Ω	rated ripple current at 85°C, 100Hz mA
6,3	1	22	0,18	2,50	45
	2	33	0,18	1,90	60
	2a	33	0,18	1,90	60
	2	47	0,18	1,25	75
	2a	47	0,18	1,25	75
	3	68	0,18	0,75	105
	2a	68	0,18	0,75	105
	4	100	0,18	0,60	135
	4	150	0,18	0,50	170
	5	220	0,18	0,40	240
	6	330	0,18	0,40	335
	6	330	0,18	0,40	335
10	1	15	0,16	2,50	40
	2	22	0,16	1,90	55
	2a	22	0,16	1,90	55
	2	33	0,16	1,25	70
	2a	33	0,16	1,25	70
	3	47	0,16	0,75	90
	2a	47	0,16	0,75	90
	4	68	0,16	0,60	120
	4	100	0,16	0,50	145
	5	150	0,16	0,40	220
	6	220	0,16	0,40	290
	6	220	0,16	0,40	290
16	1	10	0,14	2,50	35
	2	15	0,14	1,25	50
	2a	15	0,14	1,25	50
	3	22	0,14	1,00	80
	2a	22	0,14	1,00	80
	3	33	0,14	0,75	100
	2a	33	0,14	0,75	100
	4	47	0,14	0,50	110
	5	68	0,14	0,40	150
	6	100	0,14	0,40	205
	6	100	0,14	0,40	205
	6	100	0,14	0,40	205
25	1	4,7	0,14	5,00	25
	2	6,8	0,14	3,50	30
	2a	6,8	0,14	3,50	30
	2	10	0,14	2,50	40
	2a	10	0,14	2,50	40
	3	15	0,14	2,00	55
	2a	15	0,14	2,00	55
	3	22	0,14	1,50	70
	2a	22	0,14	1,50	70
	4	33	0,14	1,00	90
	5	47	0,14	0,80	130
	6	68	0,14	0,50	170

* 2 and 3 not for new developments

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