AZC - AZS SERIES

ALUMINIUM ELECTROLYTIC CAPACITORS FOR PRINTED WIRING BOARD

Series	Capacitance range	Voltage range	Temperature range	Case Φ x H	Applications
AZC AZS	100 - 4700	200 -450	-25°C , +105°C	30 x 40 45 x 100	Snap-in type, 2-4 pins configuration Extended temperature range Solder pin mounting Industrial applications

MECHANICAL OUTLINES:

CASE: cylindrical, aluminium made
TERMINALS: to be soldered, for printed wiring board (type SNAP-IN)
SEALING: hermetic by beading on a rubber-Bakelite cover
PRESSURE RELEASE VENT: directly on to the aluminium case
SLEEVE: self-extinguishing thermo shrinkable sleeve
MOUNTING: vertical, by soldering to printed circuit board.
SIZE: see enclosed drawings
CLIMATIC CATEGORY (IEC 68): 25/98/56

SPECIFICATIONS	**TEMPERATURE RANGE**	**CAPACITANCE**
CECC 30300 IEC 384-4 ("long life grade") MIL C62D DIN 41240 / DIN 45910	Operating: -25 °C +105 °C Climatic Category (IEC 68): 25/105/56	Tolerance shall be within the following limits: -20% + 20% (standard tolerance) or -10% +30% (available on request)

LEAKAGE CURRENT:

After the rated voltage has been applied to the capacitor for 5 minutes the leakage current must be:

Maximum limit	at 25 °C	$I_f \leq 0{,}004 * C * V$
Operating limit	at 25 °C:	$I_f \leq 0{,}001 * C * V$

where I_f = leakage current (μA)
C= capacitance (μF)
V= rated voltage (V)

IMPORTANT

When using high-capacitance and high-voltage electrolytic capacitors it is important to remember that the inner part (the rolled section) is not insulated from can: between the negative pole and the aluminium can there is a variable and not defined resistance essentially due to the electrolyte used in capacitor manufacture.

SURGE VOLTAGE

Working Voltage	200	250	315	400	420	450	500
Surge Voltage	230	290	347	440	460	495	525

RIPPLE CURRENT:

The allowable values of ripple current in amperes, are related to the temperature and frequency by the formula:

$$I_r = K_t * K_f * I_{r105}$$

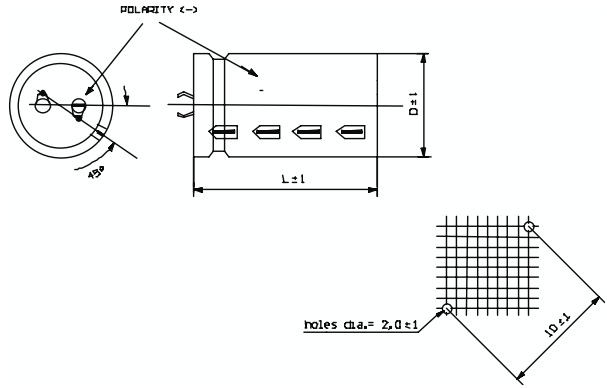
where I_{r105} is the limit given by tables, referred to a temperature of 105 °C and to a frequency of 100 Hz and K_t or K_f are values here below tabulated:

°C	50	65	75	85	95	105
K_t	2.6	2.4	2.1	1.8	1.35	1.0

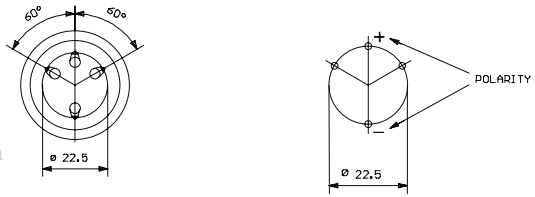
V_n	HZ	50	98	300	400	500	>1KHZ
V>160		0.88	1.00	1.20	1.25	1.35	1.40

CAPACITORS DIMENSIONS AND DRILLING PLAN OF PRINTED WIRING BOARD

- *AZC SERIES*



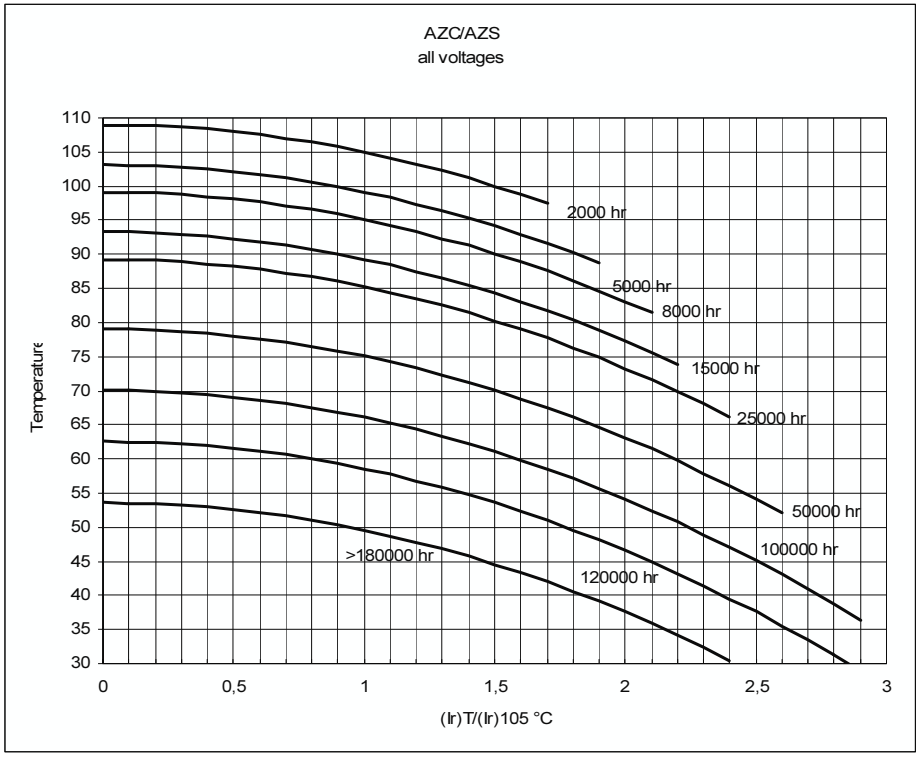
- *AZS SERIES (D = 35 / 40 / 45 mm)*



CASE CODE	Φ x l (mm)	CASE CODE	Φx l (mm)	CASE CODE	Φ x l (mm)	CASE CODE	Φ x l (mm)
MB	30 x 40	**NN**	35 x 60	**PN**	40 x 60	**QE**	45 x 75
MC	30 x 50	**NE**	35 x 75	**PG**	40 x 100	**QG**	45 x 100
NB	35 x 40	**PB**	40 x 40	**QC**	45 x 50		
NC	35 x 50	**PC**	40 x 50	**QN**	45 X 60		

- *The unconnected pins serve as mountings and must be soldered to insulated pads*

EXPECTED LIFE AS A FUNCTION OF TEMPERATURE AND RIPPLE CURRENT



Expected life criteria: see introduction.

CAP (µF)	Rated Voltage (Vn)	Case Code	Φ x h (mm)	TG δ 100Hz	ESR max 100Hz (mOhm)	ESR typ 100Hz (mOhm)	Z max 10Khz (mOhm)	I ripple 75°C 100Hz (A)	I ripple 105°C 100Hz (A)	CATALOGUE NUMBER 2 mounting pins	4 mounting pins
470		MB	30 x 40	0,08	203	152	174	3,2	1,5	AZC471M200MB1	
680		MB	30 x 40	0,08	141	105	120	3,9	1,9	AZC681M200MB1	
1000		MC	30 x 50	0,08	96	72	82	5,2	2,5	AZC102M200MC1	
1000		NB	35 x 40	0,08	96	72	82	5,7	2,7	AZC102M200NB1	AZS102M200NB1
1200		NB	35 x 40	0,08	80	60	68	6,2	3,0	AZC122M200NB1	AZS122M200NB1
1500	**200**	NC	35 x 50	0,08	64	48	54	6,9	3,3	AZC152M200NC1	AZS152M200NC1
1800		NC	35 x 50	0,08	53	40	46	7,6	3,6	AZC182M200NC1	AZS182M200NC1
2700		NE	35 x 75	0,08	35	27	30	11,1	5,3	AZC272M200NE1	AZS272M200NE1
3300		PG	40 x 100	0,08	29	22	25	15,4	7,3		AZS332M200PG1
2200		QC	45 x 50	0,08	43	33	37	9,7	4,6		AZS222M200QC1
3300		QE	45 x 75	0,08	29	22	25	14,1	6,7		AZS332M200QE1
4700		QG	45 x 100	0,08	20	15	18	19,6	9,3		AZS472M200QG1

CAP (µF)	Rated Voltage (Vn)	Case Code	Φ x h (mm)	TG δ 100Hz	ESR max 100Hz (mOhm)	ESR typ 100Hz (mOhm)	Z max 10Khz (mOhm)	I ripple 75°C 100Hz (A)	I ripple 105°C 100Hz (A)	CATALOGUE NUMBER 2 mounting pins	4 mounting pins
470		MB	30 x 40	0,08	203	152	174	3,2	1,5	AZC471M250MB1	
680		MC	30 x 50	0,08	141	105	120	4,3	2,0	AZC681M250MC1	
680		NB	35 x 40	0,08	141	105	120	4,7	2,2	AZC681M250NB1	AZC681M250NB1
1000	**250**	NB	35 x 40	0,08	96	72	82	5,7	2,7	AZC102M250NB1	AZC102M250NB1
1000		NC	35 x 50	0,08	96	72	82	5,7	2,7	AZC102M250NC1	AZC102M250NC1
2200		NE	35 x 75	0,08	43	33	37	10,0	4,8	AZC222M250NE1	AZC222M250NE1
1500		PC	40 x 50	0,08	64	48	54	7,5	3,6	AZC152M250PC1	AZC152M250PC1
2200		PG	40 x 100	0,08	43	33	37	12,6	6,0		AZC222M250PG1

CAP (µF)	Rated Voltage (Vn)	Case Code	Φ x h (mm)	TG δ 100Hz	ESR max 100Hz (mOhm)	ESR typ 100Hz (mOhm)	Z max 10Khz (mOhm)	I ripple 75°C 100Hz (A)	I ripple 105°C 100Hz (A)	CATALOGUE NUMBER 2 mounting pins	4 mounting pins
220		MB	30 x 40	0,08	434	326	370	2,2	1,1	AZC221M385MB1	
330		MB	30 x 40	0,08	290	217	247	2,7	1,3	AZC331M385MB1	
470	**385**	NC	35 x 50	0,08	203	152	156	4,1	1,9	AZC471M385NC1	AZS471M385NC1
470		PB	40 x 40	0,08	203	152	174	3,8	1,8	AZC471M385PB1	AZS471M385PB1
680		NC	35 x 50	0,08	141	105	108	4,9	2,3	AZC681M385NC1	AZS681M385NC1
680		PC	40 x 50	0,08	141	105	108	5,3	2,5	AZC681M385PC1	AZS681M385PC1

CAP (µF)	Rated Voltage (Vn)	Case Code	Φ x h (mm)	TG δ 100Hz	ESR max 100Hz (mOhm)	ESR typ 100Hz (mOhm)	Z max 10Khz (mOhm)	I ripple 75°C 100Hz (A)	I ripple 105°C 100Hz (A)	CATALOGUE NUMBER 2 mounting pins	4 mounting pins
220		MB	30 x 40	0,08	434	326	370	2,2	1,1	AZC221M400MB1	
330		MB	30 x 40	0,08	290	217	247	2,7	1,3	AZC331M400MB1	
330		MC	30 x 50	0,08	290	217	247	3,0	1,4	AZC331M400MC1	
470		MC	30 x 50	0,08	203	152	174	3,6	1,7	AZC471M400MC1	
470		NB	35 x 40	0,08	203	152	174	3,9	1,8	AZC471M400NB1	AZS471M400NB1
470		NC	35 x 50	0,08	203	152	174	3,9	1,8	AZC471M400NC1	AZS471M400NC1
560		NC	35 x 50	0,08	171	128	146	4,2	2,0	AZC561M400NC1	AZS561M400NC1
680	**400**	NC	35 x 50	0,08	141	105	120	4,7	2,2	AZC681M400NC1	AZS681M400NC1
820		NN	35 x 60	0,08	117	87	82	5,5	2,6	AZC821M400NN1	AZS821M400NN1
1200		NE	35 x 75	0,08	80	60	68	7,4	3,5	AZC122M400NE1	AZS122M400NE1
680		PC	40 x 50	0,08	141	105	120	5,0	2,4	AZC681M400PC1	AZS681M400PC1
1200		PE	40 x 75	0,08	80	60	68	8,0	3,8		AZS122M400PE1
1500		PG	40 x 100	0,08	64	48	54	10,4	4,9		AZS152M400PG1
1000		QC	45 x 50	0,08	96	72	82	6,6	3,1		AZS102M400QC1
1500		QE	45 x 75	0,08	64	48	54	9,5	4,5		AZS152M400QE1
2200		QG	45 x 100	0,08	43	33	37	13,4	6,4		AZS222M400QG1

CAP (µF)	Rated Voltage (Vn)	Case Code	Φ x h (mm)	TG δ 100Hz	ESR max 100Hz (mOhm)	ESR typ 100Hz (mOhm)	Z max 10Khz (mOhm)	I ripple 75°C 100Hz (A)	I ripple 105°C 100Hz (A)	CATALOGUE NUMBER 2 mounting pins	4 mounting pins
150		MB	30 x 40	0,10	796	597	652	1,7	0,8	AZC151M450MB1	
220		MB	30 x 40	0,10	543	407	445	2,0	1,0	AZC221M450MB1	
330		MC	30 x 50	0,10	362	271	297	2,7	1,3	AZC331M450MC1	
330		NB	35 x 40	0,10	362	271	297	3,0	1,4	AZC331M450NB1	AZS331M450NB1
470		NC	35 x 50	0,10	254	191	138	4,3	2,1	AZC471M450NC1	AZS471M450NC1
680		NN	35 x 60	0,10	176	132	120	5,0	2,4	AZC681M450NN1	AZS681M450NN1
680		NE	35 x 75	0,10	176	132	132	5,3	2,5	AZC681M450NE1	AZS681M450NE1
820	**450**	NE	35 x 75	0,10	146	109	110	5,8	2,8	AZC821M450NE1	AZS821M450NE1
680		PC	40 x 50	0,10	176	132	132	4,8	2,3	AZC681M450PC1	AZS681M450PC1
1000		PE	40 x 75	0,10	119	90	98	6,6	3,2		AZS102M450PE1
1500		PG	40 x 100	0,10	80	60	66	9,5	4,5		AZS152M450PG1
820		QC	45 x 50	0,10	146	109	119	5,4	2,6		AZS821M450QC1
1200		QE	45 x 75	0,10	100	75	82	7,8	3,7		AZS122M450QE1
1800		QG	45 x 100	0,10	66	50	49	11,1	5,3		AZS182M450QG1