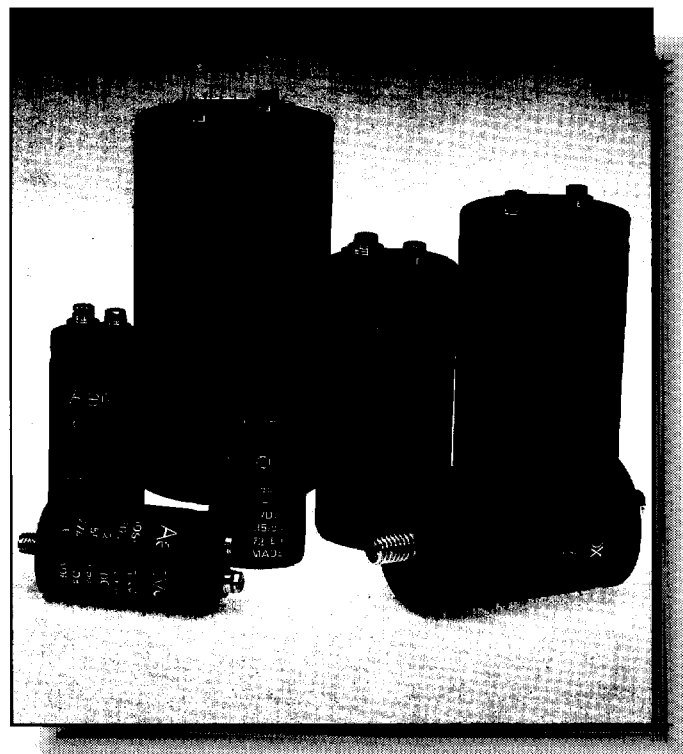


ALS27/29 SERIES

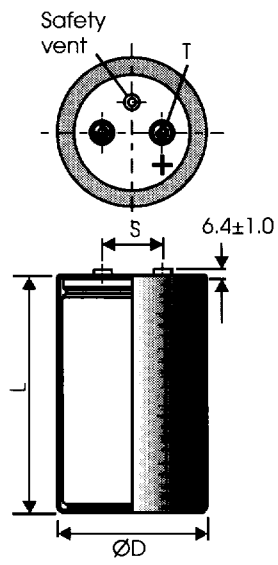
Screw Terminals - Plain and Stud Mountings

This range of professional grade components offers high levels of reliability and performance with outstanding high frequency characteristics. Their low levels of e.s.r. and impedance are ideally suited to high efficiency power supply and inverter applications. Physical dimensions meet the requirements of CO37/39.

- Capacitance range** 68µF to 470,000µF
- Capacitance tolerance** -10% +50%
- Voltage range**..... 6.3V to 450V d.c.
- Temperature range** -55°C to +85°C
- Case sizes**..... 36 x 49mm to 77 x 146mm

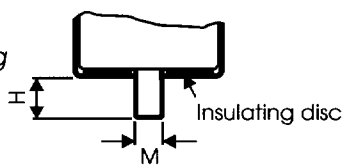


ALS29



ALS27

Stud Mounting



DIMENSIONS (sleeved) mm

CASE CODE	D ±1	L ±2	S ±0.5	M THREAD	H ±1	T THREAD	MOUNTING CLIP
DY	36	49	12.7	M8	12	M4	2736
DB	36	62	12.7	M8	12	M4	2736
DE	36	82	12.7	M8	12	M4	2736
KB	51	62	22.2	M12	16	M5	2737
KE	51	82	22.2	M12	16	M5	2737
KJ	51	115	22.2	M12	16	M5	2737
MJ	66	115	28.5	M12	16	M5	2738
PJ	73	115	31.7	M12	16	M5	2739
NP	77	146	31.7	M12	16	M5	V11

Terminations

Aluminium inserts with M4 or M5 threads, in accordance with NFC-UTE 83-110, max torque 2NM. Max torque for stud M8:4NM/M12:8NM.

ALS27/29 SERIES

Screw Terminals - Plain and Stud Mountings

TECHNICAL DATA

Related documents

CECC 30301-016/-017
NFC-UTE 83-110 Type 1
IEC 384-4

Temperature range

Storage -65°C to +85°C
Operating -55°C to +85°C
Environmental classification 55/085/56

Surge voltage

1000 surges (30 seconds) at 85°C with surge voltage applied. See electrical characteristics.

Charge/discharge

10° cycles at 25°C and rated voltage. One cycle per second with a time constant of 0.1.

D.C. leakage current

After application of rated d.c. voltage for 5 minutes at 20°C, the d.c. leakage current shall not exceed $(0.003 C_R U_R + 4) \mu\text{A}$ where C_R is the rated capacitance in μF and U_R is the rated d.c. voltage.

Vibration

10Hz to 55Hz at 0.75mm or 10g for 3x2hrs duration.

Insulation resistance

$\geq 100\text{M}\Omega$ at 100V d.c., across insulating sleeve.

Voltage proof

$\geq 2500\text{V}$ d.c., across insulating sleeve. See technical data.

Ripple current

The following values are approximate only, to give an indication of the effects of frequency and temperature on ripple current. More accurate data can be obtained by referring to the Application Notes available from BHC Aerovox.

FREQUENCY CORRECTION

Capacitors shall withstand the rated r.m.s. ripple current as given in the tables at upper category temperature in circulating air. For frequencies other than those shown the following formula should be used:

$$\text{Ripple current} = \sqrt{\frac{F \times A^2 \times B^2}{100 \times (B^2 - A^2) + (F \times A^2)}}$$

A = 100Hz ripple current

B = 10kHz ripple current

F = Required frequency (Hz)

TEMPERATURE CORRECTION

For ambient temperature other than 85°C the following correction factors should be employed.

AMBIENT TEMPERATURE	FACTOR
30°C	2.5
50°C	2.1
70°C	1.6
85°C	1.0

N.B. The sum of the d.c. and a.c. voltage components should not exceed the d.c. voltage rating.

Life expectancy

At rated temperature with rated voltage and ripple current applied.

CAN DIAMETER (mm) LIFE EXPECTANCY (hours)

36	10000
51	23000
66	27000
73,77	28000

Mounting

Any position but refer to mounting section on page 9. For details of mounting clips and stud mounting kits see page 68/69.

Capacitor marking

The capacitors are marked with items 1 to 6 from the following list as a minimum, and as much of the remaining information as is practical.

1. Rated capacitance in μF
2. Rated voltage d.c.
3. Polarity of terminations
4. Tolerance on rated capacitance
5. Date code/Batch code
6. BHC part number
7. Environmental classification

Ordering information

For details of ordering see page 70.

ALS27/29 SERIES

Screw Terminals - Plain and Stud Mountings

Rated voltage	Cap μ F	Case Size	ESR $m\Omega$ at 20°C		Impedance $m\Omega$ at 20 °C, 10 KHz		Ripple current A at 85°C		Type number (Excluding style ref)
			100Hz		100 Hz	10 KHz	100 Hz	10 KHz	
6.3V d.c. (7.2V surge)	15000	36x49	33.0		32.0		5.9	6.4	ALS2-A153DY6R3
	22000	36x62	26.0		22.0		7.5	8.1	ALS2-A223DB6R3
	33000	36x82	16.0		14.0		9.4	10.1	ALS2-A333DE6R3
	47000	51x62	13.0		12.0		12.1	13.0	ALS2-A473KB6R3
	68000	51x82	11.0		9.5		14.7	16.0	ALS2-A683KE6R3
	100000	51x115	8.0		7.0		23.7	25.8	ALS2-A104KJ6R3
	150000	66x115	7.5		7.0		27.6	30.1	ALS2-A154MJ6R3
	220000	73x115	7.5		7.5		29.0	31.0	ALS2-A224PJ6R3
	470000	77x146	7.5		6.5		37.0	40.0	ALS2-A474NP6R3
10V d.c. (11.5V surge)	10000	36x49	34.0		27.0		6.0	6.5	ALS2-A103DY010
	15000	36x62	24.0		19.0		7.4	8.1	ALS2-A153DB010
	22000	36x82	20.0		18.0		9.3	10.0	ALS2-A223DE010
	33000	51x62	15.0		13.0		12.0	12.9	ALS2-A333KB010
	47000	51x82	11.0		10.0		14.6	15.8	ALS2-A473KE010
	68000	51x115	8.5		7.5		23.2	25.2	ALS2-A683KJ010
	100000	66x115	8.0		8.0		27.6	29.4	ALS2-A104MJ010
	150000	73x115	8.0		9.0		28.0	30.5	ALS2-A154PJ010
	330000	77x146	7.5		6.5		36.7	39.9	ALS2-A334NP010
16V d.c. (18.4V surge)	6800	36x49	43		34		5.3	5.9	ALS2-A682DY016
	10000	36x62	30.0		23.0		6.8	7.4	ALS2-A103DB016
	15000	36x82	19.0		14.0		8.4	9.2	ALS2-A153DE016
	22000	51x62	15.0		12.0		10.9	11.9	ALS2-A223KB016
	33000	51x82	12.0		9.5		13.4	14.6	ALS2-A333KE016
	47000	51x115	9.0		8.0		21.3	23.2	ALS2-A473KJ016
	68000	66x115	8.0		8.0		24.8	27.0	ALS2-A683MJ016
	100000	73x115	8.0		8.0		26.0	28.1	ALS2-A104PJ016
	220000	77x146	7.5		6.5		33.5	35.9	ALS2-A224NP016
25V d.c. (28.5V surge)	4700	36x49	46.0		35.0		5.3	5.9	ALS2-A472DY025
	6800	36x62	32.0		25.0		6.6	7.3	ALS2-A682DB025
	10000	36x82	21.0		15.0		8.2	9.1	ALS2-A103DE025
	15000	51x62	17.0		12.0		10.7	11.8	ALS2-A153KB025
	22000	51x82	13.0		9.5		13.0	14.4	ALS2-A223KE025
	33000	51x115	9.0		7.0		20.9	23.2	ALS2-A333KJ025
	47000	66x115	8.5		8.0		24.4	27.0	ALS2-A473MJ025
	68000	73x115	8.0		8.0		26.1	28.1	ALS2-A683PJ025
	150000	77x146	7.5		6.0		33.0	36.0	ALS2-A154NP025
40V d.c. (46V surge)	3300	36x49	48.0		32.0		5.2	5.9	ALS2-A332DY040
	4700	36x62	31.0		20.0		6.4	7.3	ALS2-A472DB040
	6800	36x82	26.0		17.0		8.0	9.0	ALS2-A682DE040
	10000	51x62	18.0		12.5		10.3	11.6	ALS2-A103KB040
	15000	51x82	15.0		11.0		12.6	14.1	ALS2-A153KE040
	22000	51x115	10.0		8.0		20.0	22.8	ALS2-A223KJ040
	33000	66x115	9.0		8.0		23.6	26.5	ALS2-A333MJ040
	47000	73x115	9.5		9.0		25.0	27.5	ALS2-A473PJ040
	100000	77x146	9.0		7.0		31.6	35.9	ALS2-A104NP040
63V d.c. (72V surge)	2200	36x49	74.0		45.0		4.8	5.8	ALS2-A222DY063
	3300	36x62	42.0		20.0		6.0	7.1	ALS2-A332DB063
	4700	36x82	32.0		16.0		7.5	8.9	ALS2-A472DE063
	6800	51x62	23.0		13.0		9.6	11.4	ALS2-A682KB063
	10000	51x82	13.0		9.0		16.8	20.2	ALS2-A103KE063
	15000	51x115	12.0		8.0		19.0	22.4	ALS2-A153KJ063
	22000	66x115	11.0		9.0		22.1	26.1	ALS2-A223MJ063
	33000	73x115	9.0		9.0		22.3	26.5	ALS2-A333PJ063
	47000	77x146	9.0		8.0		29.5	35.0	ALS2-A473NP063

Note: Values of E.S.R. and Impedance quoted above are maximum

ALS27/29 SERIES

Screw Terminals - Plain and Stud Mountings

Rated voltage	Cap μ F	Case Size	ESR $m\Omega$ at 20°C		Impedance $m\Omega$ at 20 °C, 10 KHz		Ripple current A at 85°C		Type number (Excluding style ref)
			100Hz				100 Hz	10 KHz	
100V d.c. (115V surge)	1000	36x49	112.0		80.0		3.5	4.5	ALS2-A102DY100
	1500	36x62	57.0		50.0		4.5	5.6	ALS2-A152DB100
	2200	36x82	48.0		40.0		5.6	7.0	ALS2-A222DE100
	3300	51x62	51.0		28.0		7.2	9.0	ALS2-A332KB100
	4700	51x82	37.0		20.0		8.9	11.0	ALS2-A472KE100
	6800	51x115	26.0		14.0		13.8	17.6	ALS2-A682KJ100
	10000	66x115	20.0		12.0		16.8	20.8	ALS2-A103MJ100
	15000	73x115	17.0		11.0		18.4	22.0	ALS2-A153PJ100
22000	77x146	13.0		9.0		22.8	27.8	ALS2-A223NP100	
160V d.c. (184V surge)	470	36x49	230.0		80.0		3.0	3.7	ALS2-A471DY160
	680	36x62	160.0		50.0		3.7	4.6	ALS2-A681DB160
	1000	36x82	130.0		58.0		4.7	5.7	ALS2-A102DE160
	1500	51x62	74.0		25.0		6.1	8.3	ALS2-A152KB160
	2200	51x82	50.0		17.0		10.0	12.8	ALS2-A222KE160
	3300	51x115	36.0		14.0		11.7	14.7	ALS2-A332KJ160
	4700	66x115	27.0		12.0		14.1	17.0	ALS2-A472MJ160
	6800	73x115	22.0		12.0		15.2	18.1	ALS2-A682PJ160
10000	77x146	17.0		10.0		19.1	22.8	ALS2-A103NP160	
250V d.c. (287V surge)	220	36x49	680.0		270.0		1.9	2.6	ALS2-A221DY250
	330	36x62	405.0		200.0		2.5	3.3	ALS2-A331DB250
	470	36x82	240.0		85.0		3.2	4.7	ALS2-A471DE250
	680	51x62	195.0		90.0		4.1	5.3	ALS2-A681KB250
	1000	51x82	140.0		85.0		5.1	6.6	ALS2-A102KE250
	1500	51x115	90.0		45.0		7.6	10.0	ALS2-A152KJ250
	2200	66x115	64.0		32.0		10.1	12.8	ALS2-A222MJ250
	3300	73x115	45.0		24.0		11.3	13.8	ALS2-A332PJ250
4700	77x146	32.0		18.0		14.9	18.0	ALS2-A472NP250	
350V d.c. (385 V surge)	150	36x49	710.0		360.0		1.5	2.4	ALS2-A151DY350
	220	36x62	500.0		300.0		1.9	3.0	ALS2-A221DB350
	330	36x82	290.0		120.0		2.5	4.9	ALS2-A331DE350
	470	51x62	235.0		128.0		3.1	5.4	ALS2-A471KB350
	680	51x82	160.0		90.0		4.0	6.9	ALS2-A681KE350
	1000	51x115	110.0		60.0		5.8	10.0	ALS2-A102KJ350
	1500	66x115	76.0		45.0		7.9	12.9	ALS2-A152MJ350
	2200	73x115	55.0		36.0		9.1	14.3	ALS2-A222PJ350
3300	77x146	38.0		26.0		12.1	18.2	ALS2-A332NP350	
400V d.c. (440V surge)	100	36x49	1500.0		1100.0		1.1	1.5	ALS2-A101DY400
	150	36x62	1320.0		760.0		1.5	2.0	ALS2-A151DB400
	220	36x82	900.0		520.0		1.9	2.6	ALS2-A221DE400
	330	51x62	600.0		380.0		2.4	3.3	ALS2-A331KB400
	470	51x82	360.0		260.0		3.1	4.3	ALS2-A471KE400
	680	51x115	255.0		180.0		4.4	6.1	ALS2-A681KJ400
	1000	66x115	130.0		120.0		6.1	9.8	ALS2-A102MJ400
	1500	73x115	90.0		90.0		8.3	11.3	ALS2-A152PJ400
2200	77x146	94.0		60.0		10.0	13.5	ALS2-A222NP400	
450V d.c. (495V surge)	68	36x49	1860.0		1650.0		0.8	1.5	ALS2-A680DY450
	100	36x62	1300.0		1350.0		1.1	1.8	ALS2-A101DB450
	150	36x82	1100.0		1200.0		1.4	2.1	ALS2-A151DE450
	220	51x62	570.0		525.0		2.0	3.7	ALS2-A221KB450
	330	51x82	380.0		345.0		2.4	4.6	ALS2-A331KE450
	470	51x115	270.0		240.0		3.3	6.3	ALS2-A471KJ450
	680	51x115	260.0		150.0		4.0	6.6	ALS2-A681KJ450
	1000	66x115	180.0		173.0		5.3	8.4	ALS2-A102MJ450
1500	73x115	120.0		120.0		6.8	10.5	ALS2-A152PJ450	
2200	77x146	80.0		83.0		9.1	13.9	ALS2-A222NP450	

Note. Values of E.S.R. and Impedance quoted above are maximum