Radial Lead Aluminum Electrolytic Capacitors– XR Series

FEATURES

- 105℃, 8,000 ~ 12,000 hours assured.
- Non-solvent proof.
- High Ripple, Long Lifeow Impedance.
- RoHs compliance.

APPLICATIONS

- Ideally suited for switching power supplies,telecommunication and other electronic products.

PRODUCT IDENTIFICATION

01	02		03	04	05	06	07
ZXR	16	—	VB	100	M	5*11	2.5TP

01

TyPe	
ZXB	Radial Lead Aluminum Electrolytic Capacitors

02

Rate Voltage	
6R3	6.3V
10	10V
16	16V
25	25V
35	35V
50	50V
63	63V
100	100V

03

Lead Wire and Sleeve type
VB

04

Nominal Capacitance	
Example	Nominal value
1R0	1uF
100	10uF
102	1000uF

05

Tolerance	
K	±10%
M	±20%

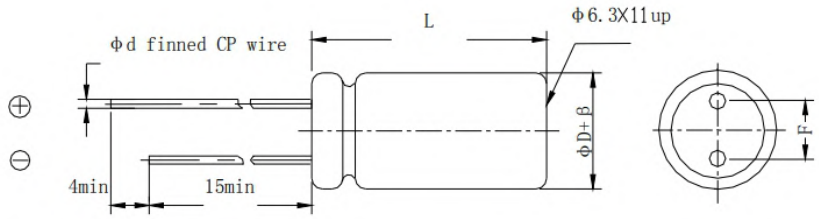
06

External Dimensions ΦDxL(mm)	
5*11	5x 11
6.3*12	6.3x 12
8*12	8x 12
10*20	10 x 20
12.5*20	12.5 x 20

07

Packing	
2.5TP	Tape & Reel

SHAPE AND DIMENSIONS



β(mm)	±0.5			±1.0				
ΦD(mm)	5	6.3	8	10	12.5	16	18	22
F±0.5(mm)	2.	2.5	3.5	5.0		7.5		10.0
Φd±0.1(mm)	0.5		0.6			0.8		
L(mm)	11,12		12,16	12,16,	16,20,25	16,20,25,30,35	20,25,30,35,40	25,30,35,40
	L±2.0							

MAIN SPECIFICATIONS

Item	Characteristics
Rated Voltage Range	160～400 Vdc / 420～500 Vdc
Operating Temperature Range	-40～+105℃ / -25～+105℃
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)
Leakage Current	C·V \ Time: ≦1000: After 1 minute I=0.1CV+40, After 5 minutes I=0.03CV+15; 〉1000: After 1 minute I=0.04CV+100, After 5 minutes I=0.02CV+25. Where, I:Max. Leakage current(μA) C:Nominal capacitance(μF) V:Rated voltage(Vdc) (at 20℃)
Dissipation Factor(Tanδ)	Rated Voltage(Vdc): 160～250 / 350～500; Tanδ(Max.): 0.20 / 0.24 (at 20℃, 120Hz)
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(Vdc): 160～250 / 350～400 / 420～500; Z(-25℃)/Z(20℃): 3 / 5 / 6; Z(-40℃)/Z(20℃): 6 / 6 / - (at 120Hz)
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 12,000 hours at 105℃. (where, 8,000 hours for ø8, 10,000 hours for ø10, ø8x50L) Capacitance change ≦ ±20% of the initial value Tanδ ≦ 200% of the initial specified value Leakage current ≦ The initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≦ ±20% of the initial value Tanδ ≦ 200% of the initial specified value Leakage current ≦ 500% of the initial specified value
Others	Satisfied characteristics KS C IEC 60384-4

Rating of ZXR

Vdc / Items μF	160		200	
	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)
10	10×16	320	10×16	320
22	10×16	450	10×16	450
25	10×16	478	8×20	465
			10×16	478
27	10×16	500	10×16	500
33	10×16	600	10×20	650
39	10×16	613	10×20	670
47	10×20	750	12.5×20	850
56	10×20	788	12.5×25	1,013
68	10×20	900	10×33	1,200
	12.5×20	950	12.5×25	1,070
82	12.5×25	1,025	16×20	1,250
100	12.5×25	1,125	16×25	1,300
	16×20	1,125		
120	16×25	1,339	16×25	1,339
150	16×25	1,510	16×25	1,510
220	16×31.5	1,933	18×31.5	2,030
	18×25	1,870		
270	16×35.5	2,189	18×35.5	2,300
330	16×40	2,516	18×40	2,586
	18×31.5	2,446		
390	18×35.5	2,745		
470	18×40	3,064		

Vdc / Items μF	250		350	
	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)
4.7	8×11.5	160		
6.8	8×11.5	180		
	10×12.5	250		
10	8×15	240	8×20	350
	10×16	350	10×16	330
22	10×16	470	12.5×20	650
	10×20	500		
33	12.5×16	613	10×33	700
			12.5×25	750
	12.5×20	688	16×20	750
47	8×50	875	10×50	950
	12.5×20	850	16×20	950
68	10×40	1,125	16×31.5	1,300
	12.5×25	1,070	18×25	1,300
82	12.5×30	1,340	18×25	1,400
	16×20	1,340		
100	16×25	1,400	18×31.5	1,550
	18×20	1,400		
120	18×20	1,450		
150	18×25	1,740		
180	12.5×50	1,910		
	18×31.5	1,960		
220	18×31.5	2,040		

Vdc / Items / μF	400		420	
	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)
1	8×11.5	60		
2.2	8×11.5	100		
3.3	8×11.5	130		
	10×12.5	150		
4.7	8×11.5	145		
	10×12.5	170		
6.8	8×15	180		
	10×16	280		
10	8×20	350	10×20	360
	10×16	350		
15	10×20	410	12.5×20	450
	12.5×16	410		
22	10×25	500	12.5×25	580
	12.5×20	550	16×20	725
33	12.5×25	780	12.5×30	750
	16×20	800	16×25	920
47	16×25	980	12.5×40	920
	18×20	980	16×25	980
56			18×20	950
68	18×25	1,350	18×25	1,100
82	18×31.5	1,500	18×31.5	1,300
100	18×35.5	1,650	18×35.5	1,400
120	18×40	1,850	18×35.5	1,600
			18×40	1,750
150	18×45	1,900		
180	18×45	2,000		

Vdc / Items / μF	450		500	
	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)	ø D×L(mm)	Rated Ripple Current (mArms/105℃, 100kHz)
4.7	8×20	220		
	10×16	220		
6.8	10×16	250		
	10×20	280		
10	10×20	360	12.5×20	440
15	10×20	400	12.5×25	500
	12.5×20	450	16×20	500
22	12.5×25	580	12.5×30	600
	16×20	725	16×25	600
			18×20	600
33	12.5×30	750	16×31.5	700
	16×25	920	18×25	700
40			12.5×50	860
47	10×50	900	18×31.5	880
	12.5×40	920		
	16×25	980		
60			12.5×60	1,180
68	18×25	1,100	18×35.5	1,200
82	18×31.5	1,300	18×40	1,300
100	18×35.5	1,400	18×45	1,500
			20×40	1,500
120	18×40	1,650		
150	18×45	1,800		
	20×40	1,800		

RATED RIPPLE CURRENT MULTIPLIERS

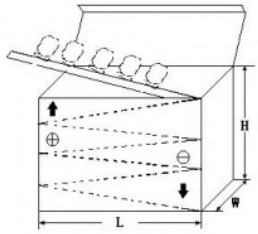
Frequency Multipliers

Freq.(Hz) / Cap.(μF)	120	1k	10k	50k	100k
1~15	0.35	0.65	0.90	0.95	1.00
22~82	0.40	0.70	0.90	0.95	1.00
100~470	0.45	0.75	0.90	0.95	1.00

PACKAING STYLE

● Taped Packaging Quantity

直径 ΦD(mm)	数量(只) Qty. (Pcs)	L(电容高度)≤22mm	L(电容高度)=25±2mm
		L×W×H(mm)	L×W×H(mm)
Φ5	2000	328×235×50	328×235×57
Φ6.3	1500		
Φ8	1000		
Φ10	600		
Φ12.5	400		
Φ16	250		
Φ18	200		



● Bulk Packaging Quantity

ΦD(mm)Diameter	L(mm)Length	Quantity (pcs/bag)	bag/box	PCS/INNERBOX	PCS/OUTERBOX
Φ4	7-8	1000	15	4	60,000
Φ5	5-7	1000	12	4	48,000
Φ5	11	1000	10	4	40,000
Φ6.3	5-7	1000	10	4	40,000
Φ6.3	8-15	1000	8	4	32,000
Φ6.3	15-20	1000	6	4	24,000
Φ8	5-12	500	8	4	16,000
Φ8	14-16	500	8	4	16,000
Φ8	20	500	6	4	12,000
Φ10	9-13	500	6	4	12,000
Φ10	14-16	250	8	4	12,000
Φ10	17-20	250	8	4	8,000
Φ10	25-30	200	8	4	6,400
Φ10	31-45	200	8	4	4,800
Φ12.5	16-28	200	6	4	4,800
Φ12.5	30-40	100	8	4	3,200
Φ12.5	45-50	100	6	4	2,400
Φ16	15-20	100	6	4	3,200
Φ16	21-30	100	6	4	2,400
Φ16	31-40	50	10	4	2,000
Φ18	15-20	100	6	4	1,200
Φ18	25-30	50	8	4	800
Φ18	35-40	50	6	4	600
Φ18	41-50	25	10	4	500