

LHA Series

Useful of 4,000 hours at 105°C (Warranty of 2,000 hours at 105°C)

Features

- Warranty life of 2000 hours at 105°C through improvement of electrolyte liquid



Product Specifications

Items	Specifications
Temperature range	-40°C ~ +105°C
Capacitance tolerance	±20% (20°C, 120Hz)
Rated voltage	25 ~ 400V.DC
Leakage current	0.01CV (μA) or 5mA, whichever is smaller or less [C = nominal capacitance (μF), V = rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C, 120Hz)
Permissible ripple current	As specified in the standard products table. (105°C, 120Hz)
High-temperature load	After the rated voltage with specified ripple current is applied at 105°C for 2000 hours: Capacitance tolerance: ±15% or less of the initial value Dissipation factor: 175% or less of the specified initial value Leakage current: Specified initial value or less
Others	JIS C 5101-4.

Ripple current correction coefficient

Temperature (°C)	40	55	70	85	105	
Correction coefficient	250WV under	4.9	3.9	3.0	1.8	1.0
	400WV	3.8	3.3	2.5	2.0	1.0
Frequency (Hz)	50/60	120	300	1K	≥10K	
Correction coefficient	0.8	1.0	1.1	1.3	1.4	

Ripple current should be under 60 Arms at M5 terminal in accordance with from the permissible current.

Attachment of legs

- See page 10 for shapes and dimensions.
- Product names in the Standard Units Rating Table correspond to the attachment legs for Type Y (Type I for ø36 only), but Type I attachment legs may be used (Shape Code = I).
- If attachment legs are not necessary, enter "N" for the attachment leg shape code.
- Attachment legs will be delivered separately.

標準品定格表

Rated Voltage V. DC	Capacitance (μF)	Case size øDXL(mm)	Case code	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	Product name
25V(1E)	10000	36×53	A5	0.35	2.9	LHA1E103I
	15000	36×83	A8	0.35	4.2	LHA1E153I
	22000	36×83	A8	0.35	5.1	LHA1E223I
	33000	36×100	A10	0.40	6.3	LHA1E333I
	47000	51×75	C8R	0.40	8.0	LHA1E473Y
	68000	51×115	C12R	0.50	10.0	LHA1E683Y
	100000	64×96	D10R	0.60	11.3	LHA1E104Y
	150000	64×115	D12R	0.80	12.9	LHA1E154Y
	220000	77×115	E12R	1.00	14.8	LHA1E224Y
	330000	90×131	F13R	1.00	19.9	LHA1E334Y

Rated Voltage V. DC	Capacitance (μF)	Case size øDXL(mm)	Case code	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	Product name
35V(1V)	6800	36×53	A5	0.30	2.6	LHA1V682I
	10000	36×83	A8	0.30	3.7	LHA1V103I
	15000	36×83	A8	0.30	4.5	LHA1V153I
	22000	36×100	A10	0.35	5.5	LHA1V223I
	33000	51×75	C8R	0.40	6.7	LHA1V333Y
	47000	51×96	C10R	0.45	8.1	LHA1V473Y
	68000	51×115	C12R	0.50	10.0	LHA1V683Y
	100000	64×115	D12R	0.60	12.1	LHA1V104Y
	150000	77×115	E12R	0.70	13.8	LHA1V154Y
	220000	90×131	F13R	0.70	17.6	LHA1V224Y

Rated Voltage V. DC	Capacitance (μF)	Case size øDXL(mm)	Case code	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	Product name
50V(1H)	3300	36×53	A5	0.20	2.2	LHA1H332I
	4700	36×53	A5	0.25	3.3	LHA1H472I
	6800	36×83	A8	0.25	3.4	LHA1H682I
	10000	36×83	A8	0.25	4.1	LHA1H103I
	15000	36×100	A10	0.30	4.9	LHA1H153I
	22000	51×75	C8R	0.35	5.9	LHA1H223Y
	33000	51×115	C12R	0.40	7.8	LHA1H333Y
	47000	64×96	D10R	0.40	9.5	LHA1H473Y
	68000	64×115	D12R	0.45	11.6	LHA1H683Y
	100000	77×115	E12R	0.50	14.1	LHA1H104Y
150000	90×131	F13R	0.50	18.9	LHA1H154Y	

Rated Voltage V. DC	Capacitance (μF)	Case size øDXL(mm)	Case code	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	Product name
63V(1J)	2200	36×53	A5	0.15	2.1	LHA1J222I
	3300	36×53	A5	0.20	2.2	LHA1J332I
	4700	36×83	A8	0.20	3.1	LHA1J472I
	6800	36×83	A8	0.20	3.7	LHA1J682I
	10000	36×100	A10	0.25	4.4	LHA1J103I
	15000	51×75	C8R	0.25	5.7	LHA1J153Y
	22000	51×96	C10R	0.30	6.8	LHA1J223Y
	33000	64×96	D10R	0.30	9.2	LHA1J333Y
	47000	64×115	D12R	0.35	10.9	LHA1J473Y
	68000	77×115	E12R	0.40	13.0	LHA1J683Y
100000	90×131	F13R	0.40	17.2	LHA1J104Y	

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
80V(1K)	2200	36×53	A5	0.15	2.1	LHA1K222I
	3300	36×83	A8	0.15	3.0	LHA1K332I
	4700	36×83	A8	0.15	3.6	LHA1K472I
	6800	36×100	A10	0.20	4.0	LHA1K682I
	10000	51×75	C8R	0.20	5.2	LHA1K103Y
	15000	51×96	C10R	0.25	6.2	LHA1K153Y
	22000	64×96	D10R	0.25	8.2	LHA1K223Y
	33000	77×96	E10R	0.30	9.7	LHA1K333Y
	47000	77×115	E12R	0.30	12.5	LHA1K473Y
	68000	90×131	F13R	0.30	16.4	LHA1K683Y

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
100V(2A)	1000	36×53	A5	0.15	1.4	LHA2A102I
	1500	36×53	A5	0.15	1.7	LHA2A152I
	2200	36×83	A8	0.15	2.5	LHA2A222I
	3300	36×83	A8	0.15	3.0	LHA2A332I
	4700	36×100	A10	0.15	3.9	LHA2A472I
	6800	51×75	C8R	0.15	5.0	LHA2A682Y
	10000	51×96	C10R	0.15	6.5	LHA2A103Y
	15000	64×96	D10R	0.20	7.6	LHA2A153Y
	22000	77×96	E10R	0.20	9.7	LHA2A223Y
	33000	77×130	E13R	0.25	11.8	LHA2A333Y
	47000	90×131	F13R	0.25	15.0	LHA2A473Y

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
160V(2C)	470	36×53	A5	0.15	1.0	LHA2C471I
	680	36×53	A5	0.15	1.1	LHA2C681I
	1000	36×83	A8	0.15	1.7	LHA2C102I
	1500	36×83	A8	0.15	2.0	LHA2C152I
	2200	36×100	A10	0.15	2.7	LHA2C222I
	3300	51×75	C8R	0.15	3.5	LHA2C332Y
	4700	51×96	C10R	0.15	4.4	LHA2C472Y
	6800	64×96	D10R	0.15	5.9	LHA2C682Y
	10000	77×96	E10R	0.15	7.6	LHA2C103Y
	15000	77×130	E13R	0.15	10.3	LHA2C153Y
	22000	90×131	F13R	0.15	13.2	LHA2C223Y

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
200V(2D)	330	36×53	A5	0.15	0.8	LHA2D331I
	470	36×53	A5	0.15	1.0	LHA2D471I
	680	36×53	A5	0.15	1.1	LHA2D681I
	1000	36×83	A8	0.15	1.7	LHA2D102I
	1500	36×100	A10	0.15	2.2	LHA2D152I
	2200	51×75	C8R	0.15	2.8	LHA2D222Y
	3300	51×96	C10R	0.15	3.7	LHA2D332Y
	4700	64×96	D10R	0.15	4.9	LHA2D472Y
	6800	64×115	D12R	0.15	6.3	LHA2D682Y
	10000	77×115	E12R	0.15	8.1	LHA2D103Y
	15000	90×131	F13R	0.15	10.9	LHA2D153Y

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
250V(2E)	330	36×53	A5	0.15	0.8	LHA2E331I
	470	36×53	A5	0.15	1.0	LHA2E471I
	680	36×83	A8	0.15	1.4	LHA2E681I
	1000	36×100	A10	0.15	1.9	LHA2E102I
	1500	51×75	C8R	0.15	2.3	LHA2E152Y
	2200	51×96	C10R	0.15	3.1	LHA2E222Y
	3300	64×96	D10R	0.15	4.2	LHA2E332Y
	4700	64×115	D12R	0.15	5.4	LHA2E472Y
	6800	77×115	E12R	0.15	6.9	LHA2E682Y
	10000	77×155	E16R	0.15	9.3	LHA2E103Y
	15000	90×157	F16R	0.15	12.2	LHA2E153Y

Rated Voltage V. DC	Capacitance (μ F)	Case size ϕ DXL(mm)	Case code	$\tan\delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	Product name
400V(2G)	1000	51×75	C8R	0.15	2.5	LHA2G102Y
	1200	51×96	C10R	0.15	3.0	LHA2G122Y
	1500	51×115	C12R	0.15	3.6	LHA2G152Y
	1800	51×130	C13R	0.15	4.1	LHA2G182Y
	2200	64×96	D10R	0.15	4.5	LHA2G222Y
	2700	64×115	D12R	0.15	5.3	LHA2G272Y
	3300	64×130	D13R	0.15	6.2	LHA2G332Y
	3900	64×155	D16R	0.15	7.2	LHA2G392YD
		77×115	E12R	0.15	6.8	LHA2G392YE
	4700	64×195	D20R	0.15	8.7	LHA2G472YD
		77×130	E13R	0.15	7.8	LHA2G472YE
	5600	64×195	D20R	0.15	9.6	LHA2G562YD
		77×155	E16R	0.15	9.2	LHA2G562YE
	6800	90×157	F16R	0.15	10.7	LHA2G682Y
	8200	90×157	F16R	0.15	11.8	LHA2G822Y
	10000	90×196	F20R	0.15	14.1	LHA2G103Y