

PHA Series

• 150°C 2,000Hrs assured.

Solvent-proof

- Wide Temperature range.
- Suitable to fit for automotive equipment.
- RoHS compliant.
- Halogen-free capacitors are also available.

PXA

PHA

Wide Temp.



SPECIFICATIONS

Item	Characteristics												
Rated Voltage Range	10 ~ 50 V _{DC}												
Operating Temperature Range	-40 ~ +150℃												
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)												
Leakage Current	I = 0.03CV (μA) or 4μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) : (at 20℃, 1 minute)												
Dissipation Factor(Tanδ)	<table><tr><td>Rated Voltage(V_{DC})</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Tanδ(Max.)</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td></tr></table> (at 20℃,120Hz)	Rated Voltage(V _{DC})	10	16	25	35	50	Tanδ(Max.)	0.24	0.20	0.16	0.14	0.12
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Temperature Characteristics (Max. impedance ratio)	<table><tr><td>Rate Voltage(V_{DC})</td><td>10 ~ 50</td></tr><tr><td>Z(-25℃)/Z(+20℃)</td><td>2</td></tr><tr><td>Z(-40℃)/Z(+20℃)</td><td>4</td></tr></table> (at 120Hz)	Rate Voltage(V _{DC})	10 ~ 50	Z(-25℃)/Z(+20℃)	2	Z(-40℃)/Z(+20℃)	4						
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Load Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied at 150℃ for 2,000 hours. Capacitance change ≤ ±30% of the initial value Tanδ ≤ 300% 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 150℃ 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 ≤ ±30% of the initial value Tanδ ≤ 300% of the initial specified value Leakage Current ≤ The initial specified value												
Others	Satisfied characteristics KS C IEC 60384-4												

DIMENSIONS OF PHA Series

Unit(mm)

		Marking : BLACK SLEEVE, WHITE INK	
øD	10	12.5	16
ød	0.6	0.6	0.8
F	5.0	5.0	7.5
øD'	øD + 0.5 max.		
L'	L + 2.0 max.		



RATINGS OF PHA Series

V _{DC}	10		16		25	
Items μF	ø D×L(mm)	Rated Ripple Current (mA _{rms} /150°C,120Hz)	ø D×L(mm)	Rated Ripple Current (mA _{rms} /150°C,120Hz)	ø D×L(mm)	Rated Ripple Current (mA _{rms} /150°C,120Hz)
220					10×16	370
330			10×16	370	12.5×20	600
470	10×16	370	12.5×20	600	16×31.5	1,100
1,000	12.5×20	600	16×31.5	1,100	16×35.5	1,150
2,200	16×31.5	1,100	16×35.5	1,150		
3,300	16×35.5	1,150				

V _{DC}	35		50	
Items μF	ø D×L(mm)	Rated Ripple Current (mA _{rms} /150°C,120Hz)	ø D×L(mm)	Rated Ripple Current (mA _{rms} /150°C,120Hz)
100	10×16	370	10×20	300
220	10×20	460	12.5×20	400
330	12.5×20	600	12.5×25	500
470	12.5×25	750	16×35.5	700
1,000	16×35.5	1,150		

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz)	120	1k	10k	50k	100k
Cap.(μF)					
100 ~ 1,000	1.00	1.15	1.30	1.33	1.40
2,200 ~ 3,300	1.00	1.03	1.05	1.06	1.08