

HE Series 105°C**HE系列****Features**

- Load life : 105°C 3000hour
- High ripple capability
- RoHS Compliant

**Specifications**

Item	Performance Characteristics					
Operating Temp. Range	-40~+105℃			-25~+105℃		
Rated Voltage Range	16 to 100 VDC			160 to 400 VDC		
Capacitance Range	2700 to 560000 μF			220 to 47000 μF		
Capacitance Tolerance	±20% (120Hz, 20℃)					
Leakage Current	$I_L \leq 3\sqrt{CV}$ (μA) After 5 minutes with rated working voltage applied					
Dissipation Factor(Tan δ) (max, 120Hz, 20℃)	Less than the value under table(%)	WV(V) Φ(mm)	35	51	64	77
		16	0.6	0.7	0.8	1.2
		25	0.4	0.5	0.7	0.8
		35	0.3	0.5	0.6	0.7
		50	0.25	0.3	0.5	0.6
		63	0.2	0.25	0.3	0.4
		80	0.2	0.2	0.25	0.3
		100	0.15	0.2	0.25	0.3
		160~250	0.15	0.15	0.2	0.2
350~450	0.2	0.2	0.25	0.25		
Low Temp. Characteristics (Max Impedance Ratio) (120Hz)	$Z_{(-25^{\circ})}/Z_{(+25^{\circ})}$	3				
	$Z_{(-40^{\circ})}/Z_{(+25^{\circ})}$	12				
Load Life	Test conditions Duration time: 3000hrs Ambient temperature: +105℃ Applied voltage: Rated DC working voltage After test requirements at +20℃ Capacitance change: ≤±15% of the initial measured value Dissipation factor: ≤175% of the initial specified value Leakage current: ≤Not more than the specified value					
Shelf Life	Test conditions Duration time: 1000hrs Ambient temperature: +105℃ Applied voltage: None Capacitance change: ≤±15% of the initial measured value Dissipation factor: ≤175% of the initial specified value Leakage current: ≤Not more than the specified value After test requirements at +20℃ : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30minutes					
Industrial Standard	JIS C-5101-4(IEC 60384-4)					

Multiplier for ripple current vs frequency

Fre.(Hz) W.V (VDC)	50(60)	120	400	1K	10K
16~50	0.8	1.0	1.03	1.05	1.08
63~100	0.8	1.0	1.05	1.07	1.10
160~400	0.8	1.0	1.10	1.13	1.18

Multiplier for ripple current vs temperature

Temp.(°C)	≤ 70	85	105
Multiplier	1.8	1.6	1.0

HE Series 105°C

HE系列

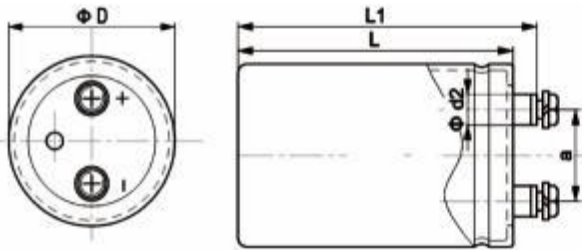
Features

- Load life : 105°C 3000hour
- High ripple capability
- RoHS Compliant



● Dimensional drawings

Ring clip/clamp mounting:



M5:Min.reach of screw = 8mm

M6:Min.reach of screw = 12mm

Terminal	Dimensions(mm) with insulating sleeve				
	D±2	L±3	L ±3	d max.	a±0.5
M5	35	50~120	56.5~126.5	10.3	12.7
M5	51	80~140	86.5~146.5	10.3	22
M5	63.5	80~140	86.5~146.5	10.3	28.6
M5	76.2/89	100~240	106.4~246.5	10.3	31.8
M6	76.2/89	100~240	106.4~246.5	17.5	31.8

Diameter D(mm)	Length L(mm)	Packing (pcs.)
35	≤70mm	120
	>70mm	60
42	≤70mm	120
	>70mm	60
51	≤70mm	70
	>70mm	35
63.5	all	24
76.2	all	15
89	all	12

● Accessories

The following items are included in the delivery package, but are not fastened to the capacitors.

	Thread	Maximum torque
For terminal	M5	2 Nm
	M6	2.5 Nm

HE Series 105°C**Features**

- Load life : 105°C 3000hour
- High ripple capability
- RoHS Compliant

**● Case Size**

WV(SV) Cap(µF)	16(20)		25(32)		35(44)		50(63)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
6800							35*50	3.1
10000					35*60	3.5	35*60	4.0
15000			35*50	3.8	35*80	4.8	35*80	5.5
22000	35*60	4.9	35*60	5.1	35*100	6.4	35*120	8.0
33000	35*80	6.7	35*100	7.4	35*120	8.5	51*100	8.3
47000	35*100	8.8	35*120	9.5	35*120	9.9	51*100	10.7
68000	51*80	9.5	51*100	10.3	51*100	12.8	51*140	12.6
100000	51*100	12.5	51*120	13.5	51*120	16.4	63.5*140	13.7
150000	51*140	17.6	63.5*120	16.9	63.5*120	16.8	76.2*140	17.9
220000	63.5*120	19.2	76.2*120	18.0	76.2*120	22.8		
330000	63.5*140	23.1	76.2*160	24.6				
470000	76.2*140	25.5						

Ripple Current (A, rms) at 105°C, 120Hz

WV(SV) Cap(µF)	63(72)		80(92)		100(125)		160(200)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1000							35*60	1.7
1500							35*80	2.1
2200							35*100	3.0
3300					35*60	1.9	35*120	4.0
4700			35*60	3.0	35*80	2.6	51*100	5.0
6800	35*60	3.7	35*80	4.1	35*100	3.5	51*140	7.0
10000	35*80	5.0	35*100	5.4	51*80	4.3	63.5*120	7.6
15000	35*120	7.2	51*80	6.3	51*100	5.7	76.2*120	7.0
22000	51*80	7.6	51*100	8.3	51*140	7.9	76.2*160	9.4
33000	51*120	10.1	51*140	11.7	63.5*140	9.5		
47000	63.5*100	11.7	63.5*140	14.3	76.2*140	9.1		
68000	63.5*140	12.6	76.2*140	14.6				
100000	76.2*140	14.6						

Ripple Current (A, rms) at 105°C, 120Hz

● For special designing requirement, please contact us.

HE Series 105°C

Features

- Load life : 105°C 3000hour
- High ripple capability
- RoHS Compliant



● Case Size

WV(sv) Cap(μF)	200(250)		250(300)		350(400)		400(450)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
220							35*50	0.6
330					35*60	0.7	35*60	0.7
470			35*60	1.1	35*80	1.0	35*80	1.0
680	35*50	1.3	35*80	1.5	35*100	1.3	35*120	1.4
1000	35*60	1.8	35*100	2.1	35*120	1.7	51*80	1.6
1500	35*80	2.3	51*80	2.6	51*100	2.2	51*120	2.4
2200	35*120	3.3	35*100	3.4	51*140	3.1	63.5*120	3.2
3300	51*100	4.2	51*140	4.8	63.5*120	4.6	76.2*120	3.9
4700	51*140	5.8	63.5*120	5.2	76.2*120	6.2	76.2*160	5.2
6800	63.5*120	6.2	76.2*120	5.5				
10000	76.2*120	6.7	76.2*160	7.6				
15000	76.2*160	9.2						

Ripple Current (A, rms) at 105°C, 120Hz