

EH series

- Low ESR, High Voltage, High ripple current capability
- Rated voltage : 35~100V
- Endurance : 2,000hours at 105°C
- Applications : LED Driver, LED Power Supply, etc.
- RoHS compliant
- Halogen Free compliant



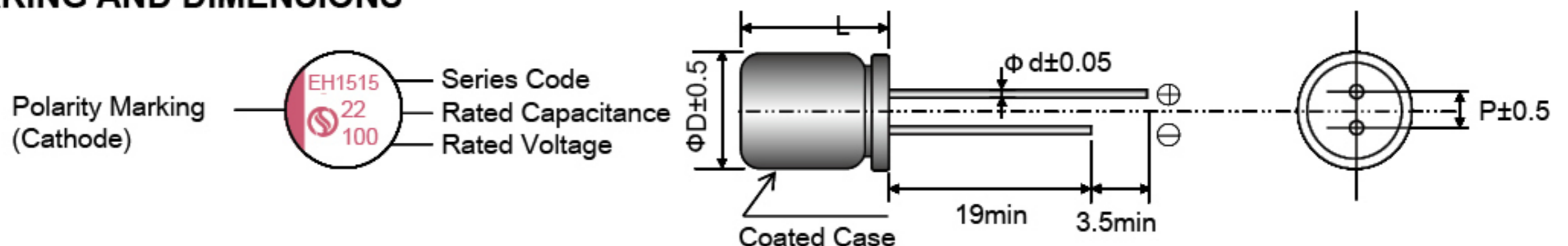
EH

SPECIFICATIONS

Items	Conditions	Characteristics
Category Temperature Range	—	-55 to +105°C
Rated Voltage Range	—	35 ~ 100V
Capacitance Tolerance	at 20°C, 120Hz	±20%(M)
Surge Voltage	at 105°C	Rated voltage × 1.15V
Leakage Current	at 20°C after 2 minutes	$I \leq 0.2CV$ or $300(\mu A)$ Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list
Dissipation Factor (tan δ)	at 20°C, 120Hz	Please see the attached characteristics list
Characteristics of Impedance at low, high temperature	at -55°C, 100kHz	$Z(-55^\circ C)/Z(+20^\circ C) \leq 1.25$
	at -25°C, 100kHz	$Z(-25^\circ C)/Z(+20^\circ C) \leq 1.15$
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to store 60°C, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (R = 1 kΩ) and discharge for 5 minutes 30 seconds.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq The initial specified value.

※ Note : If any doubt arises, measure the leakage current after following voltage treatment.
Voltage treatment : DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

MARKING AND DIMENSIONS



(Unit:mm)

Size	6.3x6	6.3x8	8x7	8x8	8x12	10x10	10x12	10x16
φ D	6.3	6.3	8	8	8	10	10	10
L	L+1 max	L+1.5 max	L+1.0 max	L+1.0 max	L+1.0 max	L+1.0 max	L+1.0 max	L+1.0 max
φ d	0.45	0.5	0.5	0.6	0.6	0.6	0.6	0.6
P	2.5	2.5	3.5	3.5	3.5	5.0	5.0	5.0

EH SERIES STANDARD CHARACTERISTICS LIST

Rated Voltage (S.V.)	Cap (μF)	Size DxL	Leakage current (μA) max. ※2	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms) 100kHz / 105°C	D.F. (tanδ) max. 120Hz / 20°C
35 (40.3)	22	6.3x6	300	70	1,450	0.12
	68	6.3x8	476	40	1,500	0.12
	82	8x7	574	60	1,800	0.12
	100	8x8	700	30	2,100	0.12
	100	8x12	700	26	2,300	0.12
	100	10x12	700	24	3,000	0.12
	150	8x8	1,050	30	2,500	0.12
	180	8x12	1,260	26	2,800	0.12
	220	10x10	1,540	26	3,000	0.12
	220	10x12	1,540	24	3,200	0.12
	330	10x12	2,310	24	3,600	0.12
	470	10x16	3,290	20	5,000	0.12
50 (57.5)	12	6.3x8	300	60	1,500	0.12
	33	6.3x8	330	60	1,500	0.12
	33	8x7	330	60	1,500	0.12
	47	8x8	470	32	1,850	0.12
	68	8x12	680	30	2,250	0.12
	47	8x12	470	30	2,250	0.12
	100	10x12	1,000	28	2,560	0.12
	150	10x12	1,500	28	2,620	0.12
63 (72.5)	22	6.3x8	300	60	1,500	0.12
	33	8x8	415	32	2,050	0.12
	33	10x10	415	32	2,200	0.12
	47	8x12	592	26	2,200	0.12
	56	10x10	705	30	2,300	0.12
	82	10x12	1,033	26	2,350	0.12
	100	10x12	1,260	25	2,550	0.12
80 (92.0)	22	8x8	352	35	1,850	0.12
	33	8x12	528	32	1,950	0.12
	47	10x10	752	33	2,200	0.12
	68	10x12	1,088	28	2,350	0.12
100 (115.0)	15	8x12	300	40	1,850	0.12
	22	10x12	440	38	2,250	0.12
	27	10x12	540	38	2,250	0.12

※ 1. Capacitance tolerance : ±20% (M)
 ※ 2. After 2 minutes

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1

