

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

Technical Data ZA series



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series



Patr No.	Voltaeg / Cap.	Size (mm)	Page
EEHZA1E220R	25 V 22 μ F	Φ 5 x 5.8	... ZA- 1
EEHZA1E330R	25 V 33 μ F	Φ 5 x 5.8	... ZA- 2
EEHZA1E470P	25 V 47 μ F	Φ 6.3 x 5.8	... ZA- 3
EEHZA1E560P	25 V 56 μ F	Φ 6.3 x 5.8	... ZA- 4
EEHZA1E680XP	25 V 68 μ F	Φ 6.3 x 7.7	... ZA- 5
EEHZA1E101XP	25 V 100 μ F	Φ 6.3 x 7.7	... ZA- 6
EEHZA1E151P	25 V 150 μ F	Φ 8 x 10.2	... ZA- 7
EEHZA1E221P	25 V 220 μ F	Φ 8 x 10.2	... ZA- 8
EEHZA1E331P	25 V 330 μ F	Φ 10 x 10.2	... ZA- 9
EEHZA1V100R	35 V 10 μ F	Φ 5 x 5.8	... ZA- 10
EEHZA1V220R	35 V 22 μ F	Φ 5 x 5.8	... ZA- 11
EEHZA1V270P	35 V 27 μ F	Φ 6.3 x 5.8	... ZA- 12
EEHZA1V330P	35 V 33 μ F	Φ 6.3 x 5.8	... ZA- 13
EEHZA1V470P	35 V 47 μ F	Φ 6.3 x 5.8	... ZA- 14
EEHZA1V680XP	35 V 68 μ F	Φ 6.3 x 7.7	... ZA- 15
EEHZA1V101P	35 V 100 μ F	Φ 8 x 10.2	... ZA- 16
EEHZA1V151P	35 V 150 μ F	Φ 8 x 10.2	... ZA- 17
EEHZA1V221P	35 V 220 μ F	Φ 10 x 10.2	... ZA- 18
EEHZA1V271P	35 V 270 μ F	Φ 10 x 10.2	... ZA- 19
EEHZA1H100R	50 V 10 μ F	Φ 5 x 5.8	... ZA- 20
EEHZA1H220P	50 V 22 μ F	Φ 6.3 x 5.8	... ZA- 21
EEHZA1H330XP	50 V 33 μ F	Φ 6.3 x 7.7	... ZA- 22
EEHZA1H470P	50 V 47 μ F	Φ 8 x 10.2	... ZA- 23
EEHZA1H680P	50 V 68 μ F	Φ 8 x 10.2	... ZA- 24
EEHZA1H101P	50 V 100 μ F	Φ 10 x 10.2	... ZA- 25
EEHZA1J100P	63 V 10 μ F	Φ 6.3 x 5.8	... ZA- 26
EEHZA1J220XP	63 V 22 μ F	Φ 6.3 x 7.7	... ZA- 27
EEHZA1J330P	63 V 33 μ F	Φ 8 x 10.2	... ZA- 28
EEHZA1J470P	63 V 47 μ F	Φ 8 x 10.2	... ZA- 29
EEHZA1J560P	63 V 56 μ F	Φ 10 x 10.2	... ZA- 30
EEHZA1J680P	63 V 68 μ F	Φ 10 x 10.2	... ZA- 31
EEHZA1J820P	63 V 82 μ F	Φ 10 x 10.2	... ZA- 32
EEHZA1K220P	80 V 22 μ F	Φ 8 x 10.2	... ZA- 33
EEHZA1K330P	80 V 33 μ F	Φ 10 x 10.2	... ZA- 34

Data Sheet

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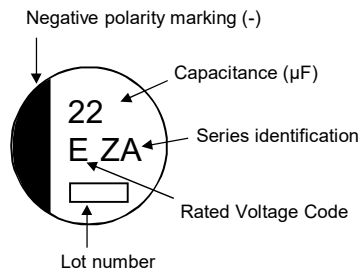
Part Number : EEHZA1E220R

Endurance: 105 °C, 10000 h

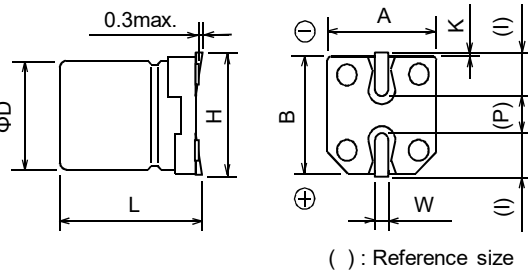
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	5.5 μA max. (at R.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	900 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

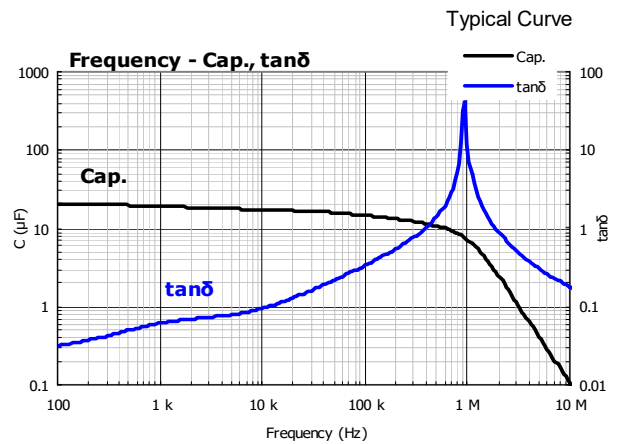
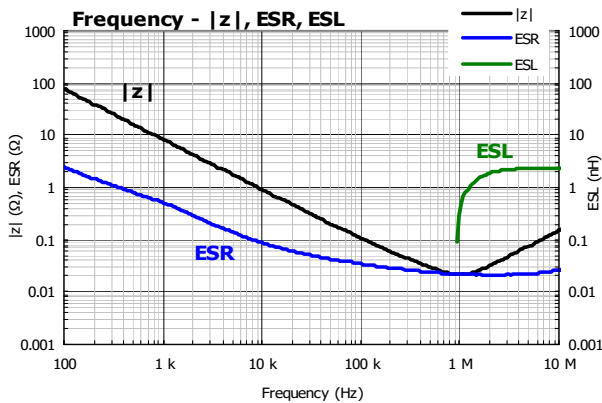


Size Code: C (Unit: mm)

ΦD	5.0 ±0.5
L	5.8 ±0.3
A, B	5.3 ±0.2
H	6.5 max.
I	2.2
W	0.65 ±0.10
P	1.5
K	0.35 +0.15/-0.20

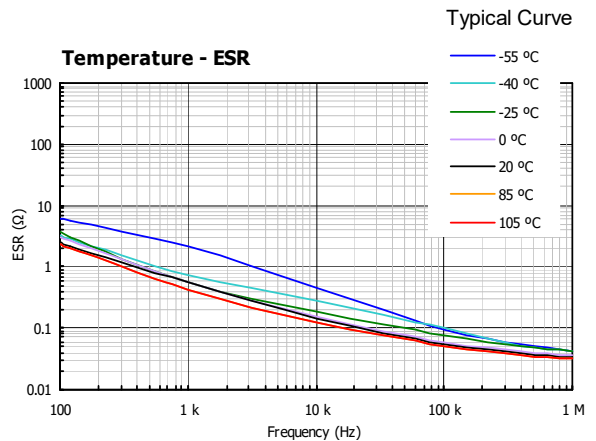
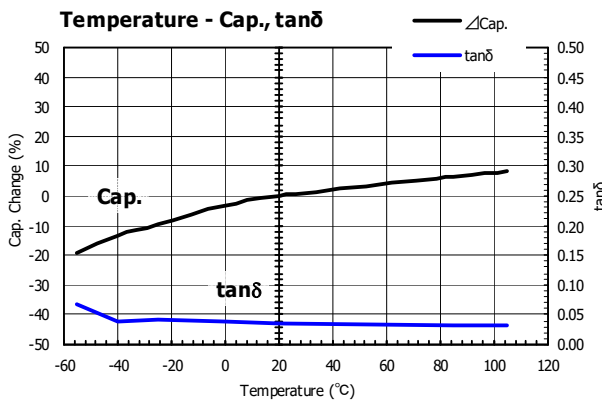
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

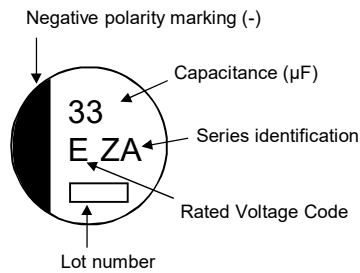
Part Number : EEHZA1E330R

Endurance: 105 °C, 10000 h

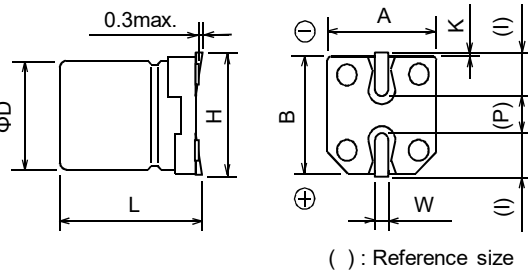
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	8.2 μA max. (at R.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	900 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

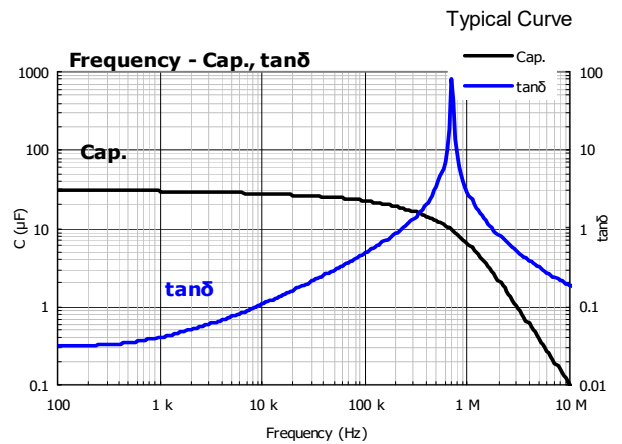
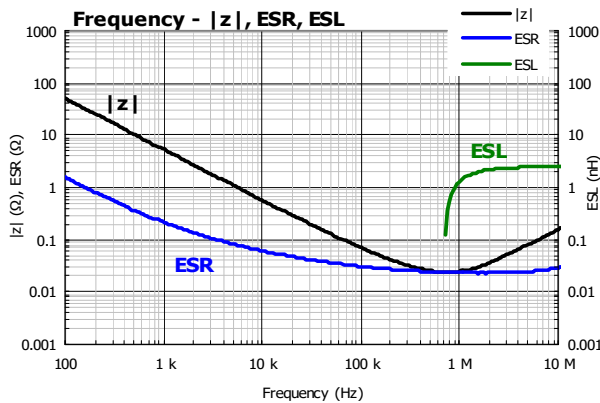


Size Code: C (Unit: mm)

ΦD	5.0 ±0.5
L	5.8 ±0.3
A, B	5.3 ±0.2
H	6.5 max.
I	2.2
W	0.65 ±0.10
P	1.5
K	0.35 +0.15/-0.20

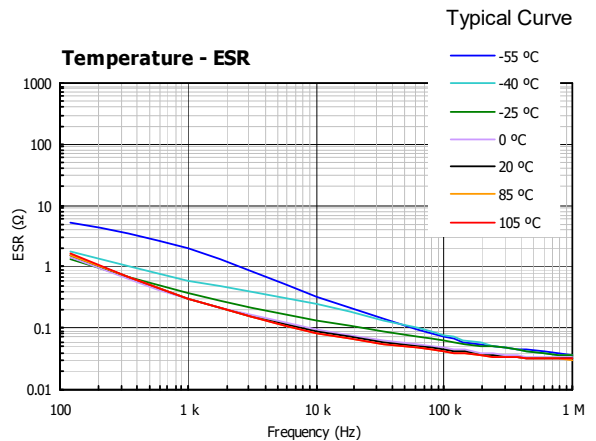
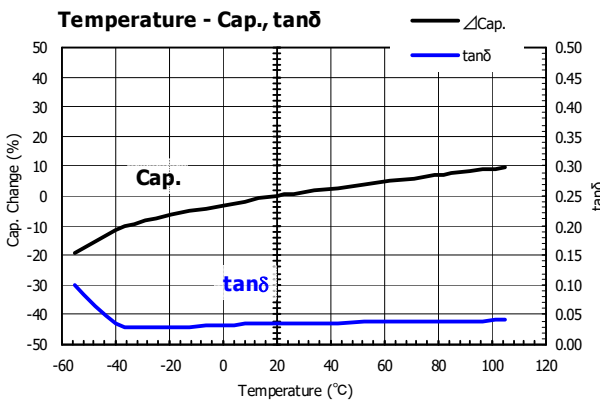
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

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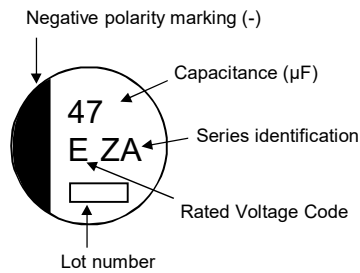
Part Number : EEHZA1E470P

Endurance: 105 °C, 10000 h

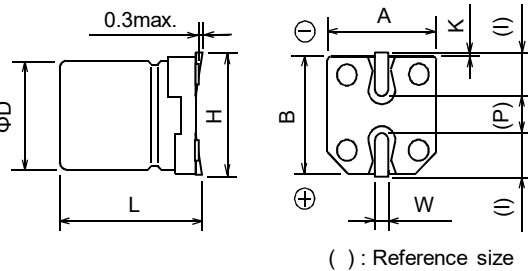
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	47 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	11.7 μA max. (at R.V., After 2 min)
ESR	50 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

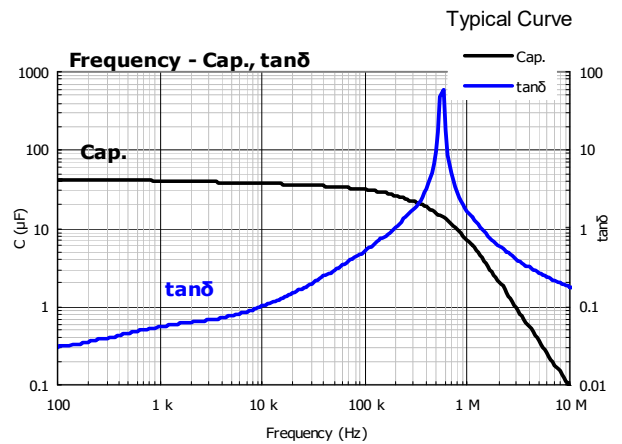
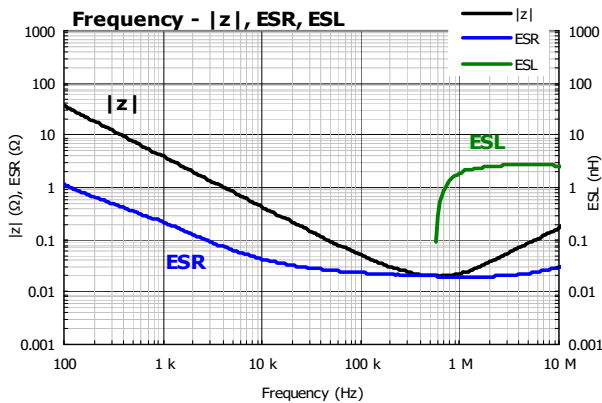


Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

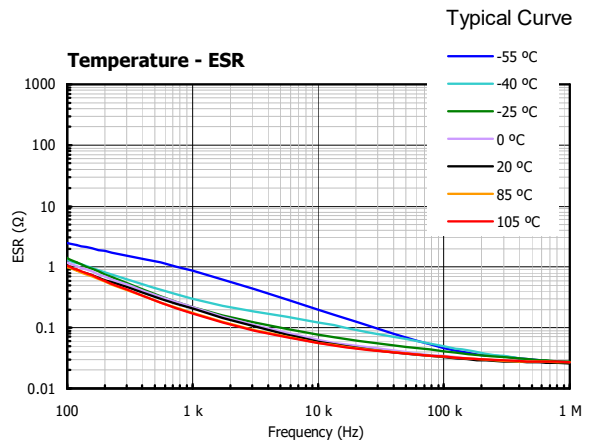
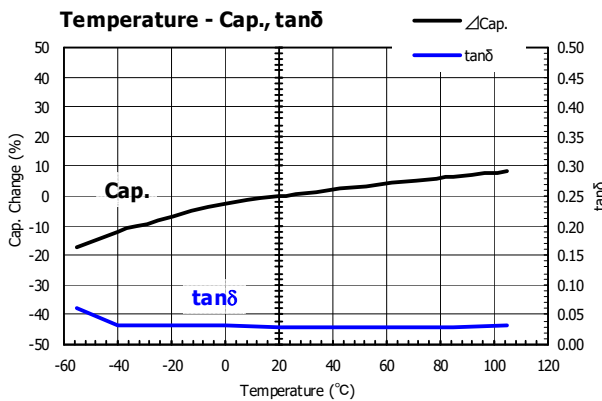
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



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Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

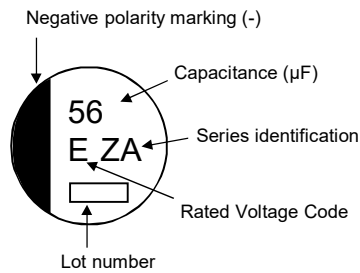
Part Number : EEHZA1E560P

Endurance: 105 °C, 10000 h

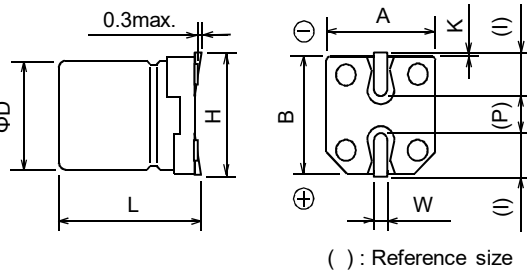
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	56 μ F (at 120 Hz)
Capacitance Tolerance	\pm 20 %

$\tan \delta$	0.14 max. (at 120 Hz)
Leakage Current	14.0 μ A max. (at R.V., After 2 min)
ESR	50 m Ω max. (at 100 kHz, 20 °C)
Ripple Current	1300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

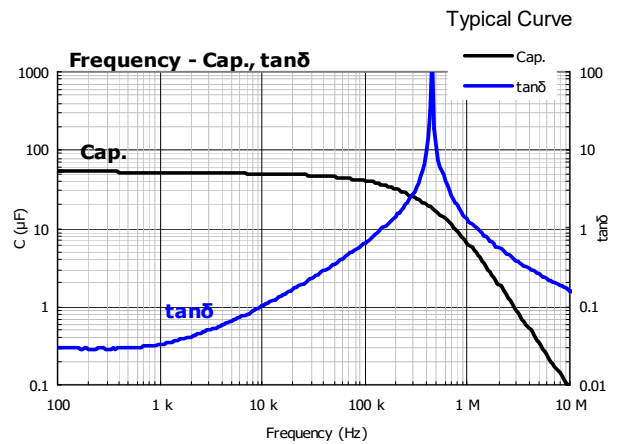
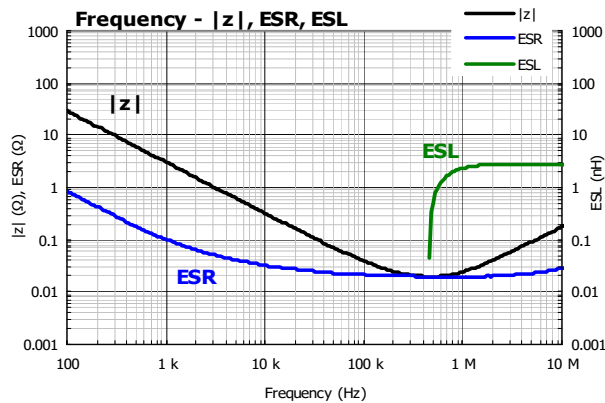


Size Code: D (Unit: mm)

Φ D	6.3 \pm 0.5
L	5.8 \pm 0.3
A, B	6.6 \pm 0.2
H	7.8 max.
I	2.6
W	0.65 \pm 0.10
P	1.8
K	0.35 +0.15/-0.20

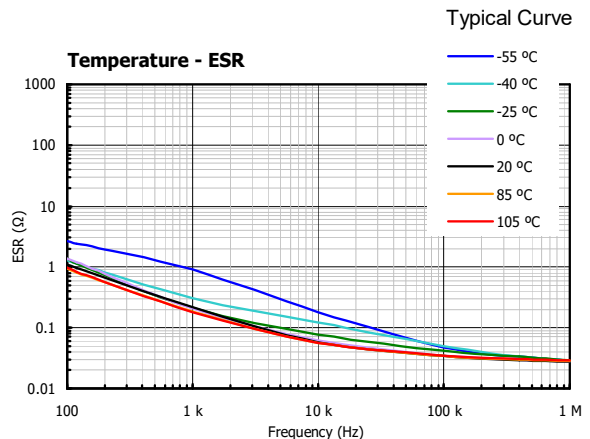
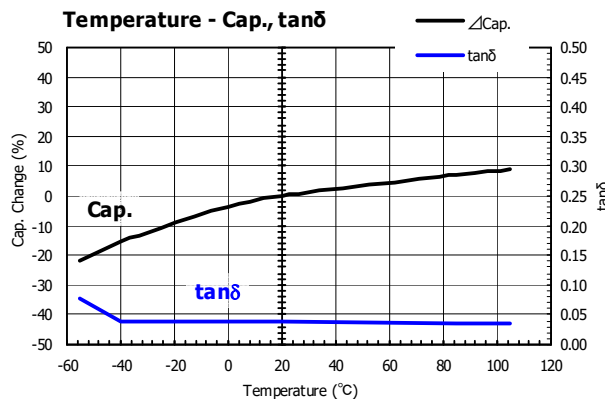
Frequency vs. Impedance, ESR, ESL, Capacitance, $\tan \delta$ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, $\tan \delta$, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



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Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

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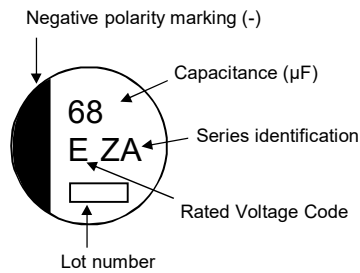
Part Number : EEHZA1E680XP

Endurance: 105 °C, 10000 h

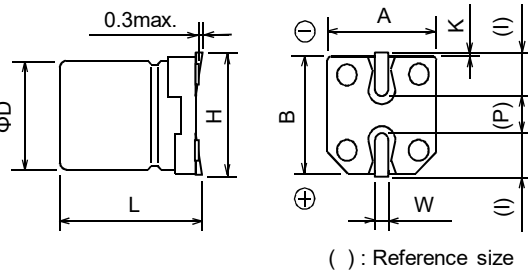
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	17.0 μA max. (at R.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2000 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

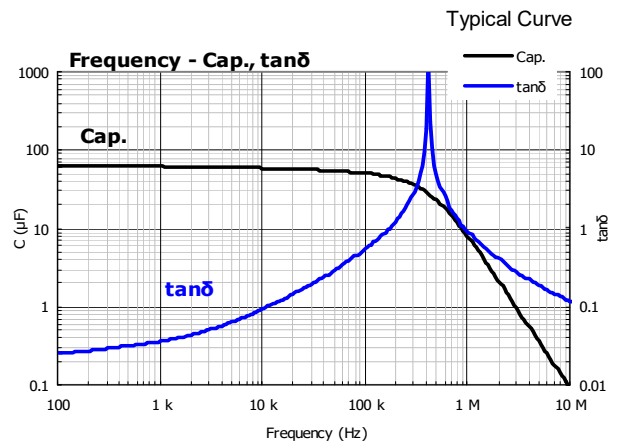
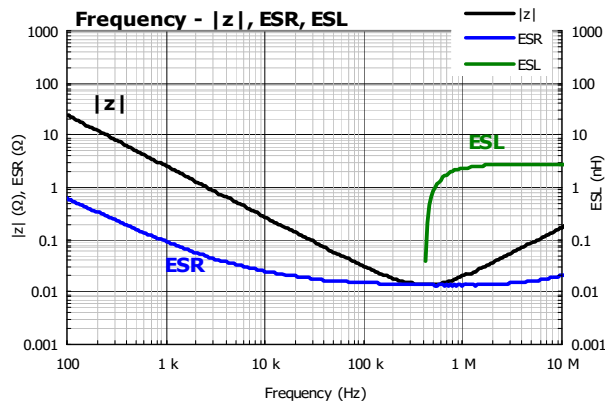


Size Code: D8 (Unit: mm)

ΦD	6.3 ±0.5
L	7.7 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

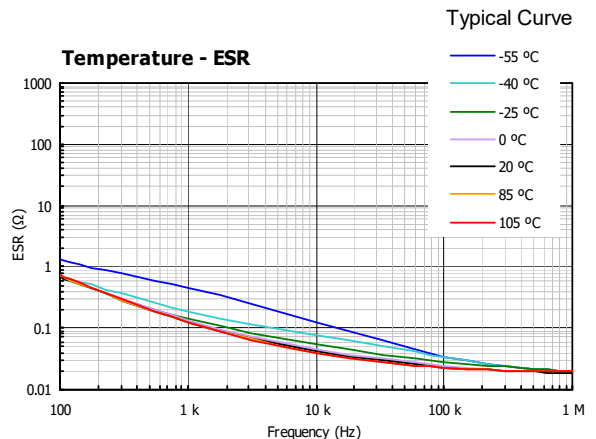
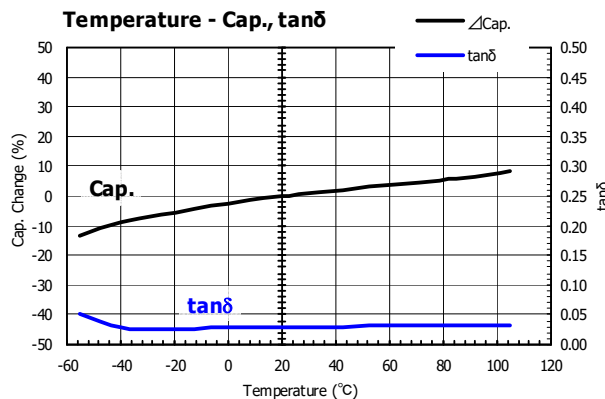
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

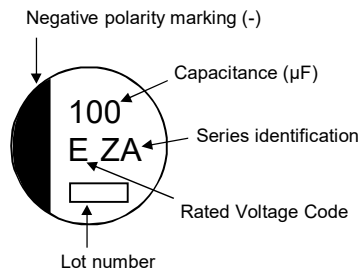
Part Number : EEHZA1E101XP

Endurance: 105 °C, 10000 h

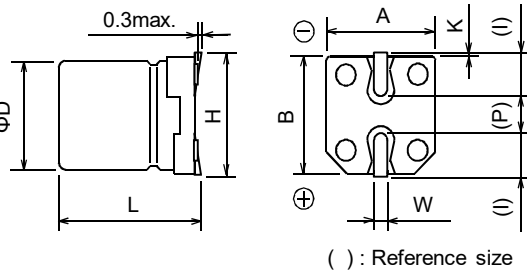
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	100 μ F (at 120 Hz)
Capacitance Tolerance	\pm 20 %

$\tan \delta$	0.14 max. (at 120 Hz)
Leakage Current	25.0 μ A max. (at R.V., After 2 min)
ESR	30 m Ω max. (at 100 kHz, 20 °C)
Ripple Current	2000 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

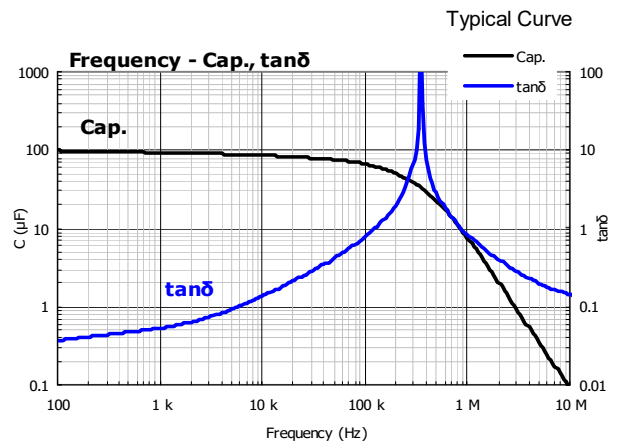
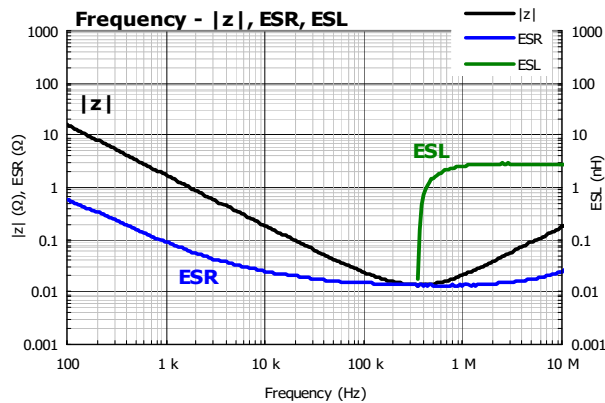


Size Code: D8 (Unit: mm)

Φ D	6.3 \pm 0.5
L	7.7 \pm 0.3
A, B	6.6 \pm 0.2
H	7.8 max.
I	2.6
W	0.65 \pm 0.10
P	1.8
K	0.35 +0.15/-0.20

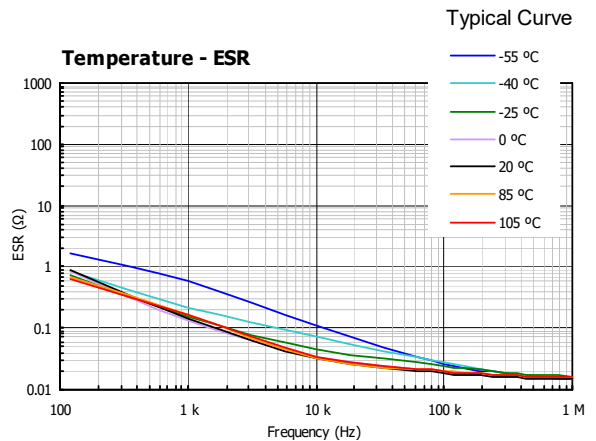
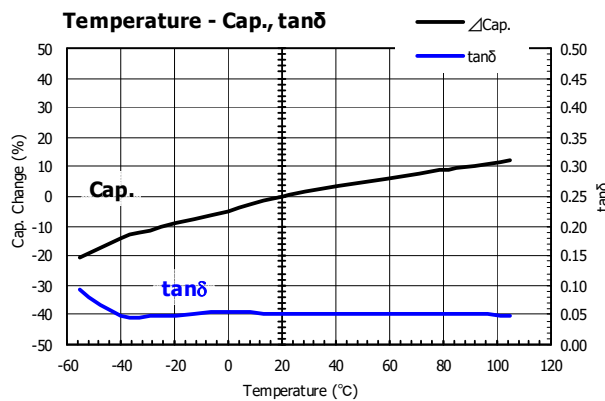
Frequency vs. Impedance, ESR, ESL, Capacitance, $\tan \delta$ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, $\tan \delta$, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

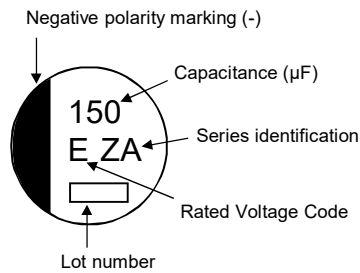
Part Number : EEHZA1E151P

Endurance: 105 °C, 10000 h

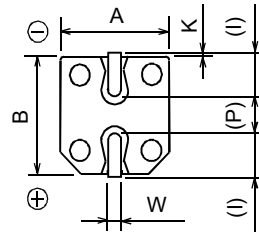
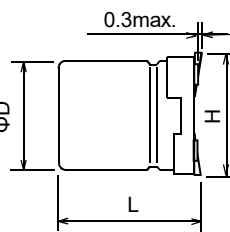
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	150 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	37.5 μA max. (at R.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2300 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)



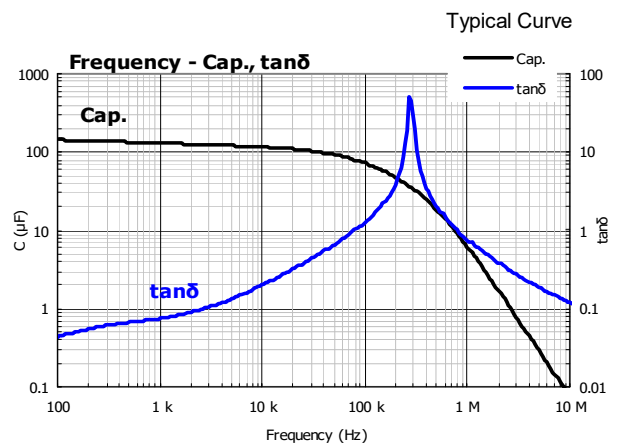
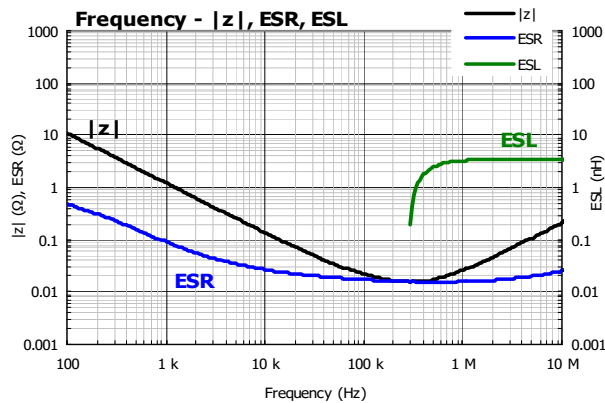
() : Reference size

Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

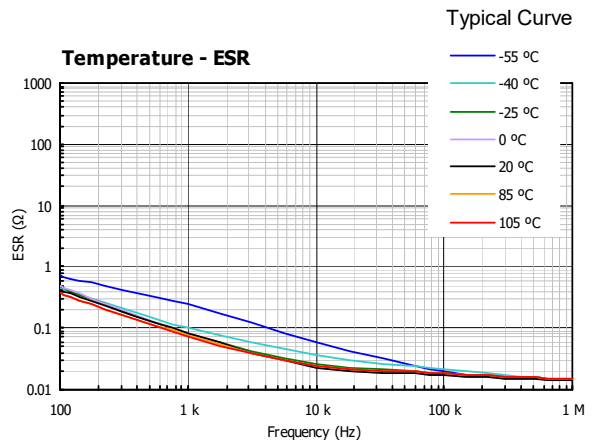
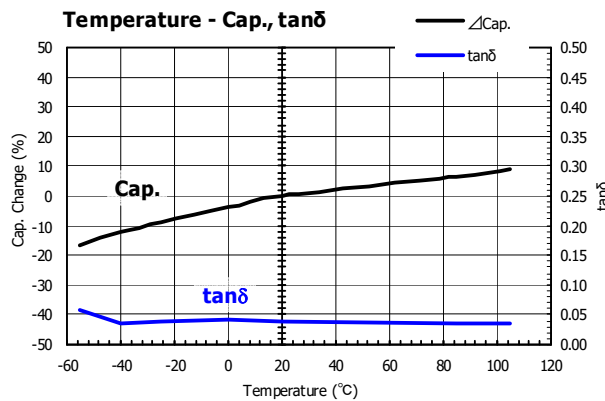
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

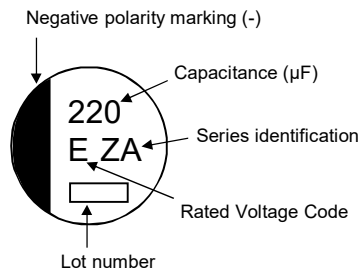
Part Number : EEHZA1E221P

Endurance: 105 °C, 10000 h

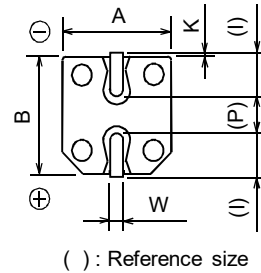
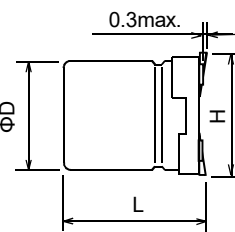
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	220 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	55.0 μA max. (at R.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2300 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

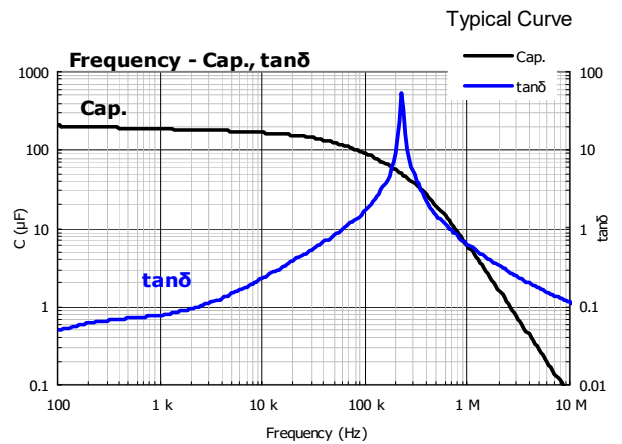
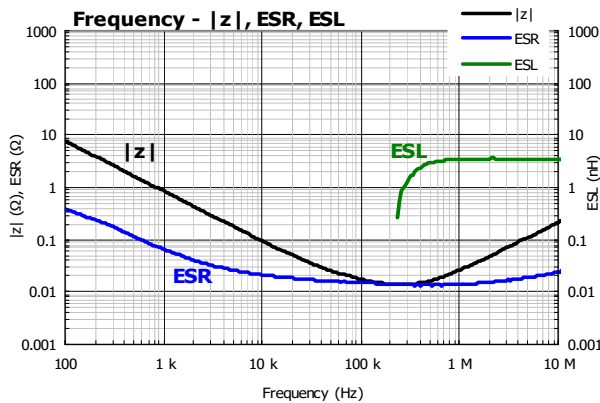


Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

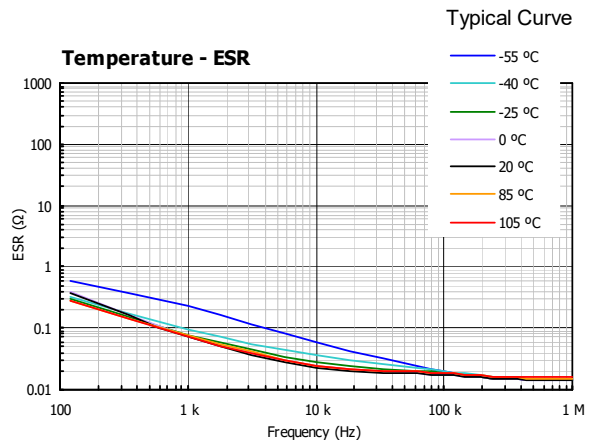
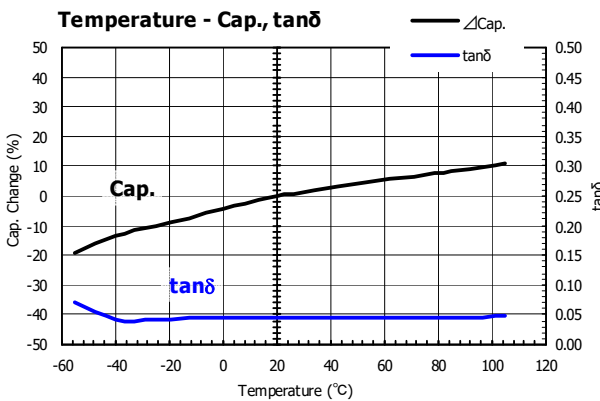
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

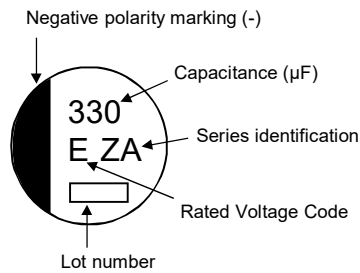
Part Number : EEHZA1E331P

Endurance: 105 °C, 10000 h

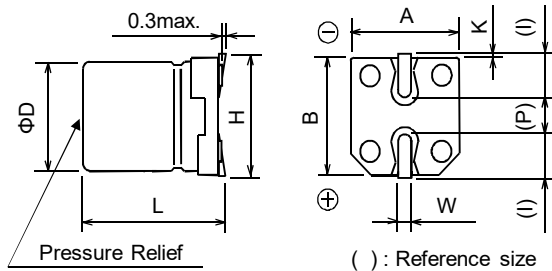
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	25 V
Nominal Capacitance	330 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.14 max. (at 120 Hz)
Leakage Current	82.5 μA max. (at R.V., After 2 min)
ESR	20 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2500 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

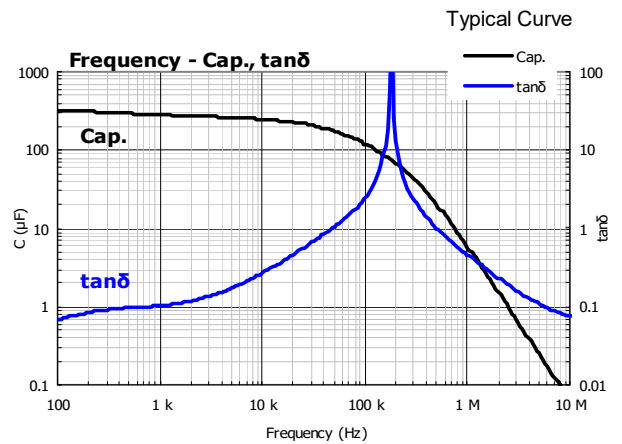
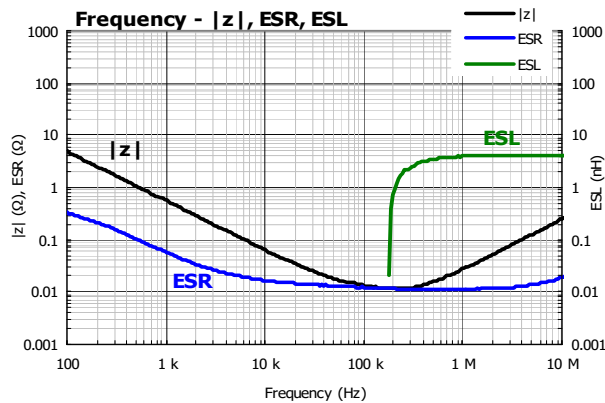


Size Code: G (Unit: mm)

ϕD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

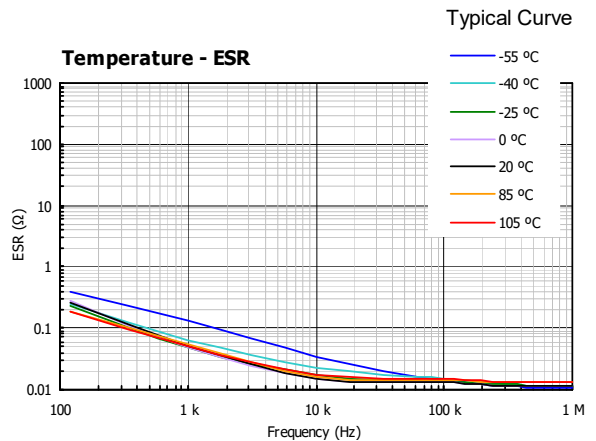
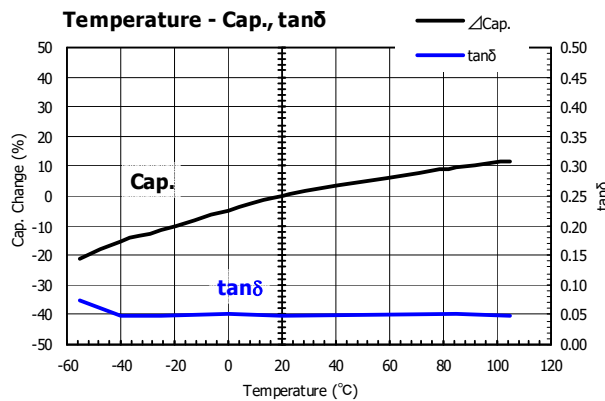
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

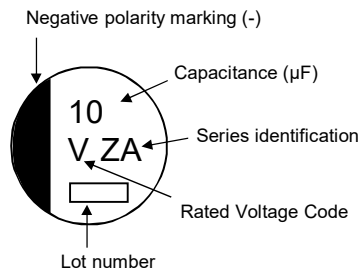
Part Number : EEHZA1V100R

Endurance: 105 °C, 10000 h

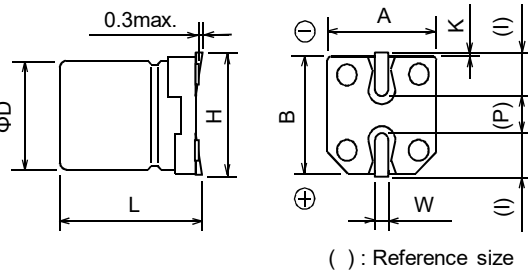
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	10 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	3.5 μA max. (at R.V., After 2 min)
ESR	100 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	900 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

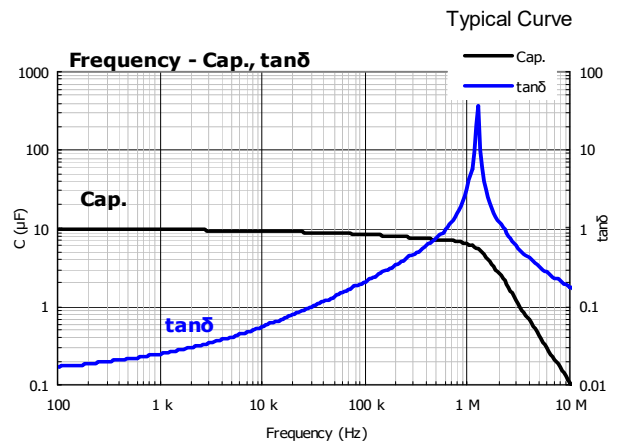
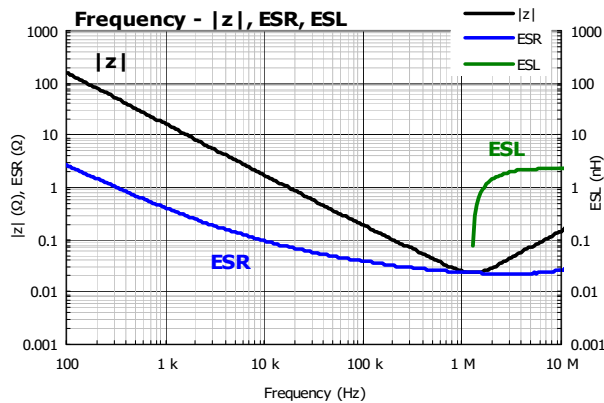


Size Code: C (Unit: mm)

ΦD	5.0 ±0.5
L	5.8 ±0.3
A, B	5.3 ±0.2
H	6.5 max.
I	2.2
W	0.65 ±0.10
P	1.5
K	0.35 +0.15/-0.20

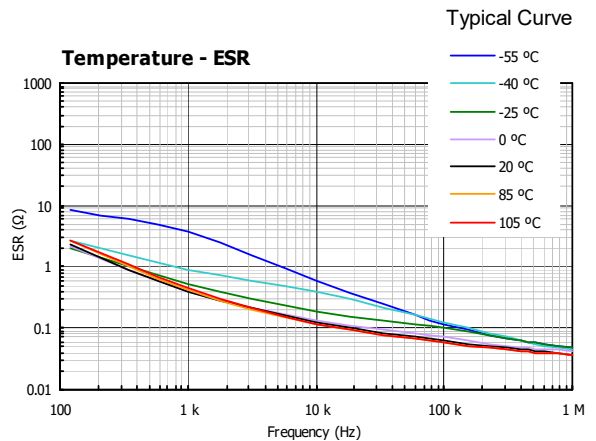
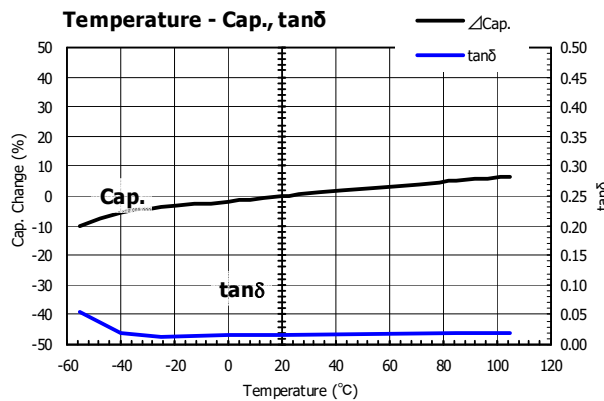
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

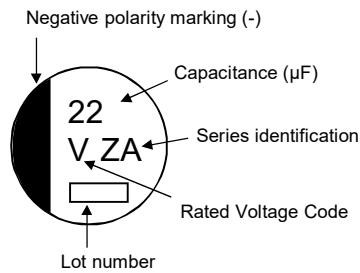
Part Number : EEHZA1V220R

Endurance: 105 °C, 10000 h

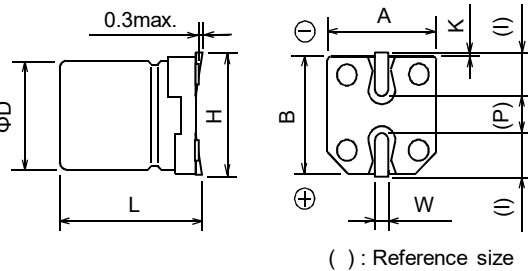
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	7.7 μA max. (at R.V., After 2 min)
ESR	100 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	900 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

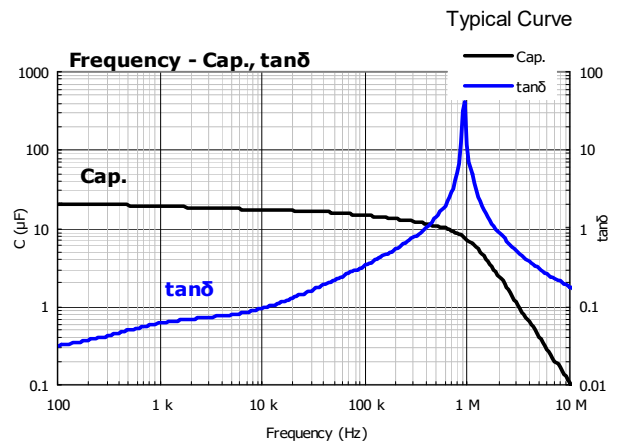
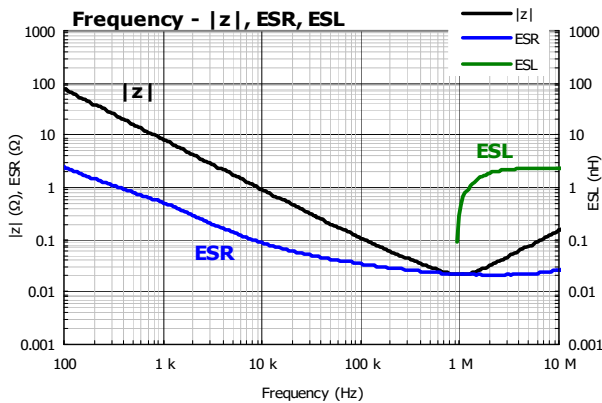


Size Code: C (Unit: mm)

ϕD	5.0 ±0.5
L	5.8 ±0.3
A, B	5.3 ±0.2
H	6.5 max.
I	2.2
W	0.65 ±0.10
P	1.5
K	0.35 +0.15/-0.20

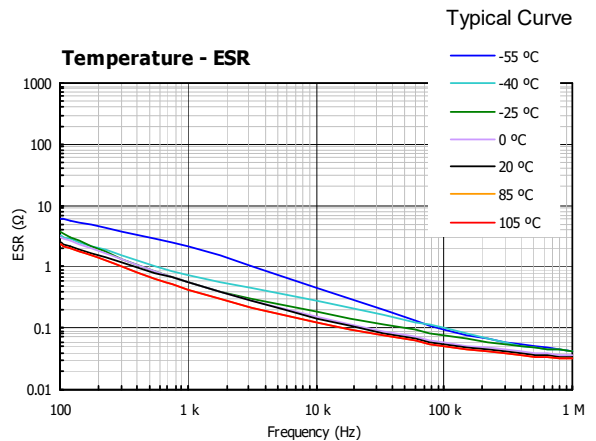
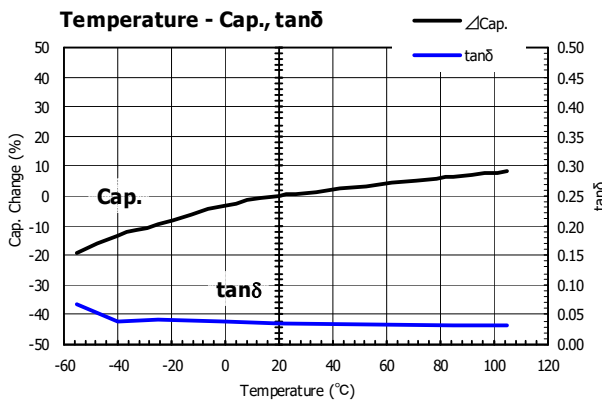
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

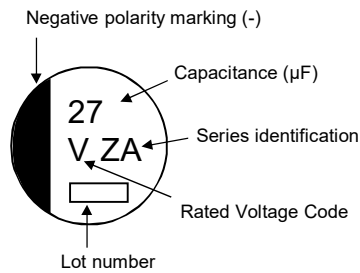
Part Number : EEHZA1V270P

Endurance: 105 °C, 10000 h

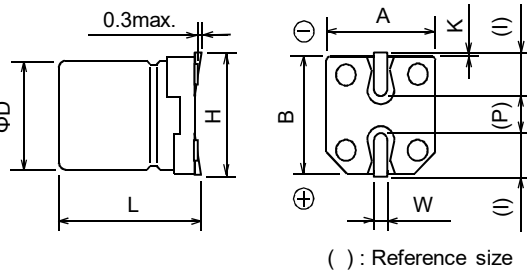
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	27 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	9.4 μA max. (at R.V., After 2 min)
ESR	60 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

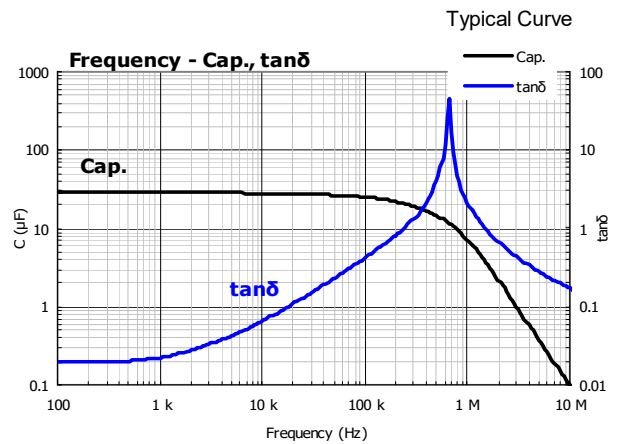
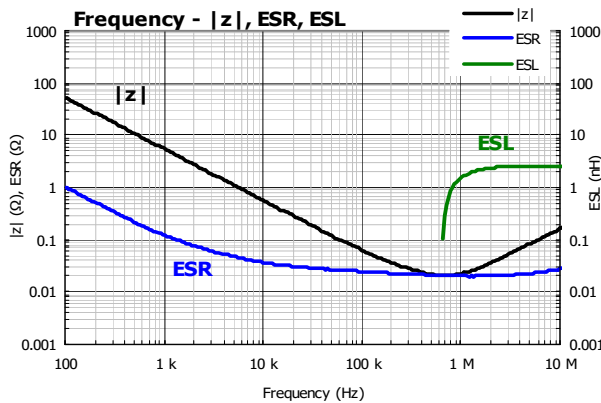


Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

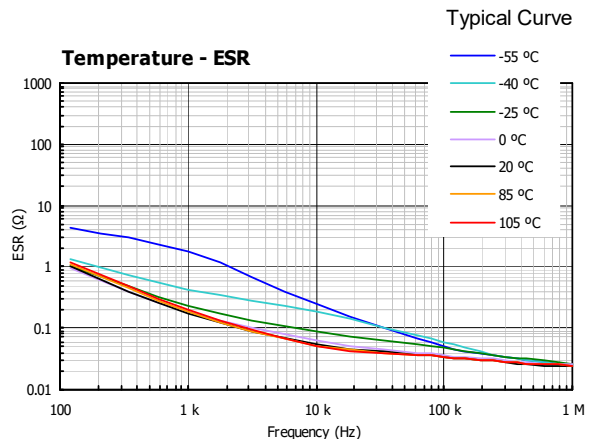
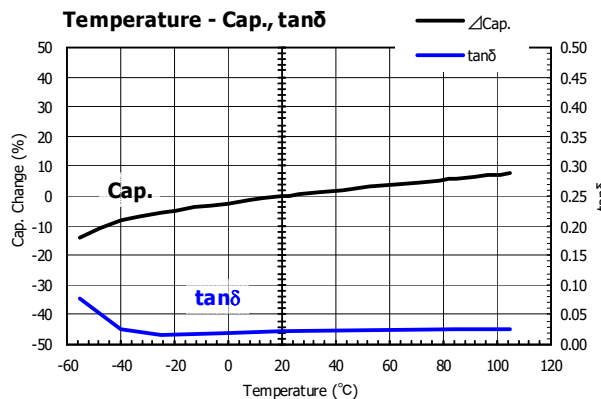
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

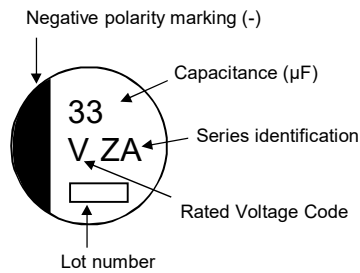
Part Number : EEHZA1V330P

Endurance: 105 °C, 10000 h

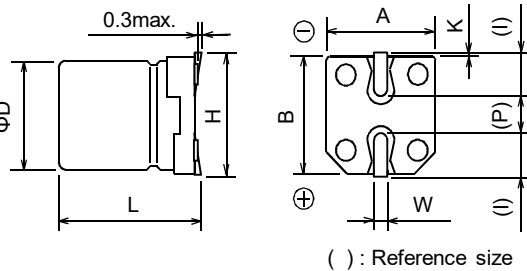
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	11.5 μA max. (at R.V., After 2 min)
ESR	60 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

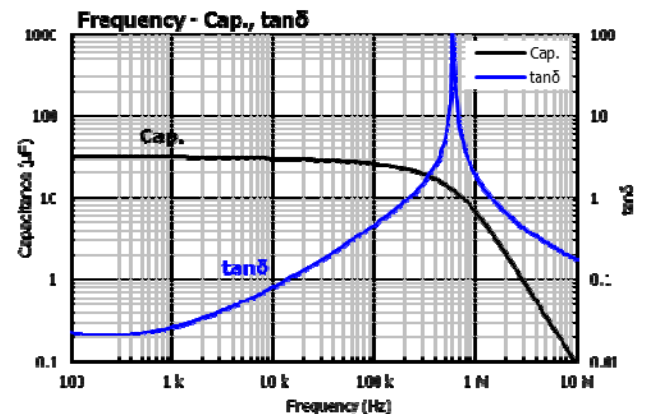
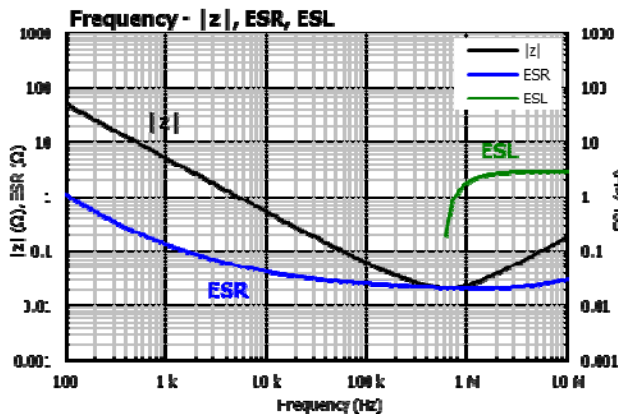


Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

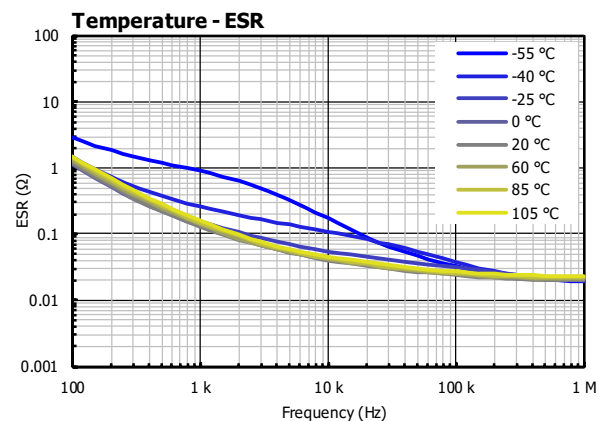
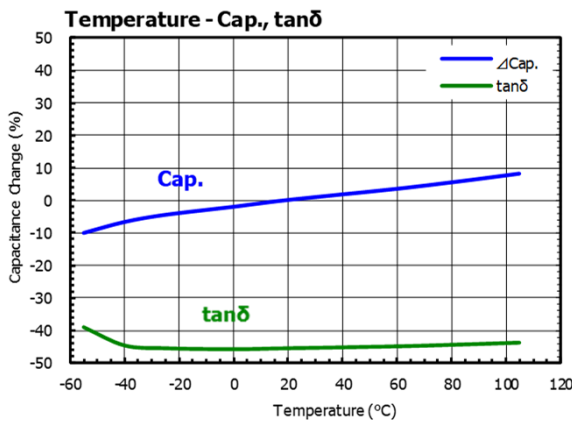
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

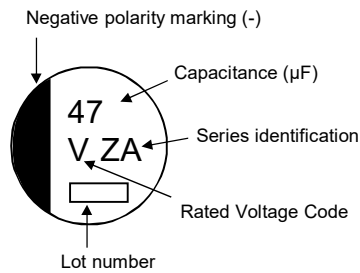
Part Number : EEHZA1V470P

Endurance: 105 °C, 10000 h

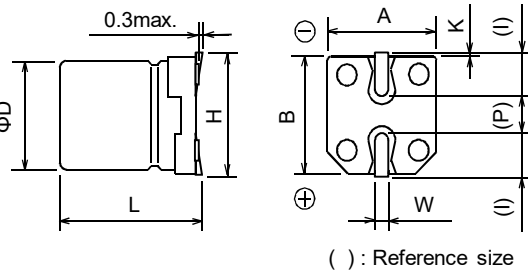
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	47 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	16.4 μA max. (at R.V., After 2 min)
ESR	60 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

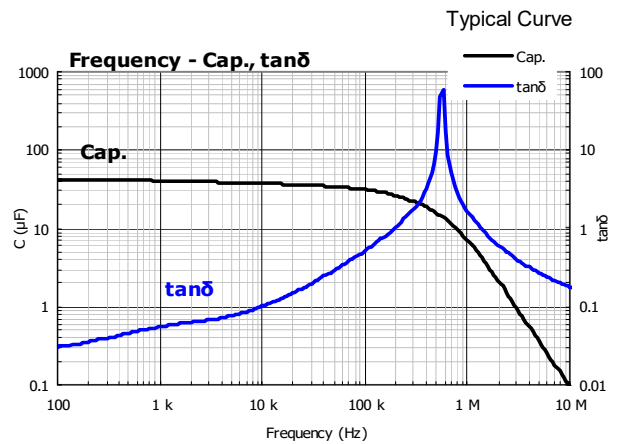
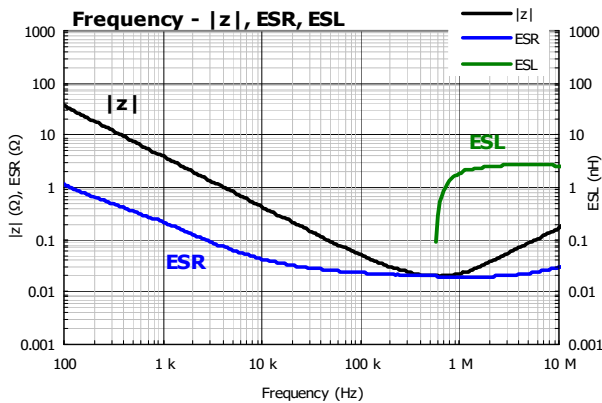


Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

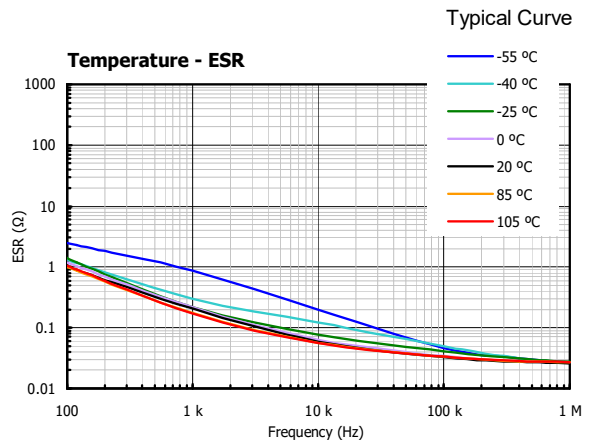
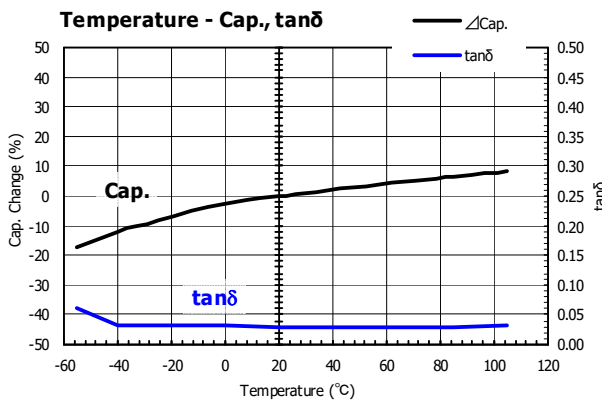
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

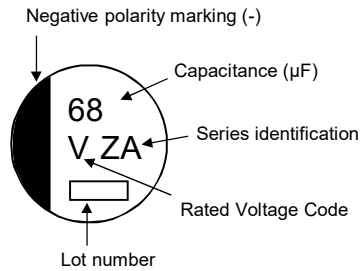
Part Number : EEHZA1V680XP

Endurance: 105 °C, 10000 h

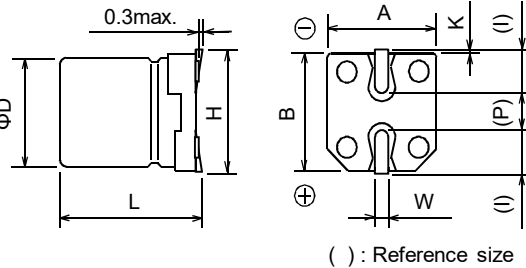
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	23.8 μA max. (at R.V., After 2 min)
ESR	35 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2000 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

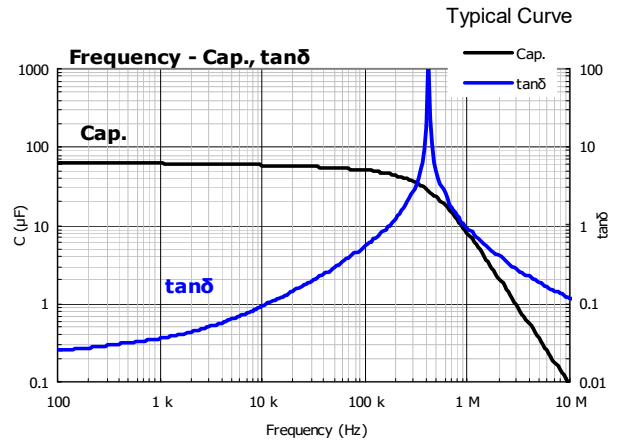
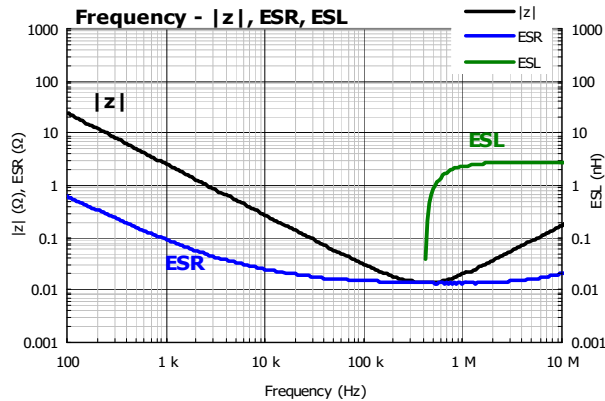


Size Code: D8 (Unit: mm)

ΦD	6.3 ±0.5
L	7.7 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

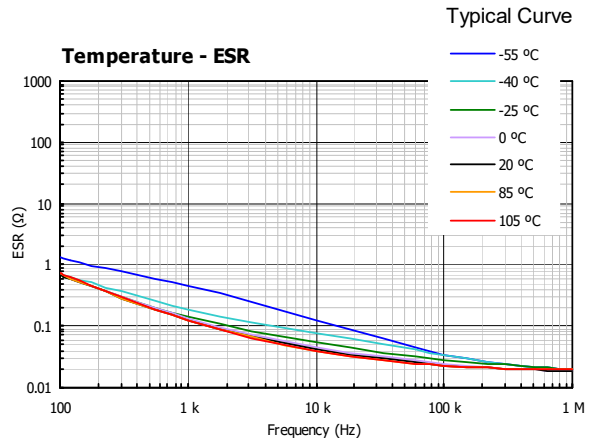
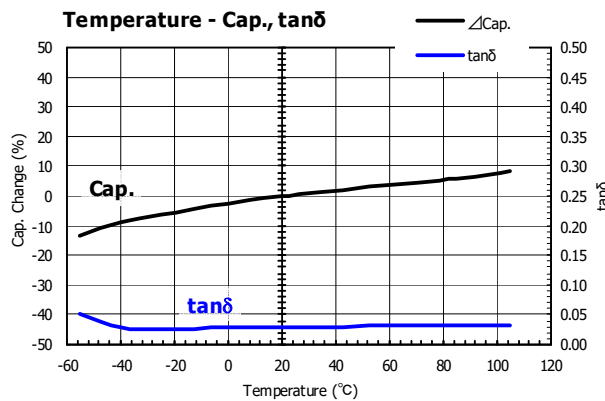
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

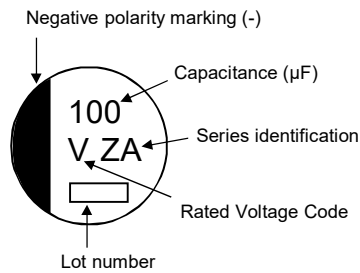
Part Number : EEHZA1V101P

Endurance: 105 °C, 10000 h

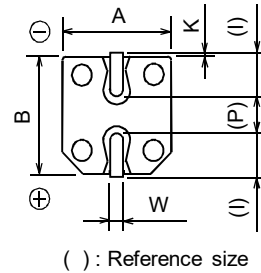
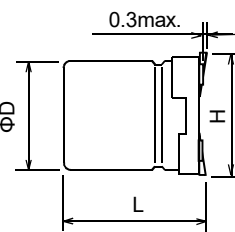
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	100 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	35.0 μA max. (at R.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2300 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)



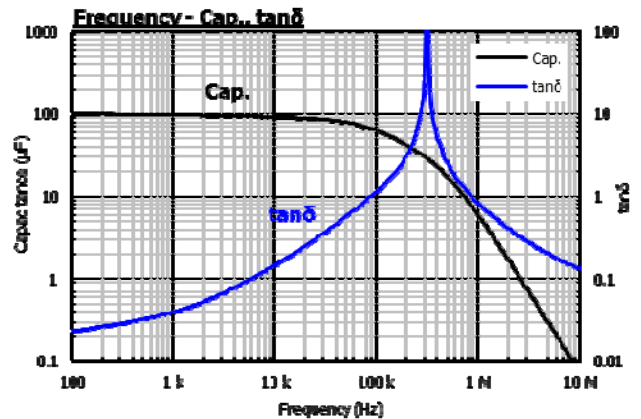
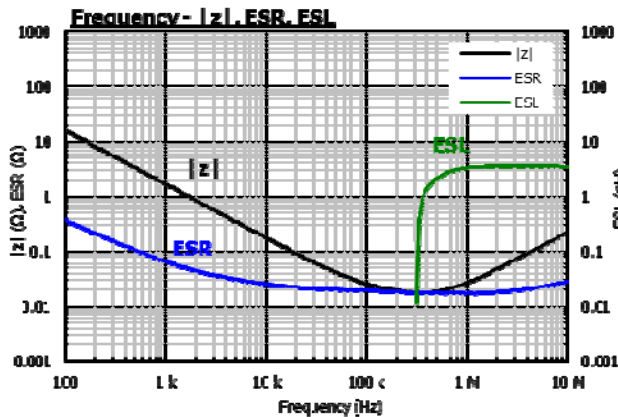
Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)

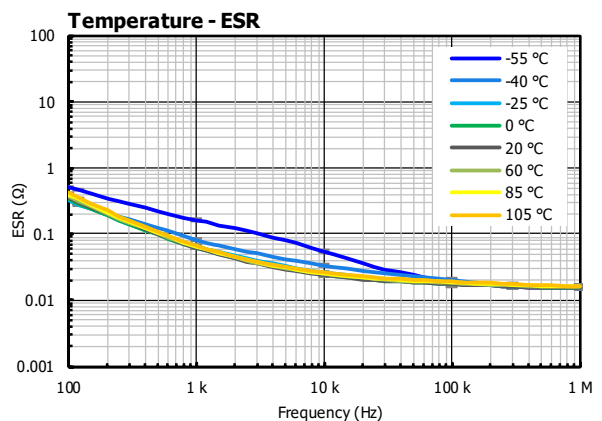
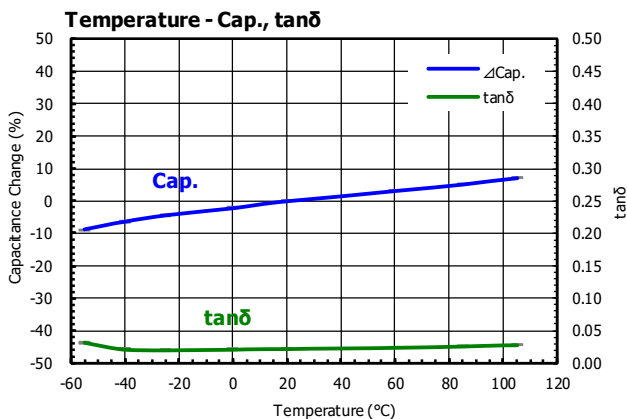
Typical Curve



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)

Typical Curve



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

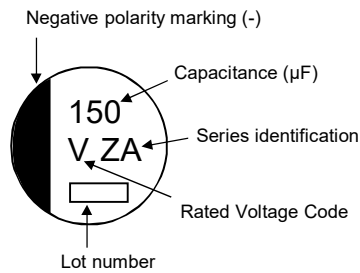
Part Number : EEHZA1V151P

Endurance: 105 °C, 10000 h

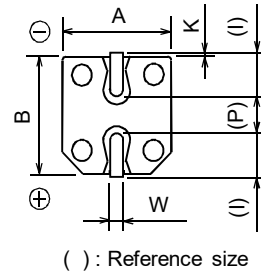
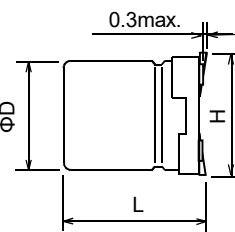
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	150 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	52.5 μA max. (at R.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2300 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

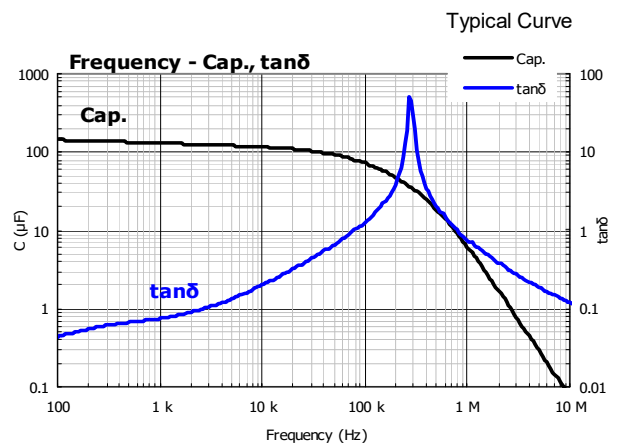
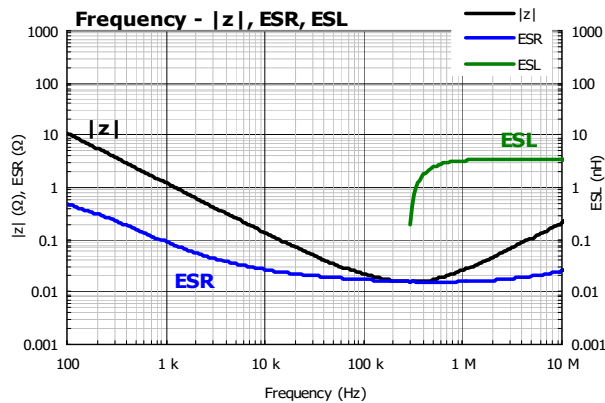


Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

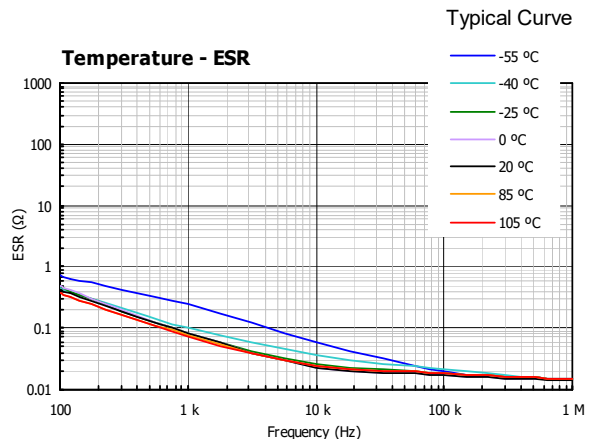
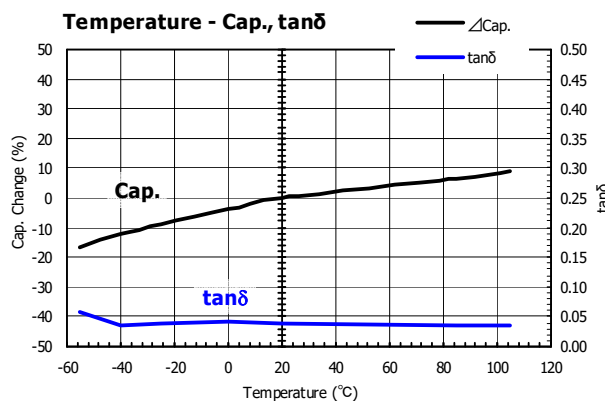
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

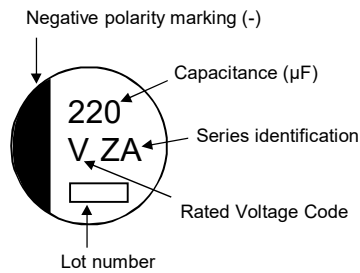
Part Number : EEHZA1V221P

Endurance: 105 °C, 10000 h

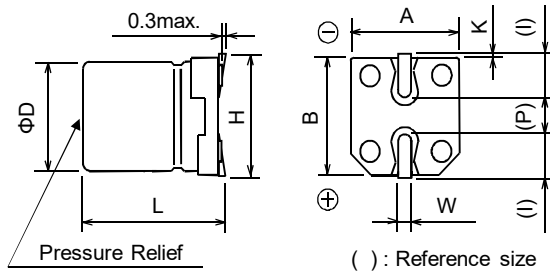
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	220 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	77.0 μA max. (at R.V., After 2 min)
ESR	20 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2500 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

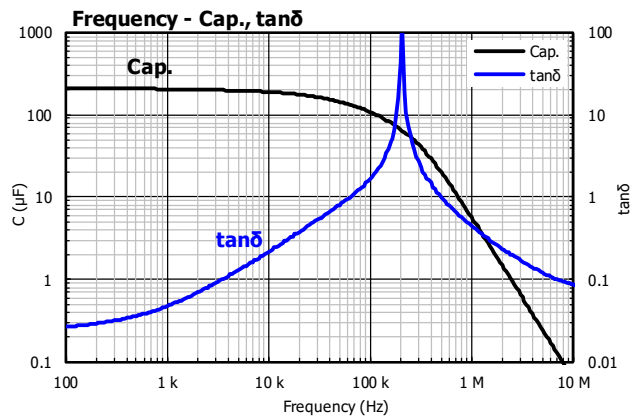
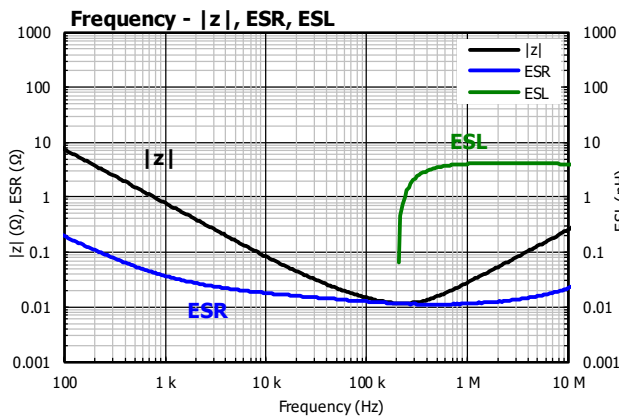


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

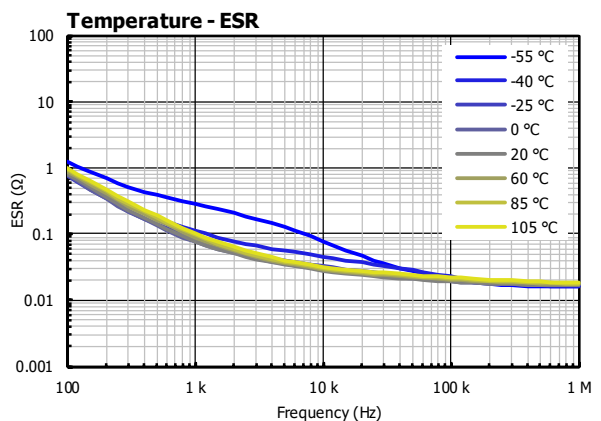
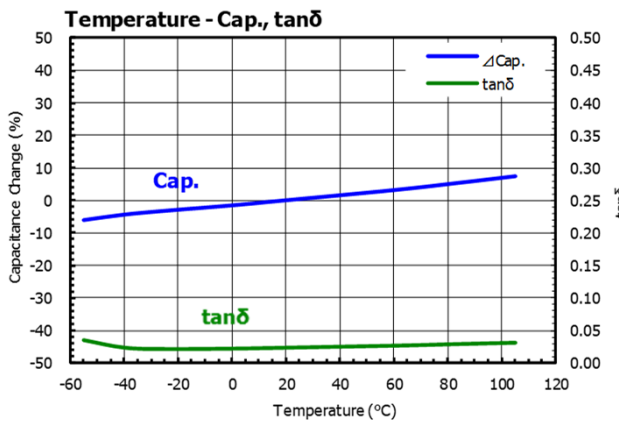
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

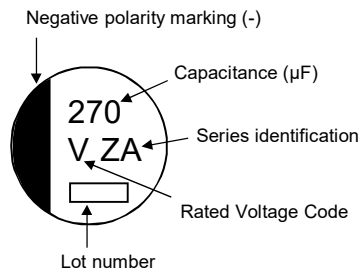
Part Number : EEHZA1V271P

Endurance: 105 °C, 10000 h

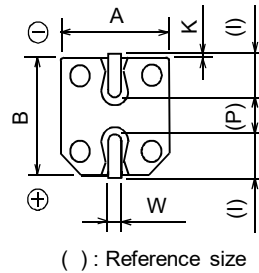
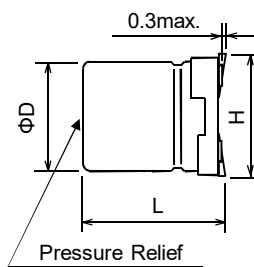
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	35 V
Nominal Capacitance	270 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.12 max. (at 120 Hz)
Leakage Current	94.5 μA max. (at R.V., After 2 min)
ESR	20 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2500 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

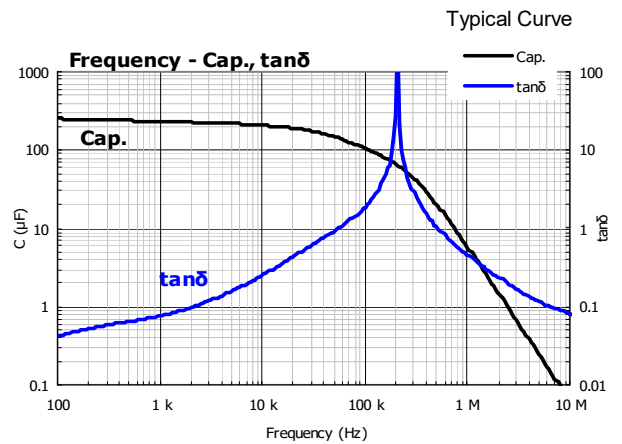
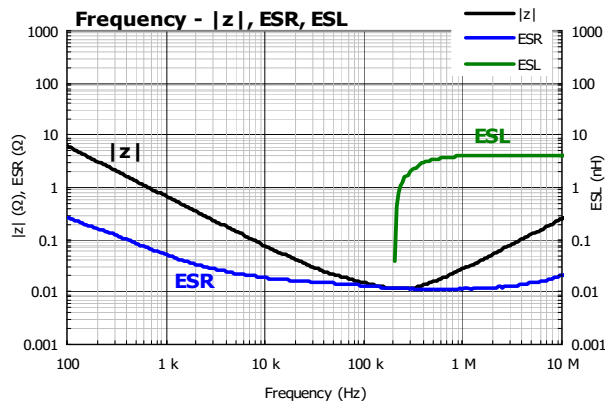


Size Code: G (Unit: mm)

ϕD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

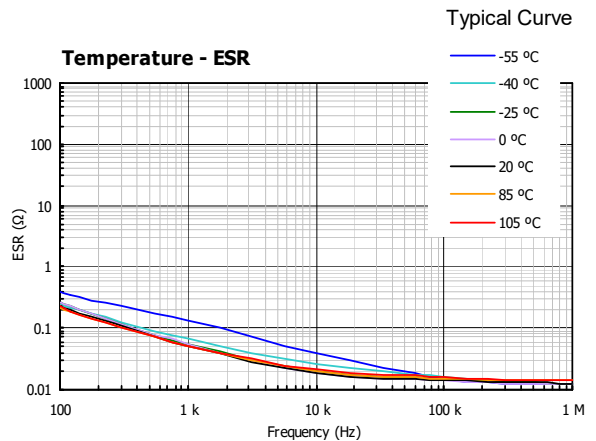
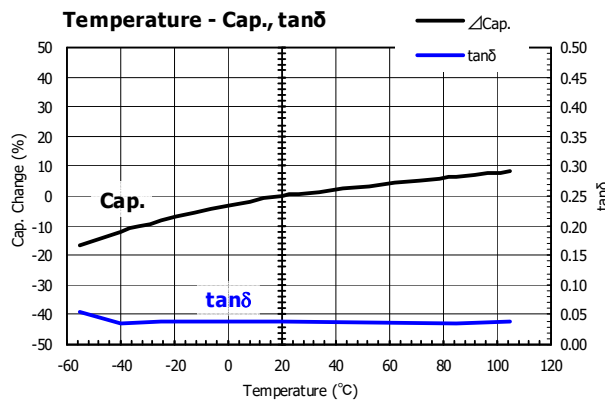
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

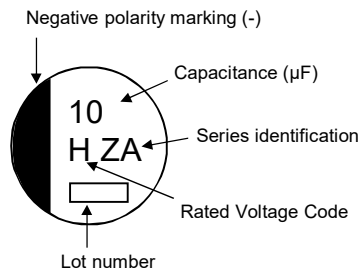
Part Number : EEHZA1H100R

Endurance: 105 °C, 10000 h

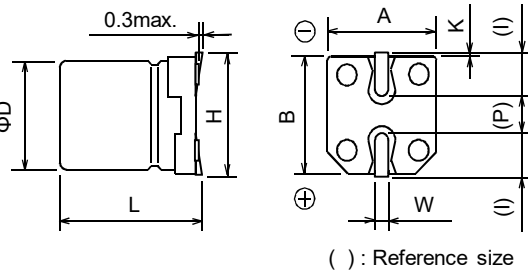
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	10 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.10 max. (at 120 Hz)
Leakage Current	5.0 μA max. (at R.V., After 2 min)
ESR	120 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	750 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

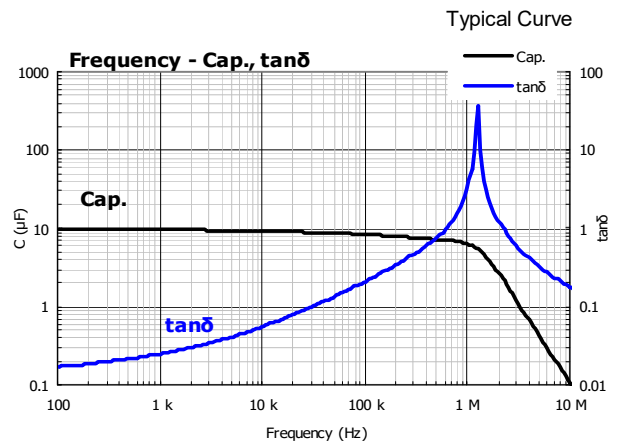
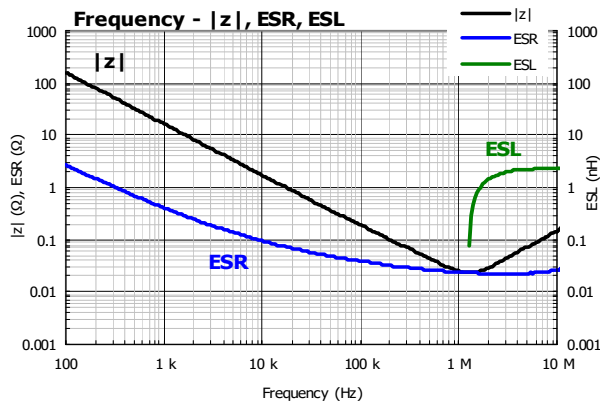


Size Code: C (Unit: mm)

ΦD	5.0 ±0.5
L	5.8 ±0.3
A, B	5.3 ±0.2
H	6.5 max.
I	2.2
W	0.65 ±0.10
P	1.5
K	0.35 +0.15/-0.20

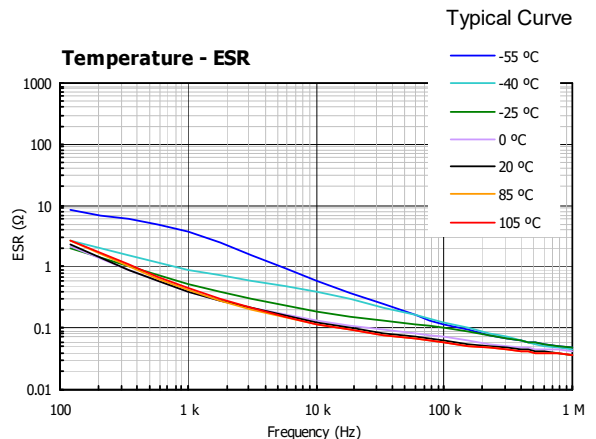
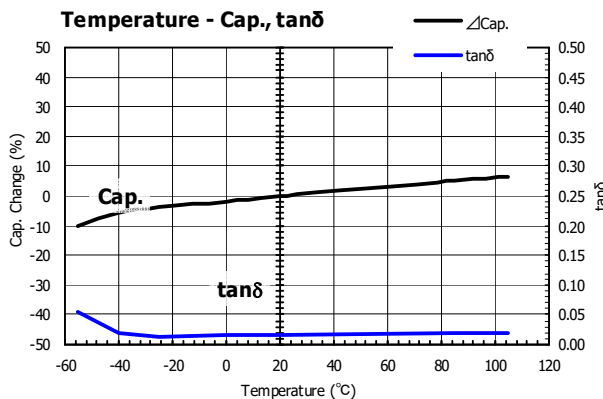
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

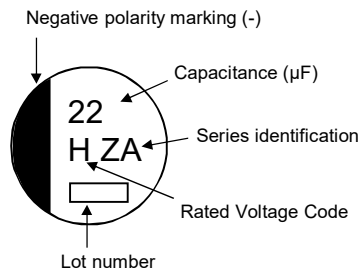
Part Number : EEHZA1H220P

Endurance: 105 °C, 10000 h

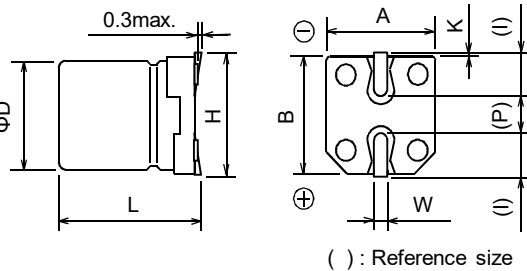
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.10 max. (at 120 Hz)
Leakage Current	11.0 μA max. (at R.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1100 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

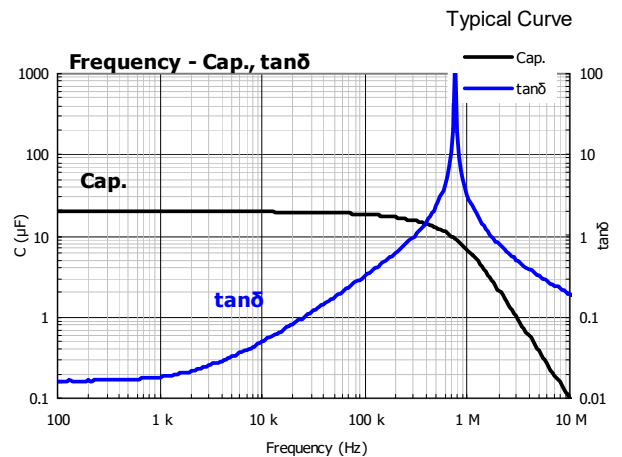
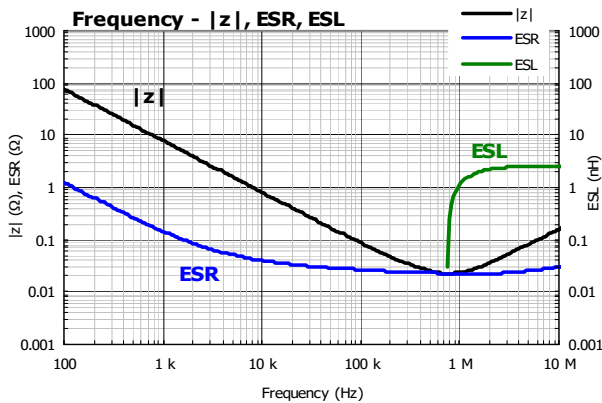


Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

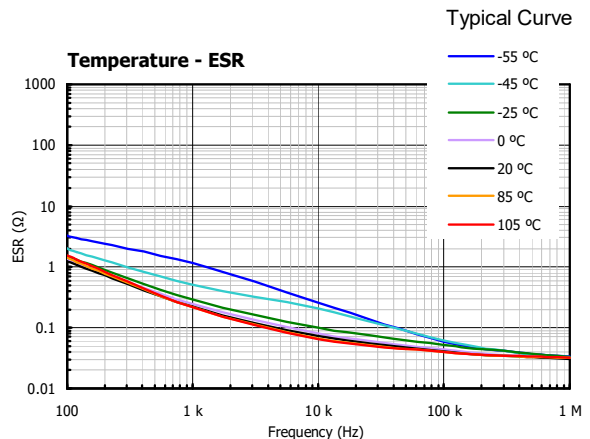
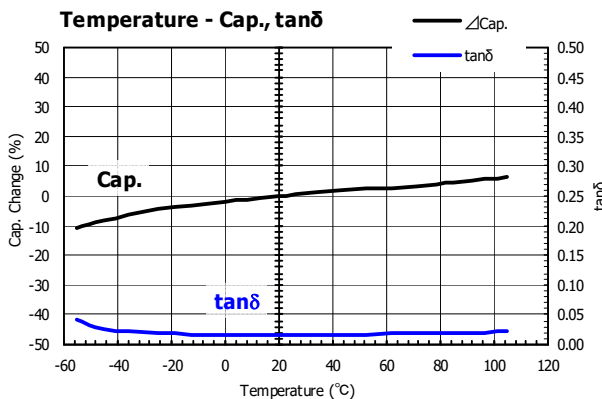
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

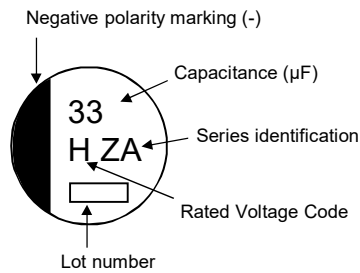
Part Number : EEHZA1H330XP

Endurance: 105 °C, 10000 h

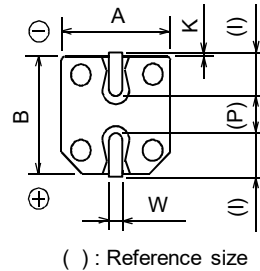
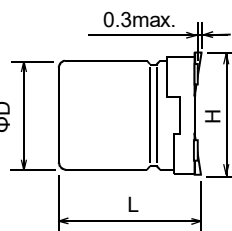
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.10 max. (at 120 Hz)
Leakage Current	16.5 μA max. (at R.V., After 2 min)
ESR	40 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1600 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

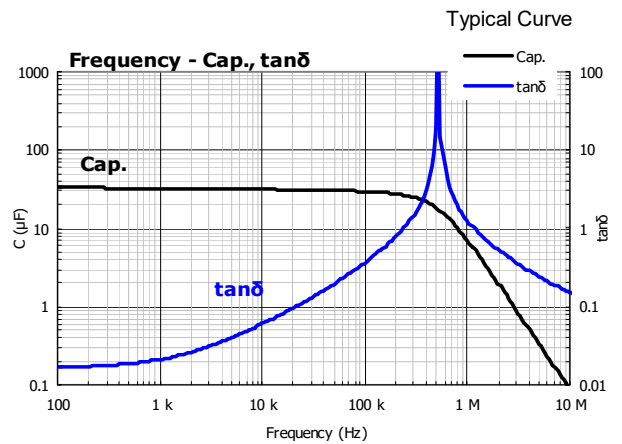
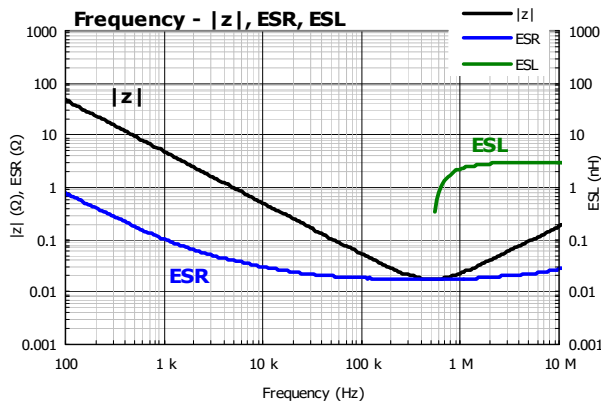


Size Code: D8 (Unit: mm)

ϕD	6.3 ±0.5
L	7.7 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

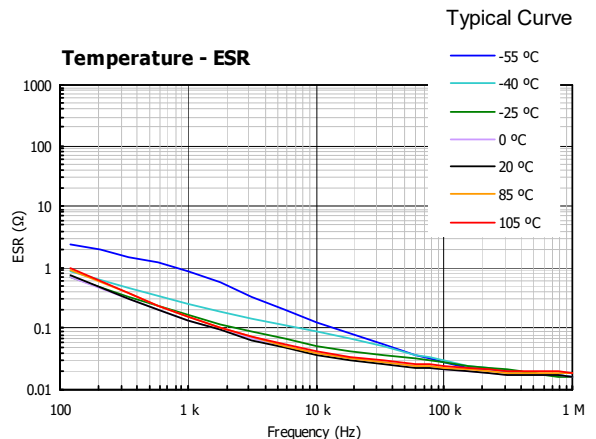
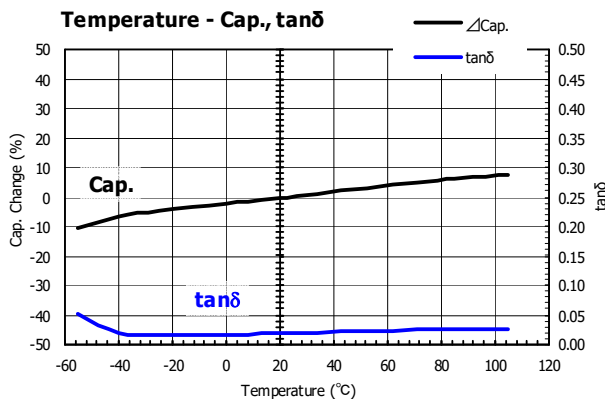
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

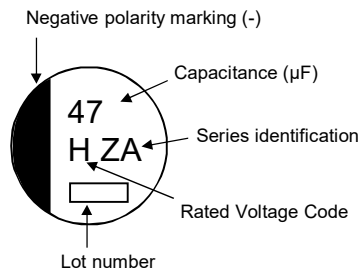
Part Number : EEHZA1H470P

Endurance: 105 °C, 10000 h

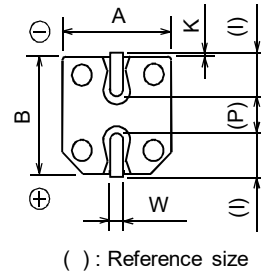
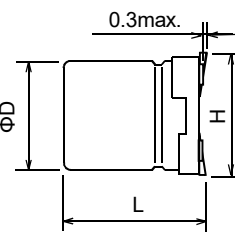
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	47 μ F (at 120 Hz)
Capacitance Tolerance	\pm 20 %

$\tan \delta$	0.10 max. (at 120 Hz)
Leakage Current	23.5 μ A max. (at R.V., After 2 min)
ESR	30 m Ω max. (at 100 kHz, 20 °C)
Ripple Current	1800 mA _{RMS} max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

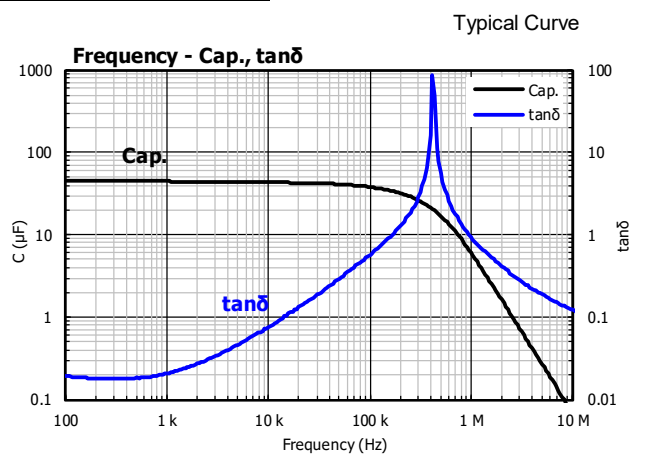
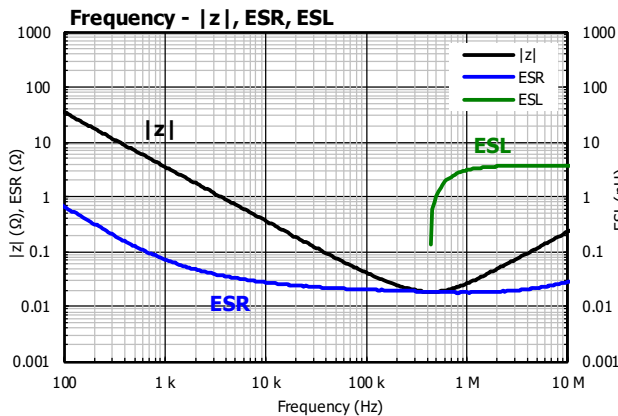


Size Code: F (Unit: mm)

Φ D	8.0 \pm 0.5
L	10.2 \pm 0.3
A, B	8.3 \pm 0.2
H	10.0 max.
I	3.4
W	0.90 \pm 0.20
P	3.1
K	0.70 \pm 0.2

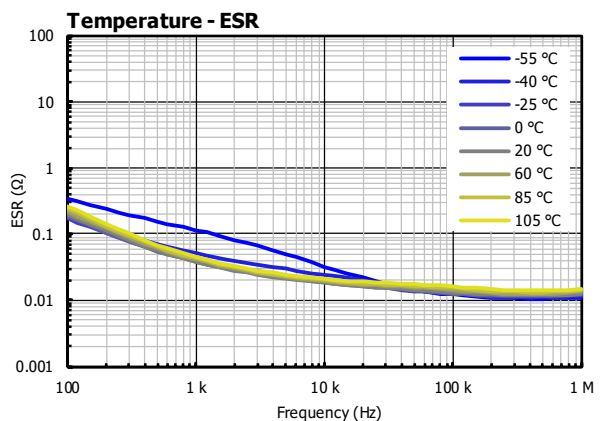
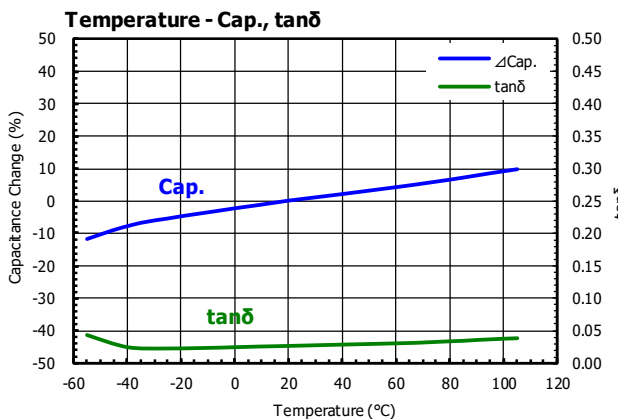
Frequency vs. Impedance, ESR, ESL, Capacitance, $\tan \delta$ Characteristics

Osc. Level: 0.5 V_{rms} (at no load)



Temperature vs. Capacitance, $\tan \delta$, ESR Characteristics

Osc. Level: 0.5 V_{rms} (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

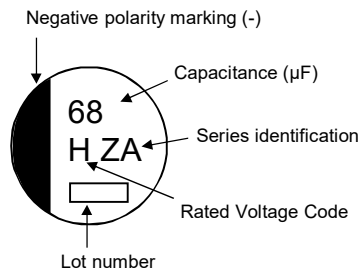
Part Number : EEHZA1H680P

Endurance: 105 °C, 10000 h

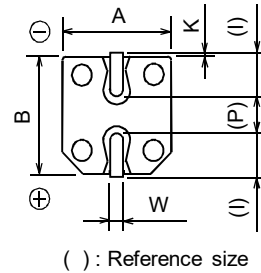
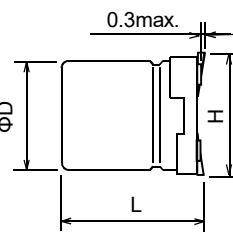
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.10 max. (at 120 Hz)
Leakage Current	34.0 μA max. (at R.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1800 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

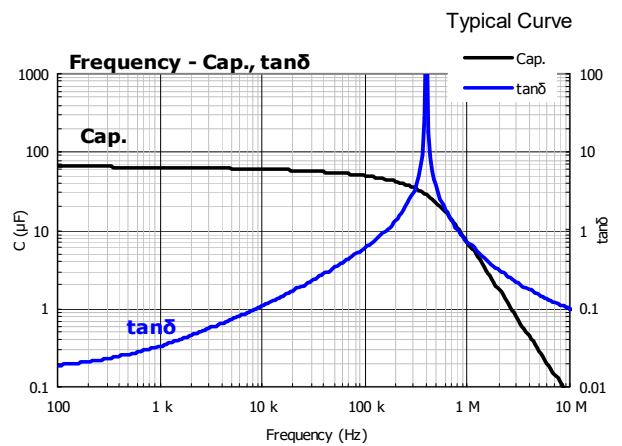
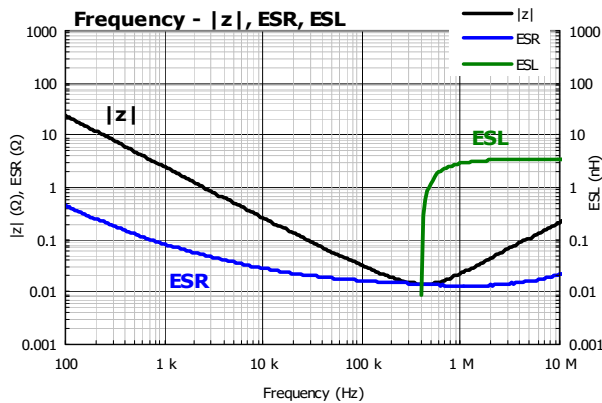


Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

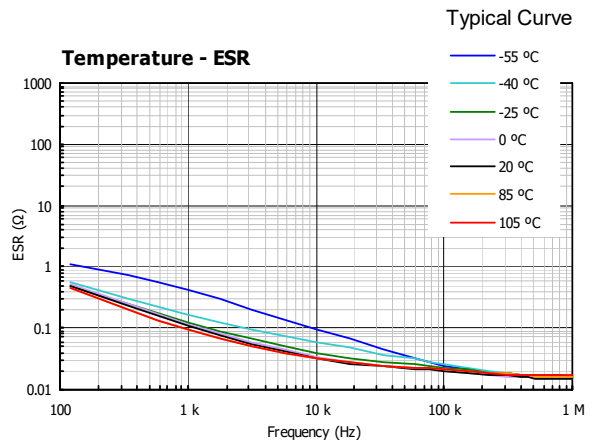
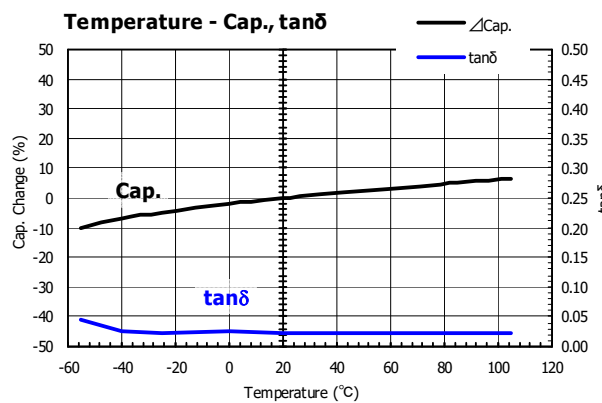
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

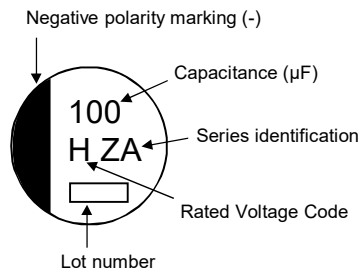
Part Number : EEHZA1H101P

Endurance: 105 °C, 10000 h

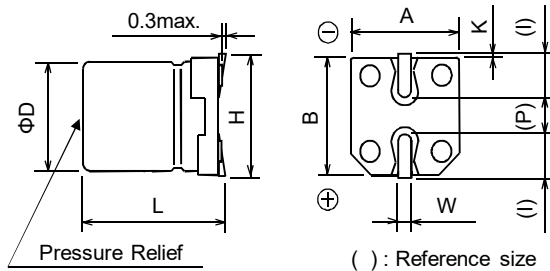
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	50 V
Nominal Capacitance	100 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.10 max. (at 120 Hz)
Leakage Current	50.0 μA max. (at R.V., After 2 min)
ESR	28 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	2000 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

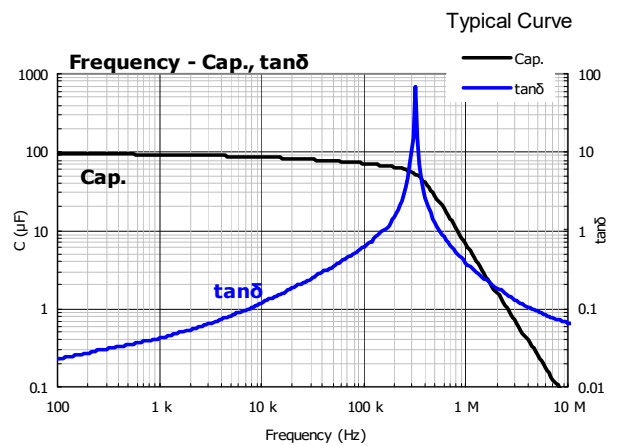
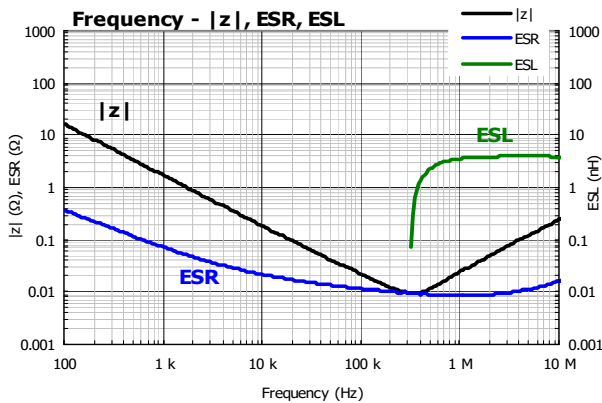


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

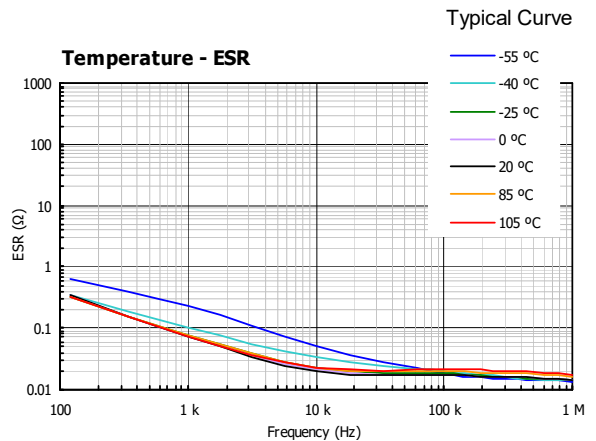
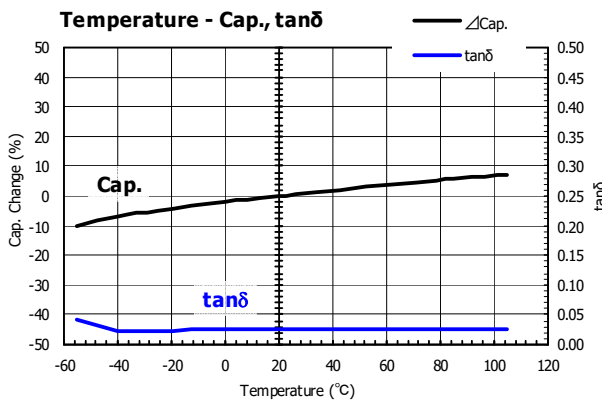
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

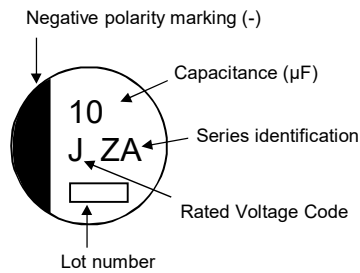
Part Number : EEHZA1J100P

Endurance: 105 °C, 10000 h

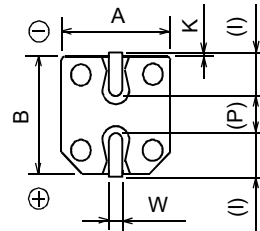
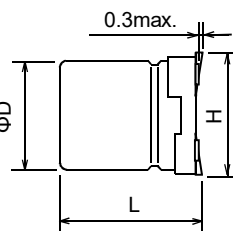
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	10 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	6.3 μA max. (at R.V., After 2 min)
ESR	120 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1000 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)



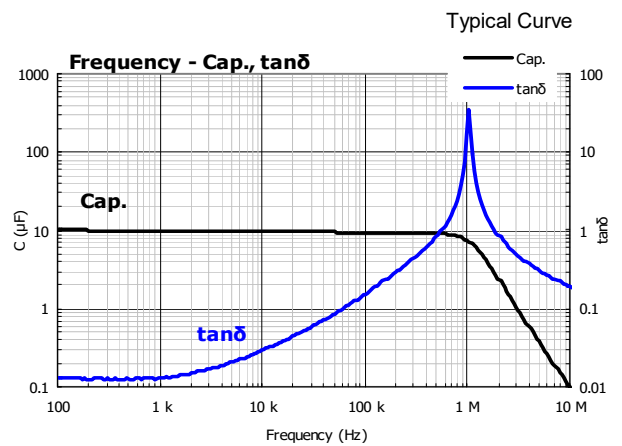
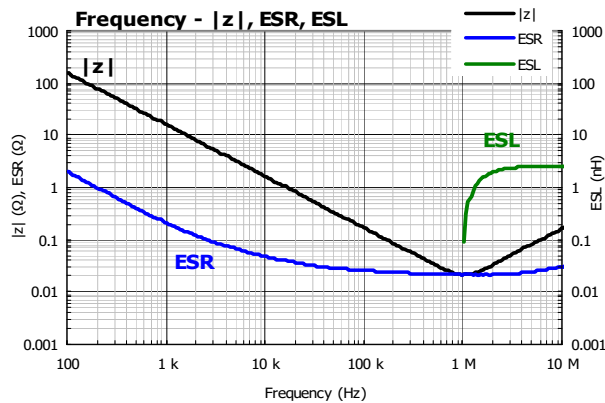
() : Reference size

Size Code: D (Unit: mm)

ΦD	6.3 ±0.5
L	5.8 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

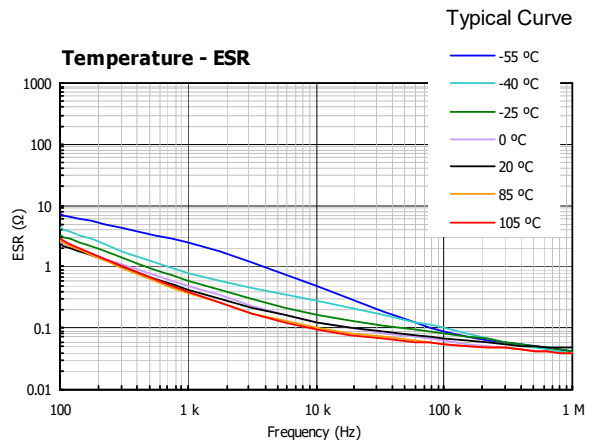
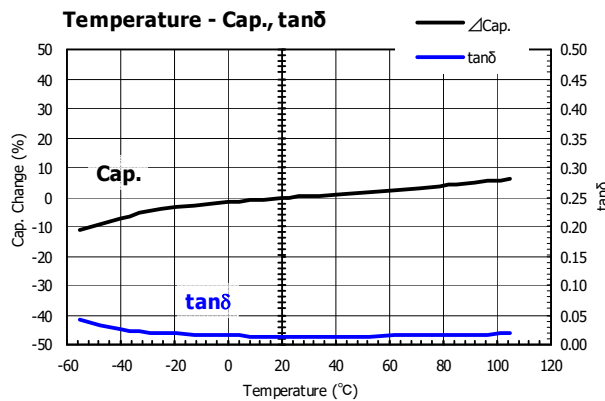
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

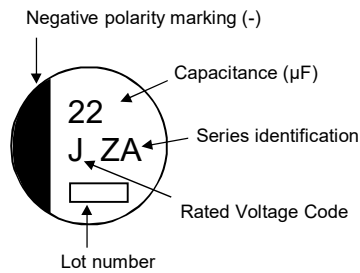
Part Number : EEHZA1J220XP

Endurance: 105 °C, 10000 h

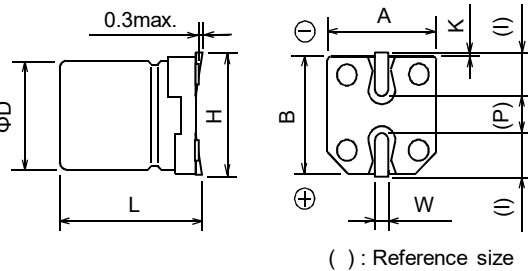
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	13.8 μA max. (at R.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1500 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

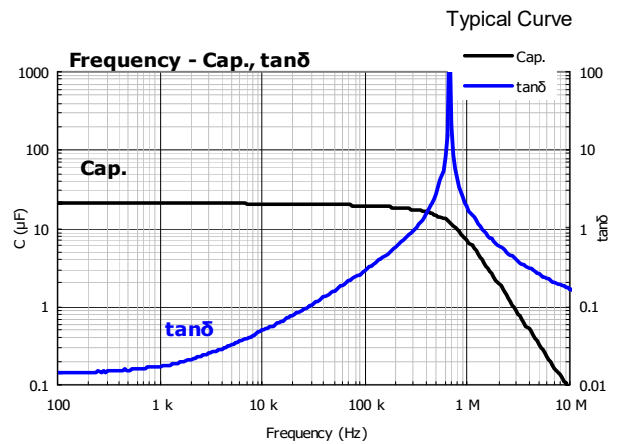
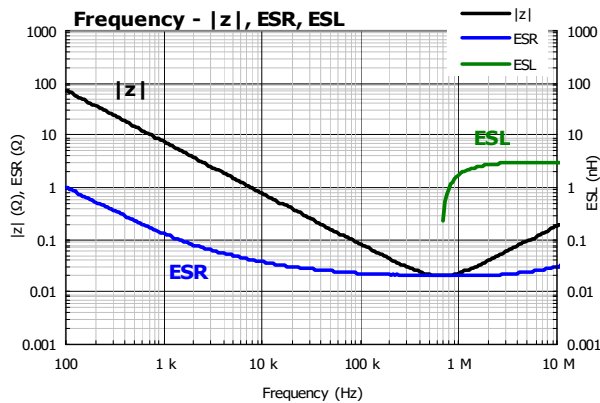


Size Code: D8 (Unit: mm)

ΦD	6.3 ±0.5
L	7.7 ±0.3
A, B	6.6 ±0.2
H	7.8 max.
I	2.6
W	0.65 ±0.10
P	1.8
K	0.35 +0.15/-0.20

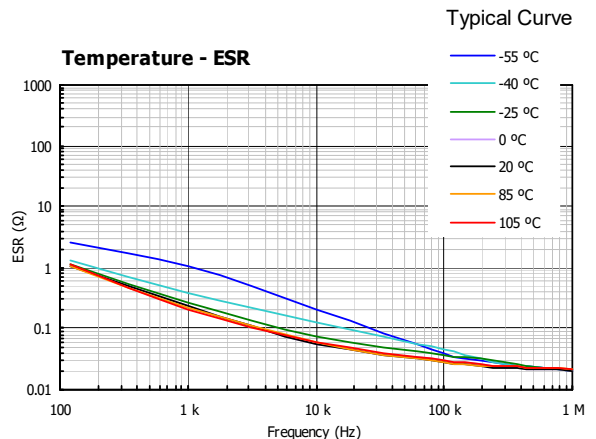
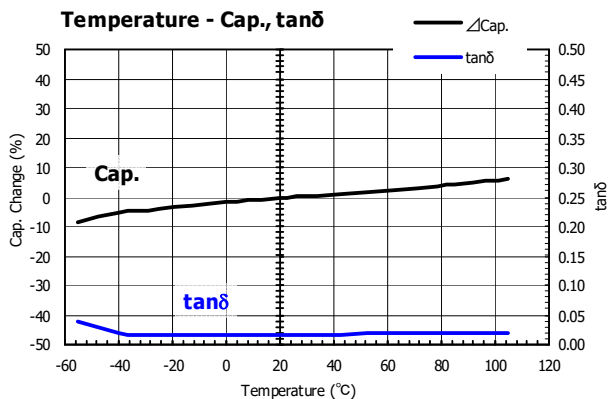
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

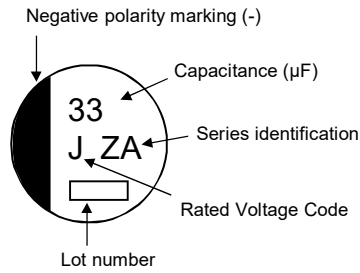
Part Number : EEHZA1J330P

Endurance: 105 °C, 10000 h

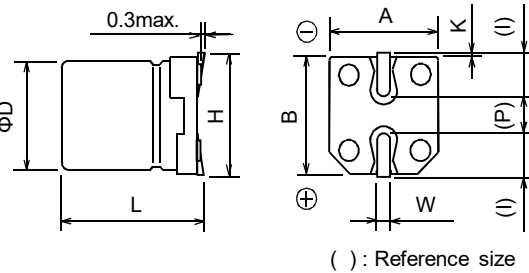
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	20.7 μA max. (at R.V., After 2 min)
ESR	40 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1700 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

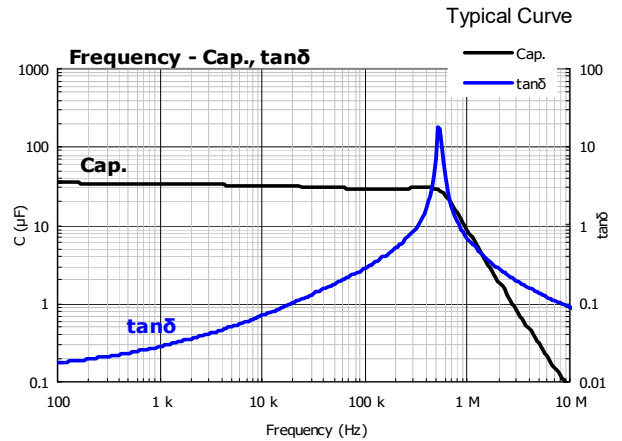
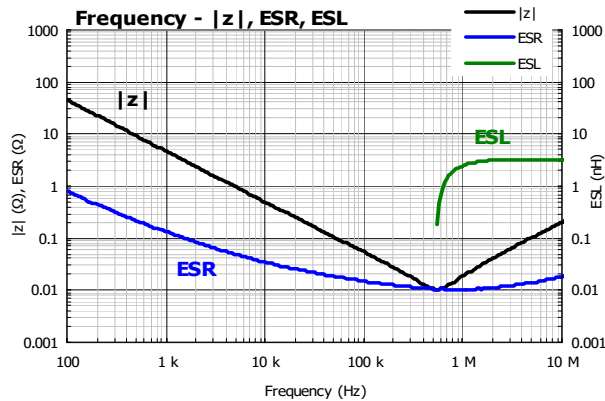


Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

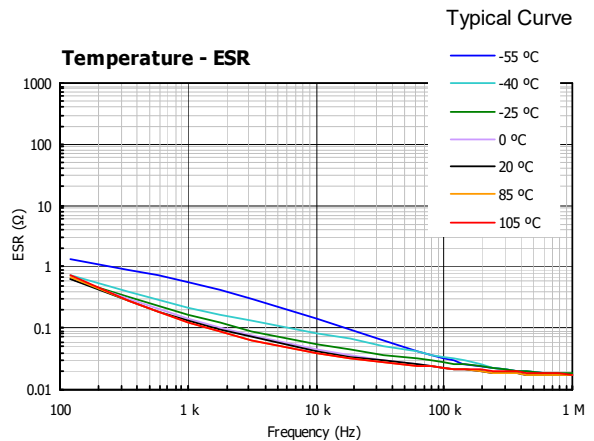
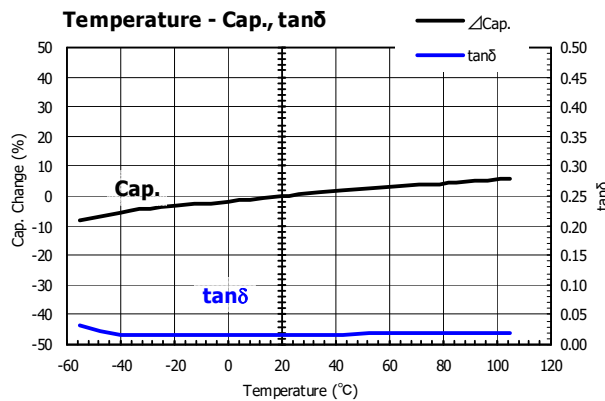
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

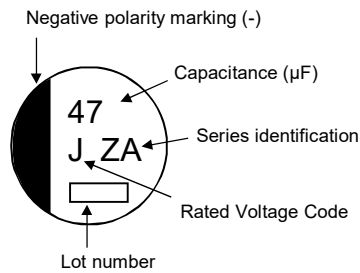
Part Number : EEHZA1J470P

Endurance: 105 °C, 10000 h

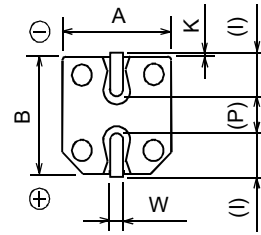
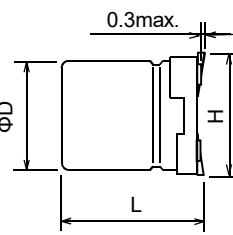
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	47 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	29.6 μA max. (at R.V., After 2 min)
ESR	40 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1700 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

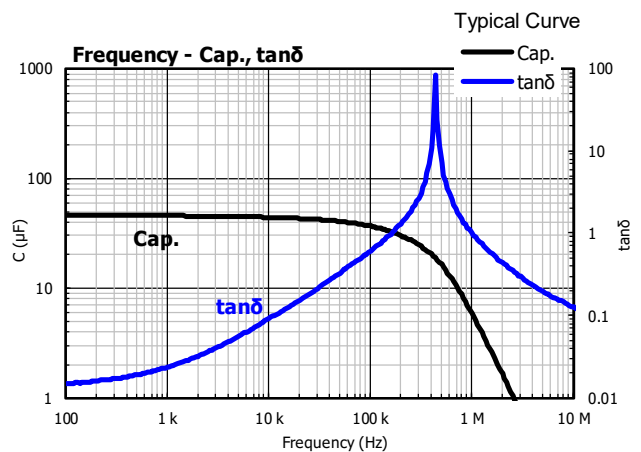
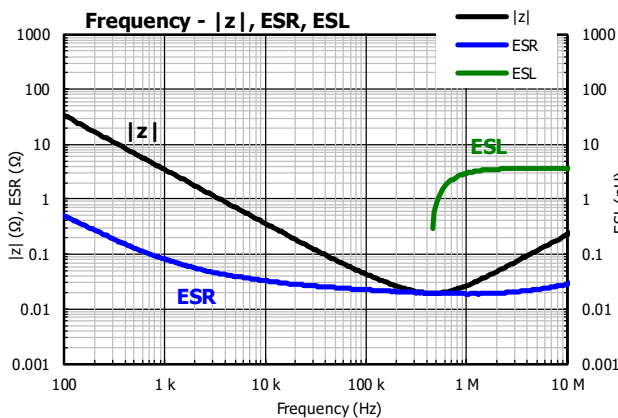


Size Code: F (Unit: mm)

ΦD	8.0 ±0.5
L	10.2 ±0.3
A, B	8.3 ±0.2
H	10.0 max.
I	3.4
W	0.90 ±0.20
P	3.1
K	0.70 ±0.2

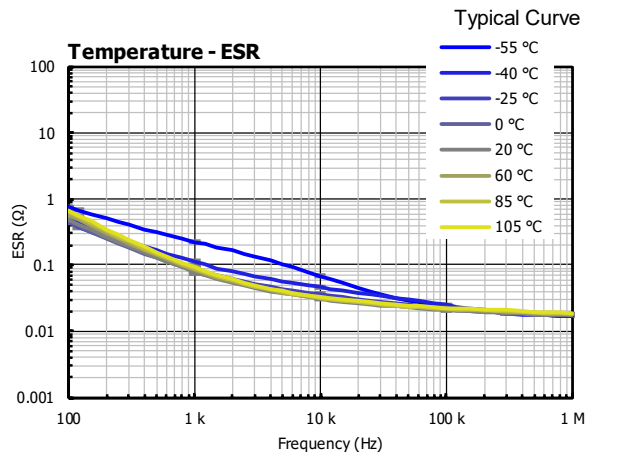
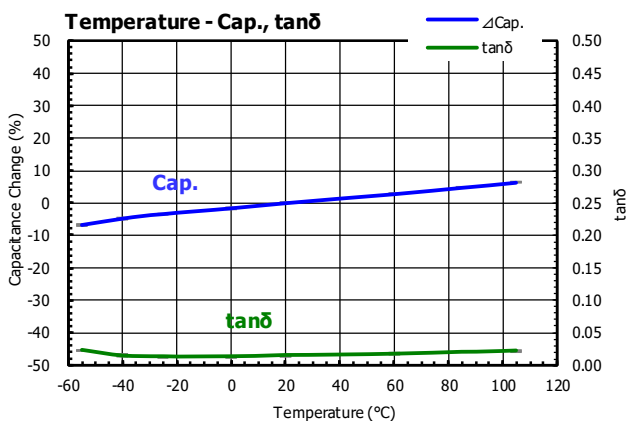
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

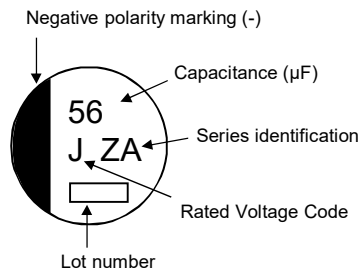
Part Number : EEHZA1J560P

Endurance: 105 °C, 10000 h

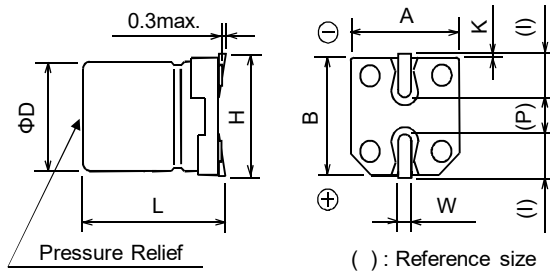
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	56 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	35.2 μA max. (at R.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1800 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

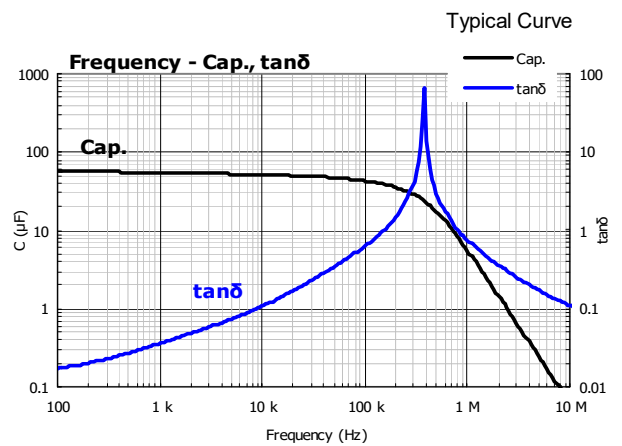
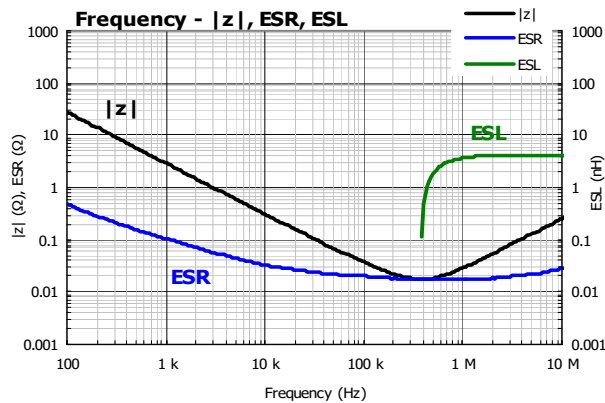


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

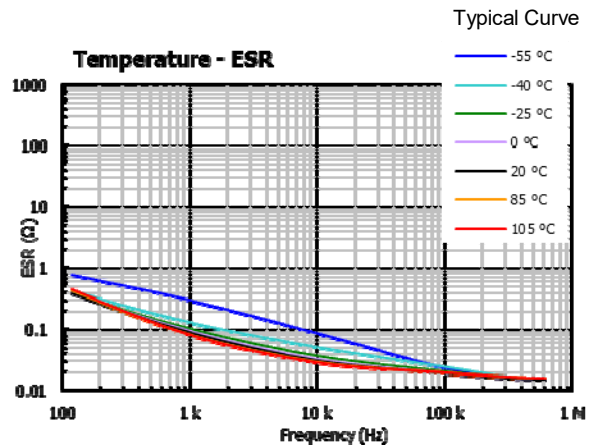
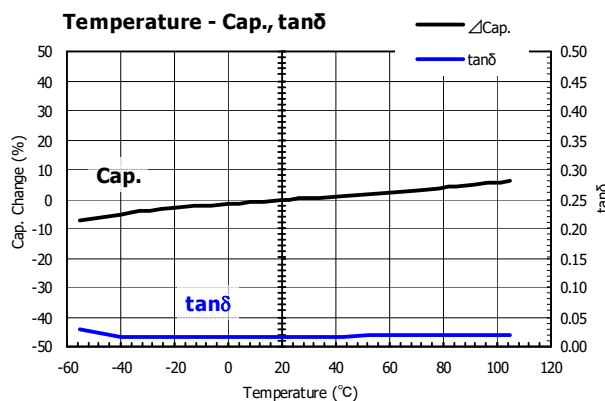
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

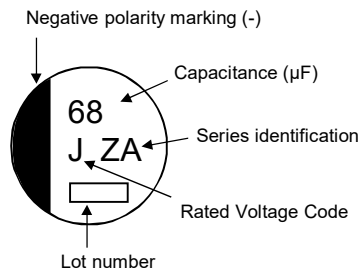
Part Number : EEHZA1J680P

Endurance: 105 °C, 10000 h

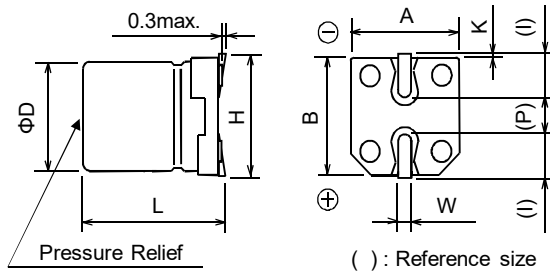
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	42.8 μA max. (at R.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1800 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

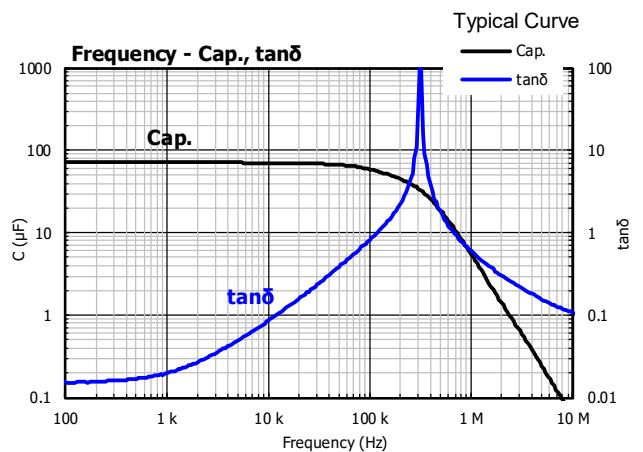
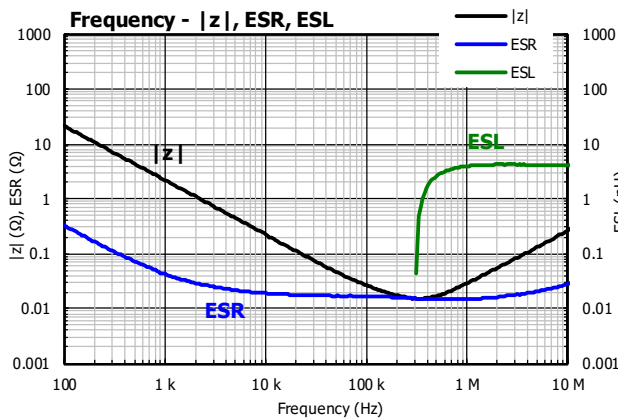


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

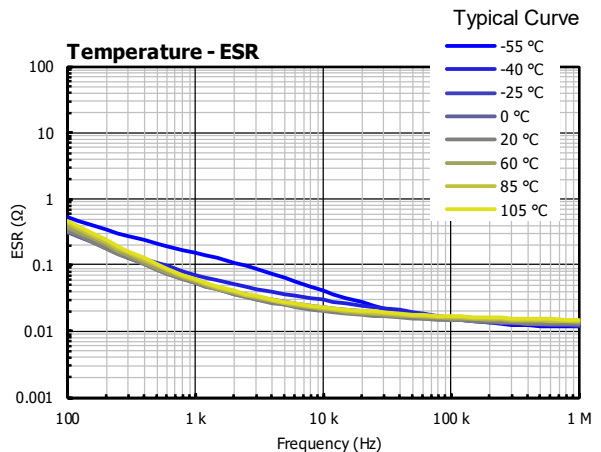
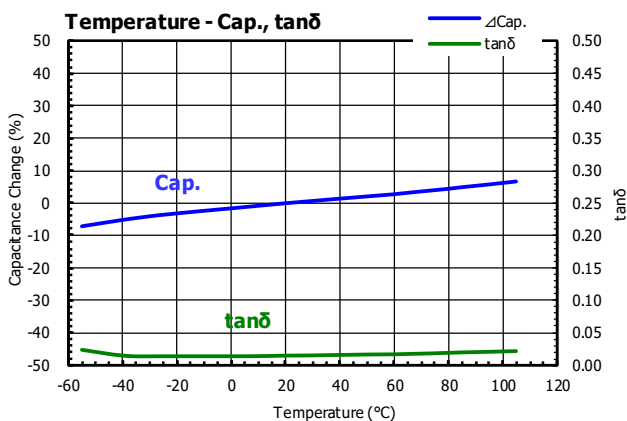
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

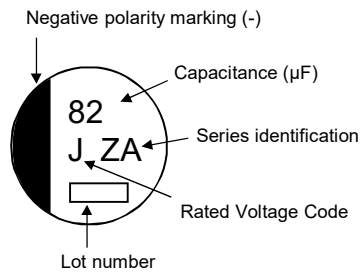
Part Number : EEHZA1J820P

Endurance: 105 °C, 10000 h

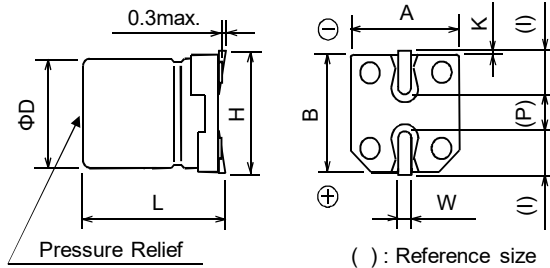
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	63 V
Nominal Capacitance	82 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	51.6 μA max. (at R.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1800 mA rms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

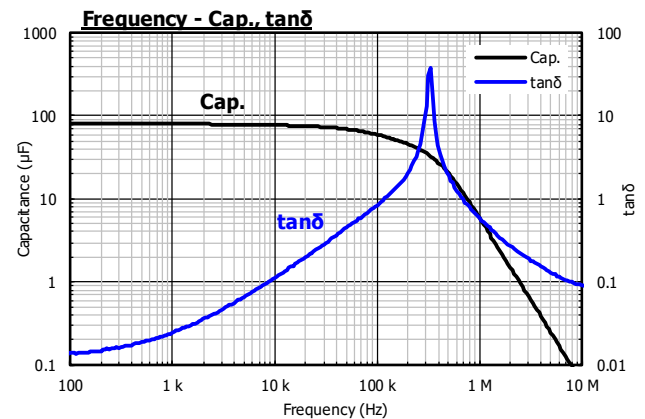
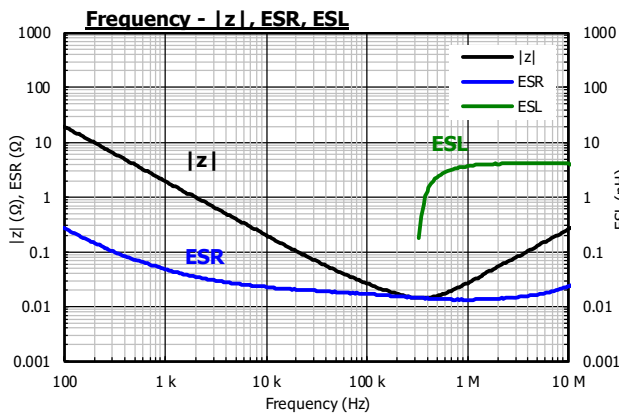


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

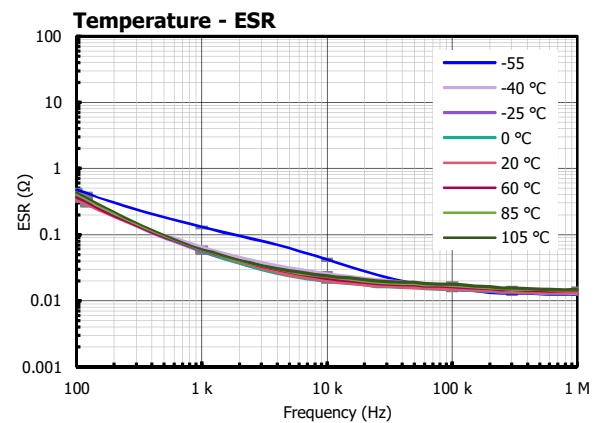
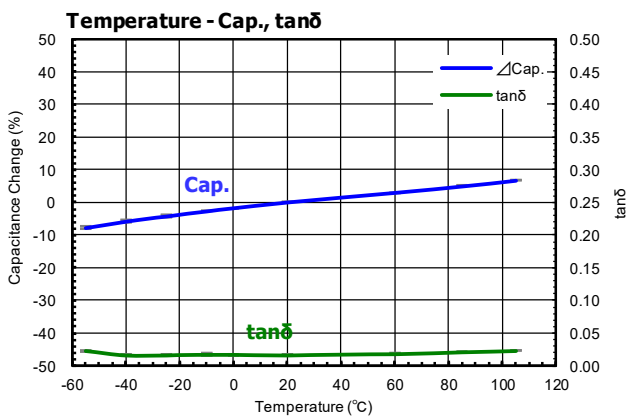
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

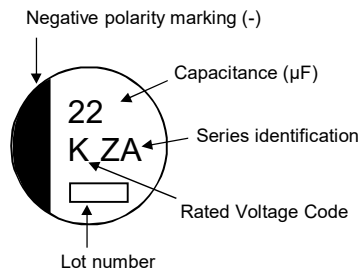
Part Number : EEHZA1K220P

Endurance: 105 °C, 10000 h

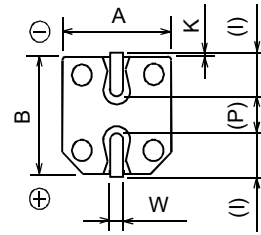
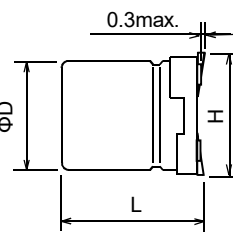
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	80 V
Nominal Capacitance	22 μ F (at 120 Hz)
Capacitance Tolerance	\pm 20 %

$\tan \delta$	0.08 max. (at 120 Hz)
Leakage Current	17.6 μ A max. (at R.V., After 2 min)
ESR	45 m Ω max. (at 100 kHz, 20 °C)
Ripple Current	1550 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)



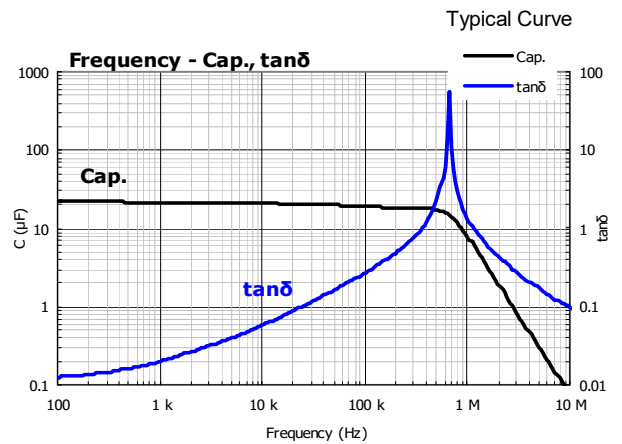
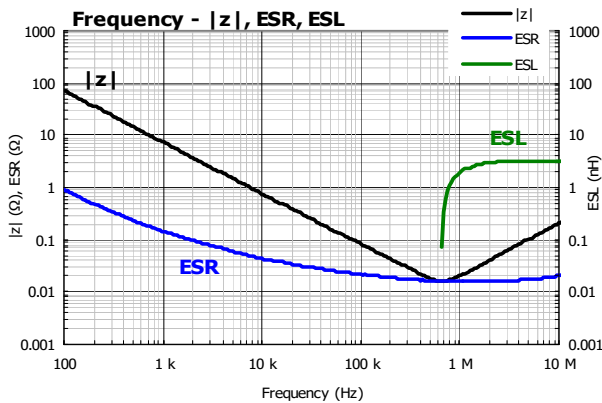
() : Reference size

Size Code: F (Unit: mm)

Φ D	8.0 \pm 0.5
L	10.2 \pm 0.3
A, B	8.3 \pm 0.2
H	10.0 max.
I	3.4
W	0.90 \pm 0.20
P	3.1
K	0.70 \pm 0.2

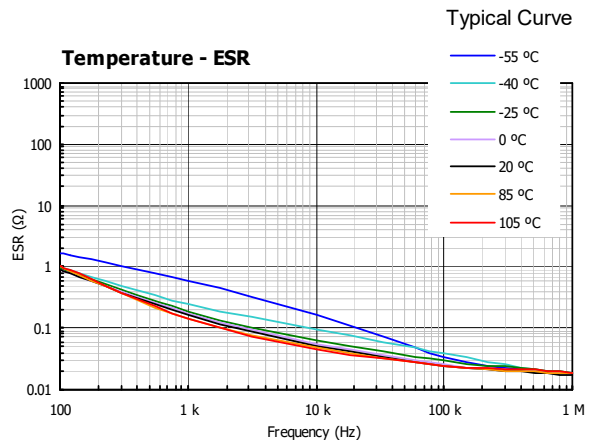
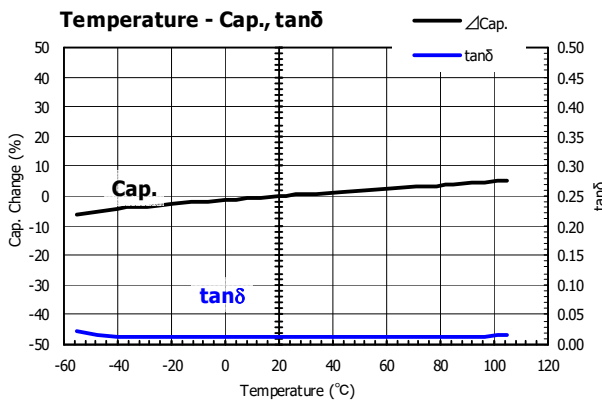
Frequency vs. Impedance, ESR, ESL, Capacitance, $\tan \delta$ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, $\tan \delta$, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



Data Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

SMD type ZA series

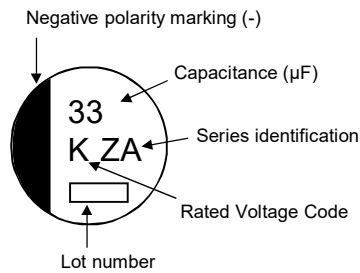
Part Number : EEHZA1K330P

Endurance: 105 °C, 10000 h

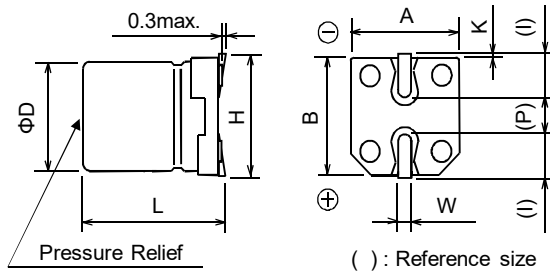
Category Temperature Range	-55 °C to 105 °C
Rated Voltage	80 V
Nominal Capacitance	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tan δ	0.08 max. (at 120 Hz)
Leakage Current	26.4 μA max. (at R.V., After 2 min)
ESR	36 mΩ max. (at 100 kHz, 20 °C)
Ripple Current	1700 mArms max. (at 100 kHz, 105 °C)

Marking



Dimensions in mm (not to scale)

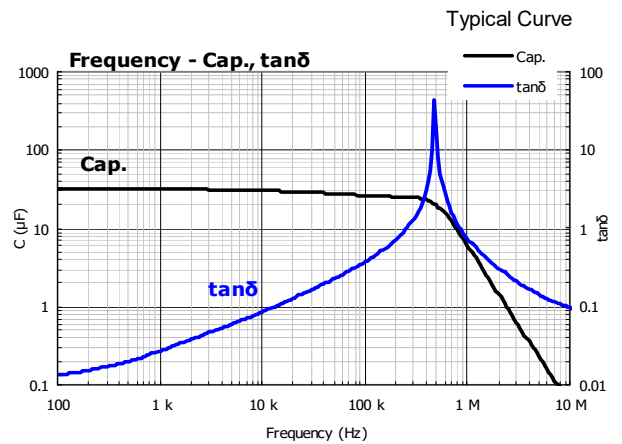
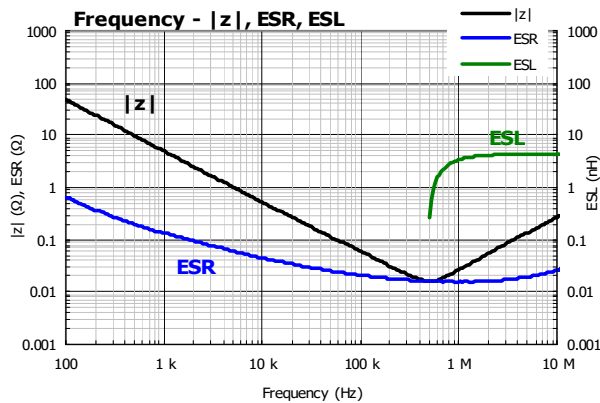


Size Code: G (Unit: mm)

ΦD	10.0 ±0.5
L	10.2 ±0.3
A, B	10.3 ±0.2
H	12.0 max.
I	3.5
W	0.90 ±0.20
P	4.6
K	0.70 ±0.2

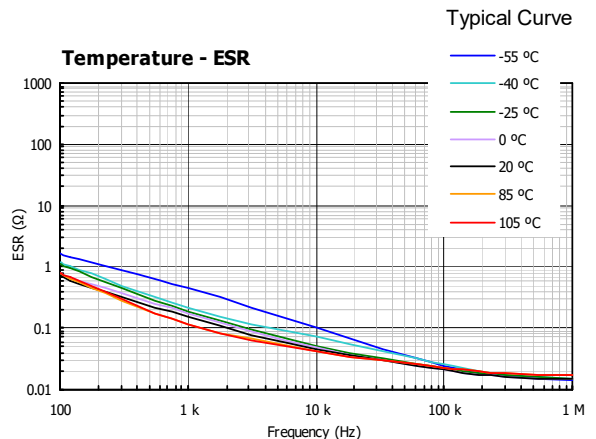
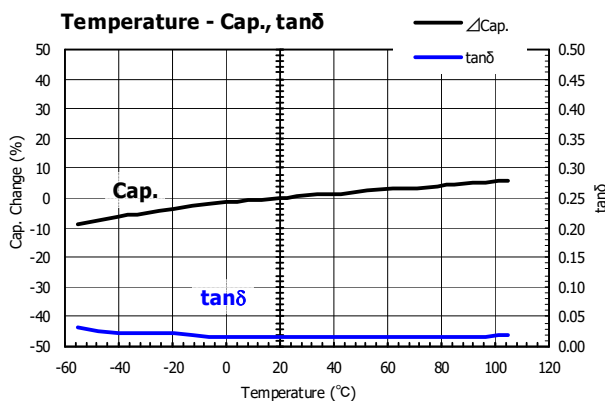
Frequency vs. Impedance, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature vs. Capacitance, tanδ, ESR Characteristics

Osc. Level: 0.5 Vrms (at no load)



**Conductive Polymer Hybrid
Aluminum Electrolytic Capacitors**

Technical Data ZA series

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Device Solutions Business Division

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