

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

Technical Data ZC series



Device Solution Business Division
Automotive & Industrial Systems Company, Panasonic Co., Ltd.

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

V type ZC series



EEHZA1E330R	25V33 μ F	ϕ 5x5.8	... ZC-2
EEHZA1E560P	25V56 μ F	ϕ 6.3x5.8	... ZC-3
EEHZA1E101XP	25V100 μ F	ϕ 6.3x7.7	... ZC-4
EEHZA1E221P	25V220 μ F	ϕ 8x10.2	... ZC-5
EEHZA1E331P	25V330 μ F	ϕ 10x10.2	... ZC-6
EEHZA1V220R	35V22 μ F	ϕ 5x5.8	... ZC-7
EEHZA1V470P	35V47 μ F	ϕ 6.3x5.8	... ZC-8
EEHZA1V680XP	35V68 μ F	ϕ 6.3x7.7	... ZC-9
EEHZA1V151P	35V150 μ F	ϕ 8x10.2	... ZC-10
EEHZA1V271P	35V270 μ F	ϕ 10x10.2	... ZC-11
EEHZA1H100R	50V10 μ F	ϕ 5x5.8	... ZC-12
EEHZA1H220P	50V22 μ F	ϕ 6.3x5.8	... ZC-13
EEHZA1H330XP	50V33 μ F	ϕ 6.3x7.7	... ZC-14
EEHZA1H680P	50V68 μ F	ϕ 8x10.2	... ZC-15
EEHZA1H101P	50V100 μ F	ϕ 10x10.2	... ZC-16
EEHZA1H121P	50V120 μ F	ϕ 10x10.2	... ZC-17
EEHZA1J100P	63V10 μ F	ϕ 6.3x5.8	... ZC-18
EEHZA1J220XP	63V22 μ F	ϕ 6.3x7.7	... ZC-19
EEHZA1J330P	63V33 μ F	ϕ 8x10.2	... ZC-20
EEHZA1J560P	63V56 μ F	ϕ 10x10.2	... ZC-21
EEHZA1J680P	63V68 μ F	ϕ 10x10.2	... ZC-22
EEHZA1K220P	80V22 μ F	ϕ 8x10.2	... ZC-23
EEHZA1K330P	80V33 μ F	ϕ 10x10.2	... ZC-24
EEHZA1K470P	80V47 μ F	ϕ 10x10.2	... ZC-25

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

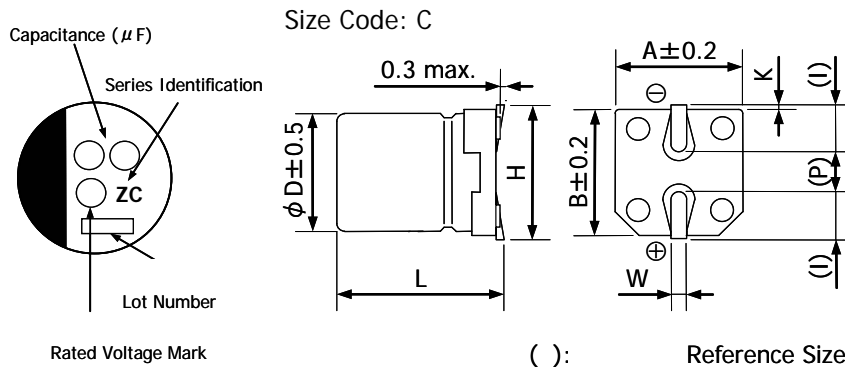
Part Number: EEHZC1E330R

φ5.0×5.8 mm / 25 V / 33 μF / 125 °C, 4000 h

Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 25 V
Nominal Capacitance Range	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.14 max. (at 120 Hz)
DC Leakage Current	8.2 μA (0.01CV) max. (at W.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz)
Ripple Current	550 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

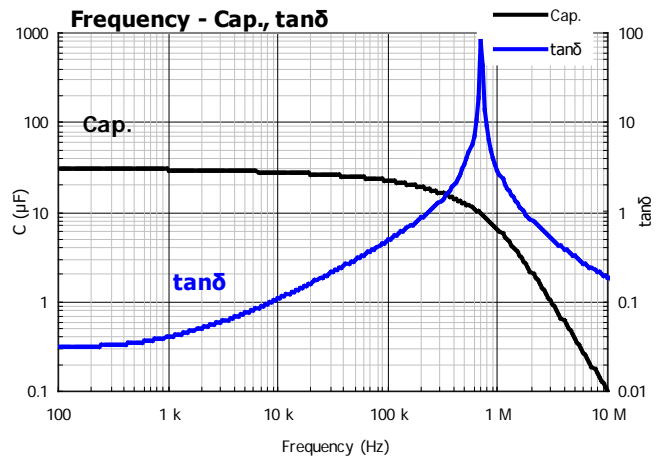
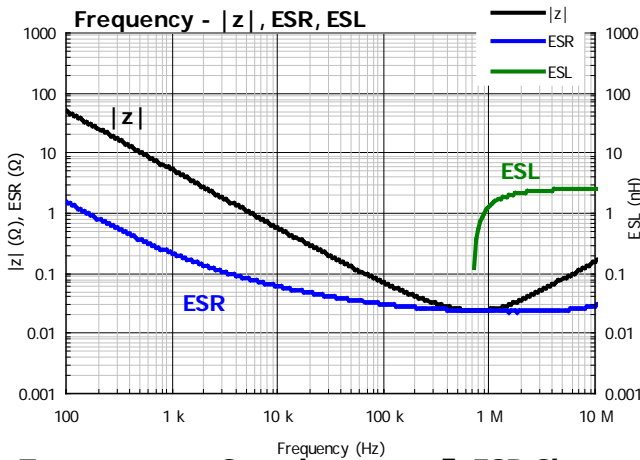
Marking, Dimensions in mm (not to scale)



	(mm)
D	5.0
L	5.8±0.3
A, B	5.3
H	6.5 max.
I	2.2
W	0.65±0.10
P	1.5
K	0.35+0.15/-0.20

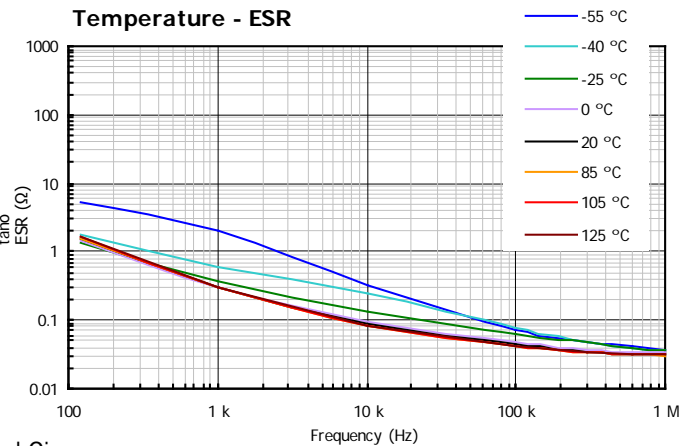
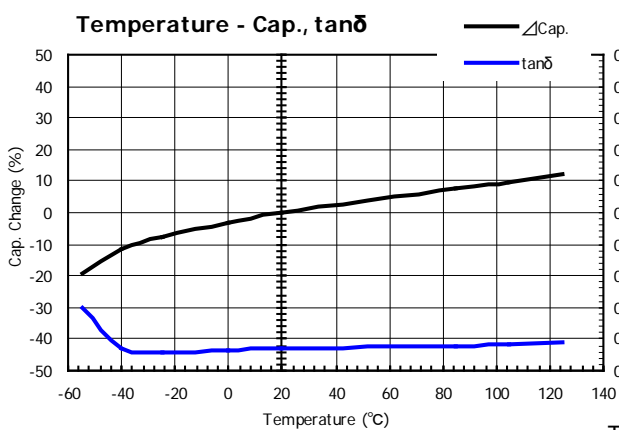
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

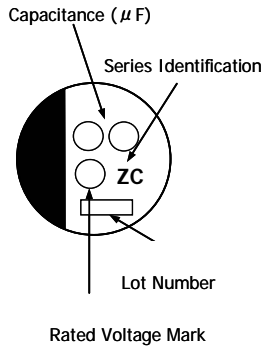
Part Number: EEHZC1E560P

φ6.3×5.8 mm / 25 V / 56 μF / 125 °C, 4000 h

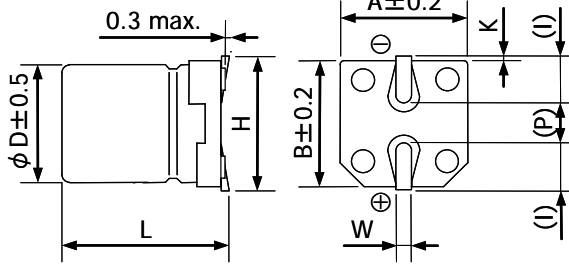
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 25 V
Nominal Capacitance Range	56 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.14 max. (at 120 Hz)
DC Leakage Current	14 μA (0.01CV) max. (at W.V., After 2 min)
ESR	50 mΩ max. (at 100 kHz)
Ripple Current	900 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D

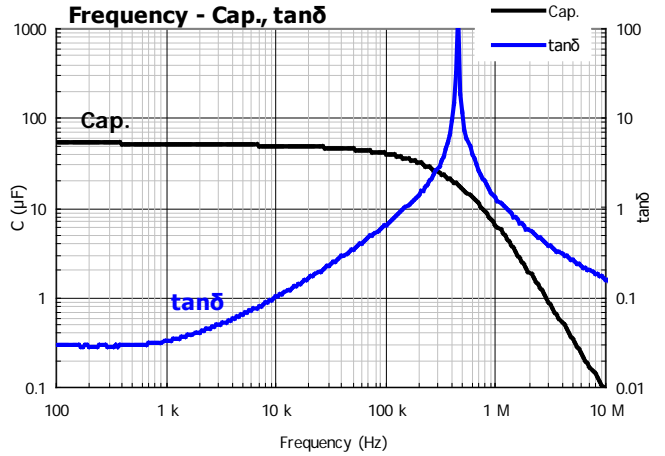
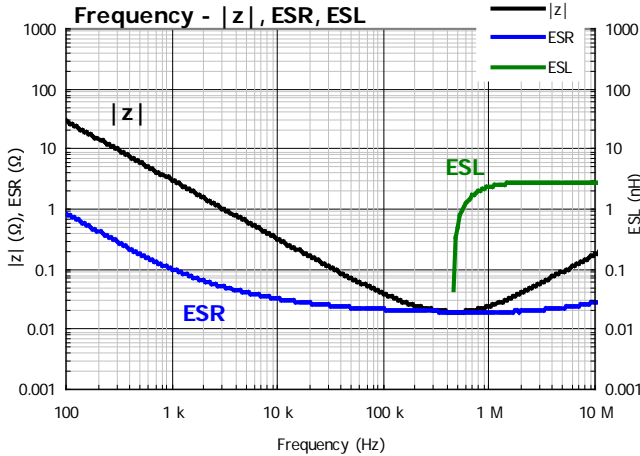


	(mm)
D	6.3
L	5.8±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

(): Reference Size

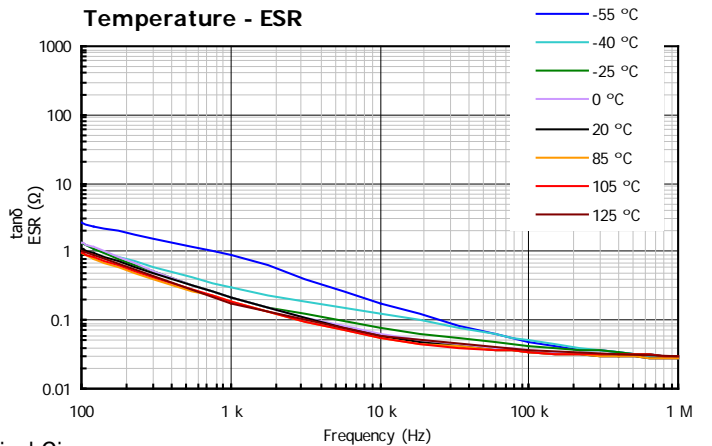
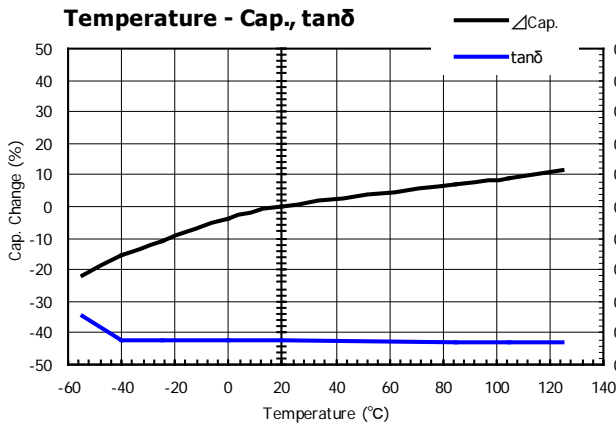
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

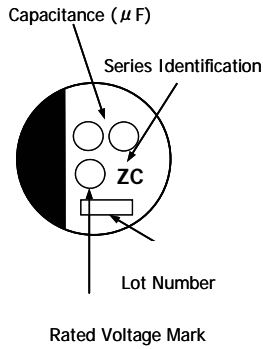
Part Number: EEHZC1E101XP

φ6.3×7.7 mm / 25 V / 100 μF / 125 °C, 4000 h

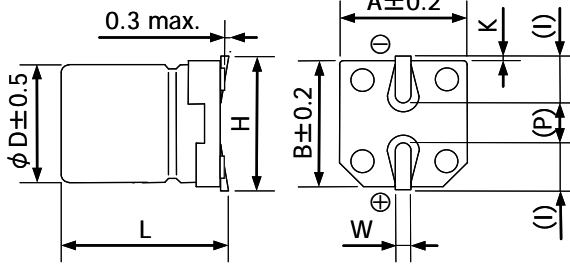
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 25 V
Nominal Capacitance Range	100 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	25 μA (0.01CV) max. (at W.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz)
Ripple Current	1400 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



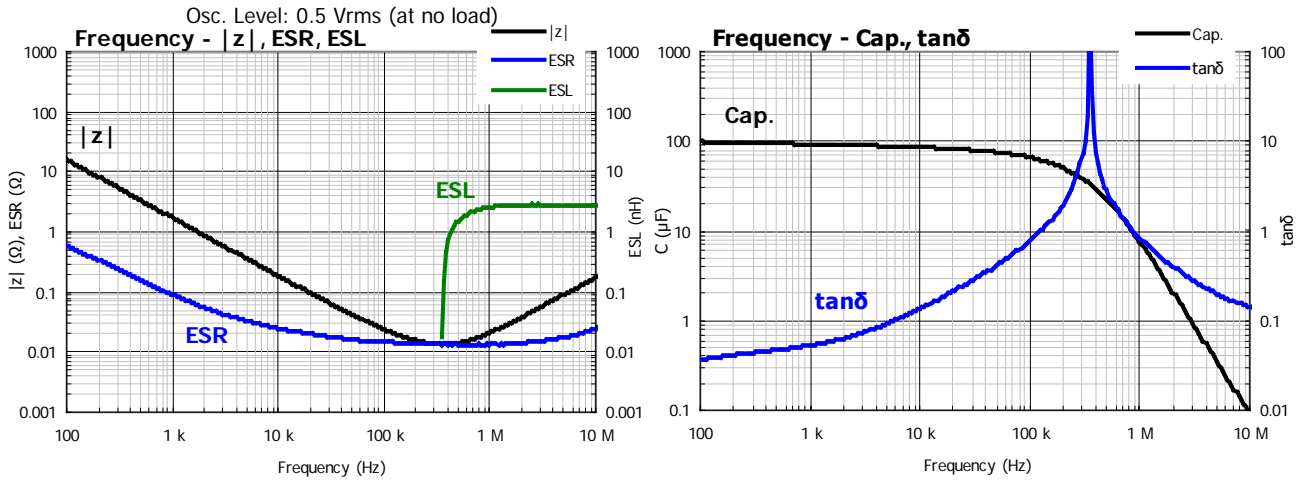
Size Code: D8



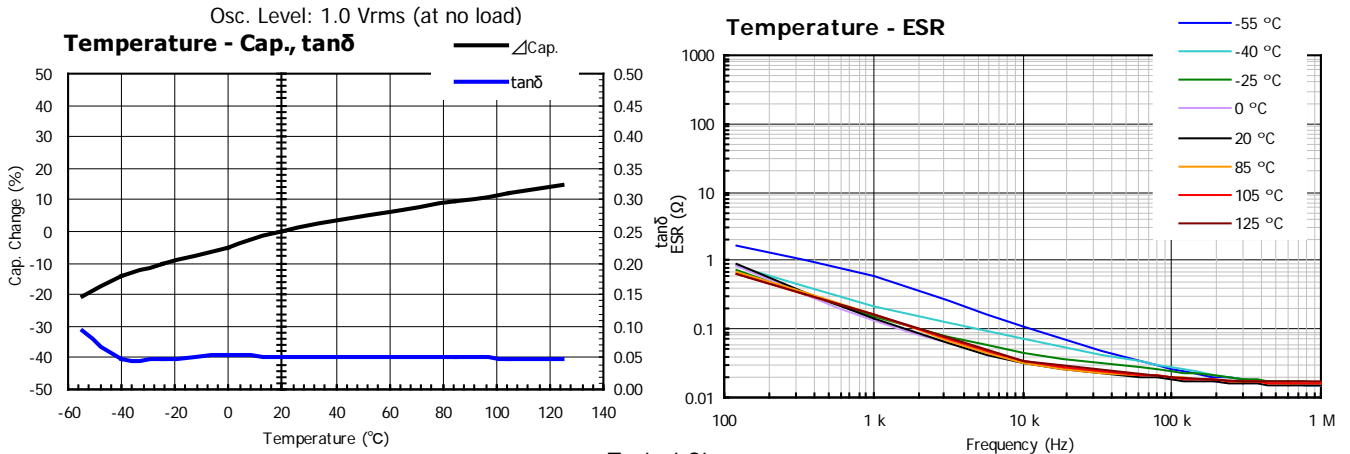
	(mm)
D	6.3
L	7.7±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

(): Reference Size

Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics



Temperature - Capacitance, tanδ, ESR Characteristics



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

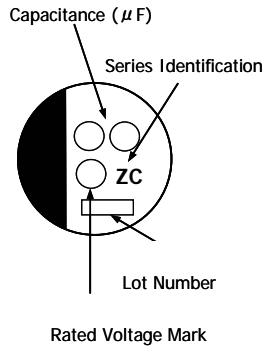
Part Number: EEHZC1E221P

φ8.0×10.2 mm / 25 V / 220 μF / 125 °C, 4000 h

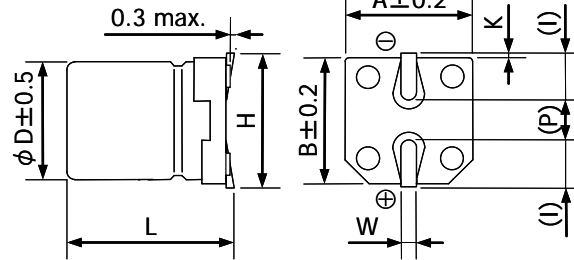
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 25 V
Nominal Capacitance Range	220 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.14 max. (at 120 Hz)
DC Leakage Current	55 μA (0.01CV) max. (at W.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz)
Ripple Current	1600 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: F

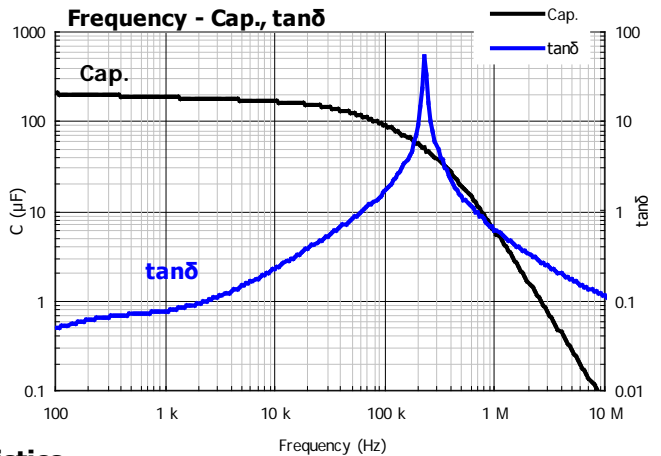
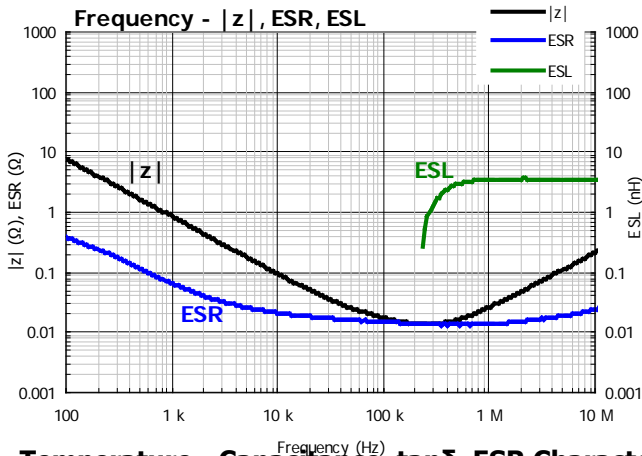


	(mm)
D	8.0
L	10.2±0.3
A, B	8.3
H	10.0 max.
I	3.4
W	0.9±0.2
P	3.1
K	0.7±0.2

(): Reference Size

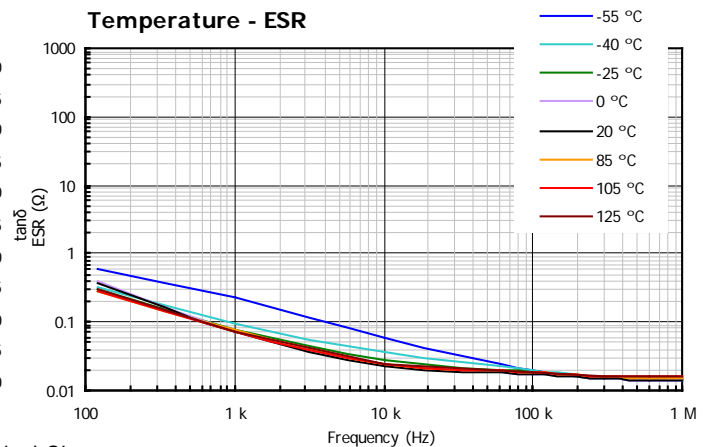
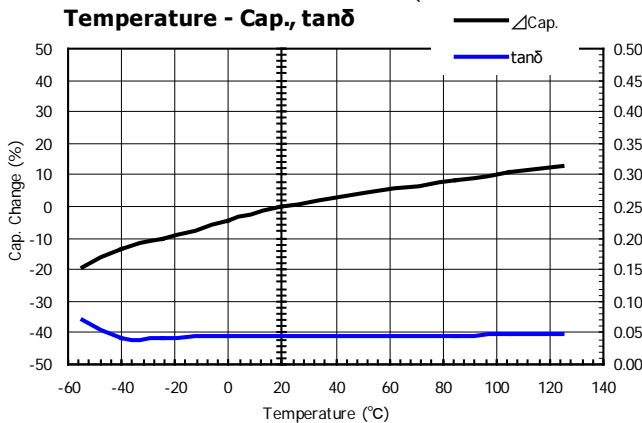
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

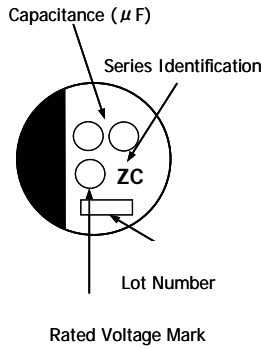
Part Number: EEHZC1E331P

φ10.0×10.2 mm / 25 V / 330 μF / 125 °C, 4000 h

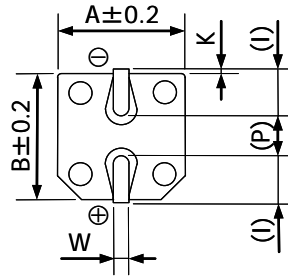
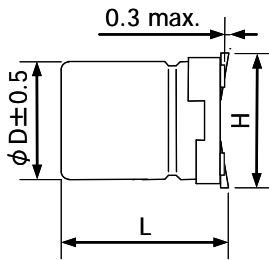
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 25 V
Nominal Capacitance Range	330 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.14 max. (at 120 Hz)
DC Leakage Current	82.5 μA (0.01CV) max. (at W.V., After 2 min)
ESR	20 mΩ max. (at 100 kHz)
Ripple Current	2000 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

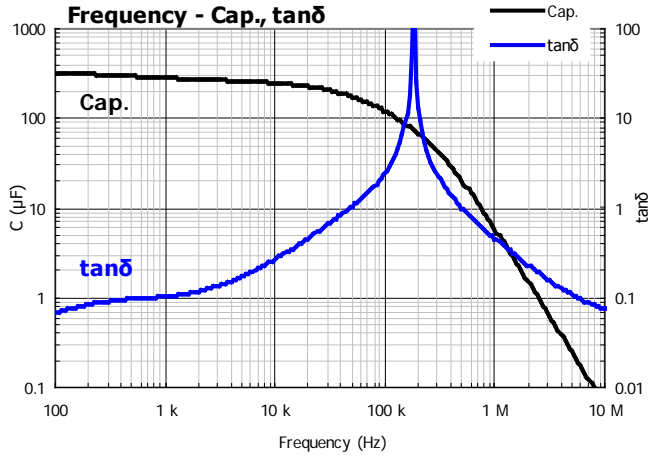
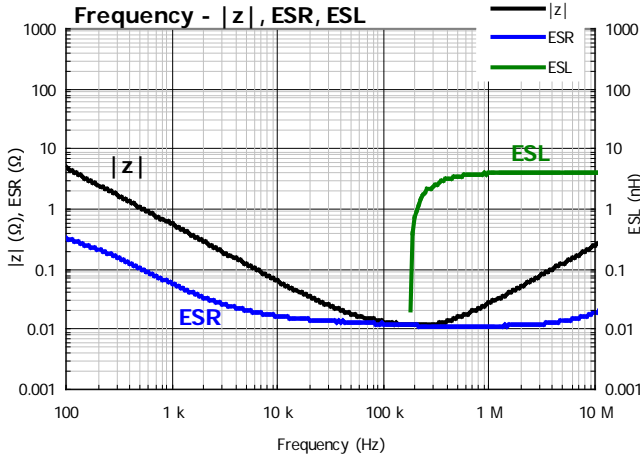


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

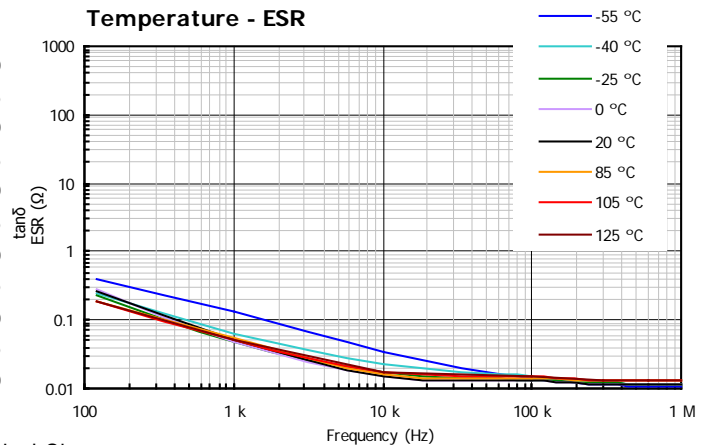
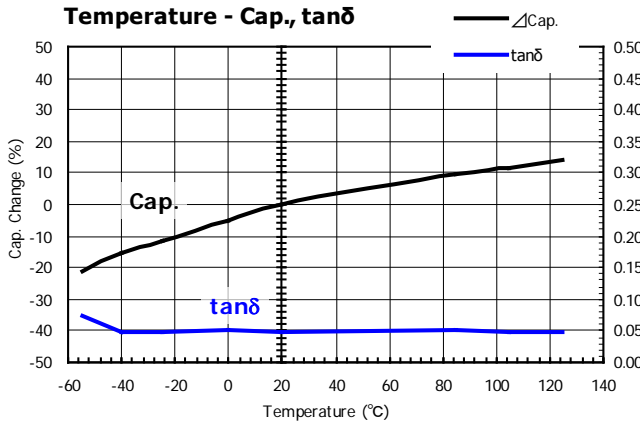
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

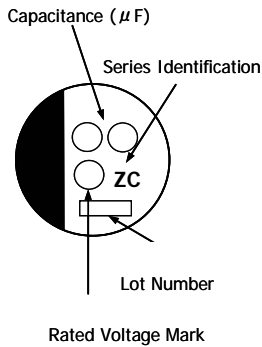
Part Number: EEHZC1V220R

φ5.0×5.8 mm / 35 V / 22 μF / 125 °C, 4000 h

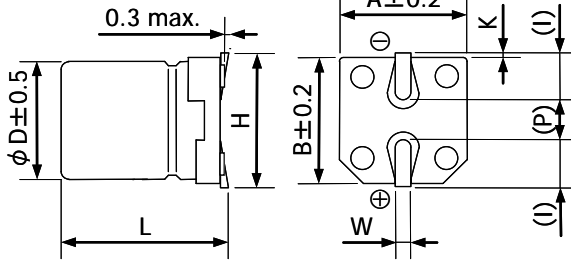
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 35 V
Nominal Capacitance Range	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	7.7 μA (0.01CV) max. (at W.V., After 2 min)
ESR	100 mΩ max. (at 100 kHz)
Ripple Current	550 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: C

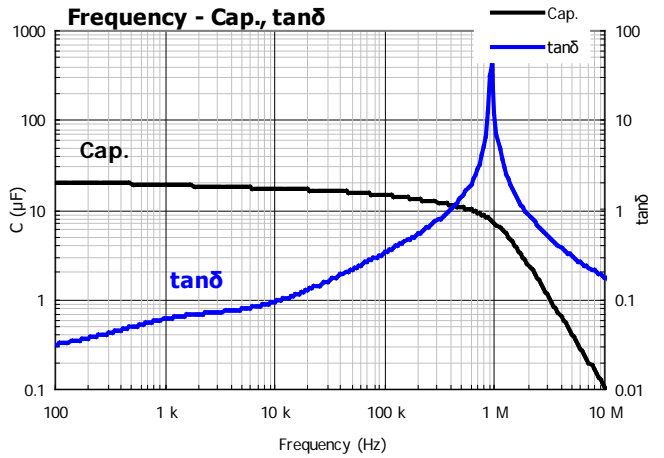
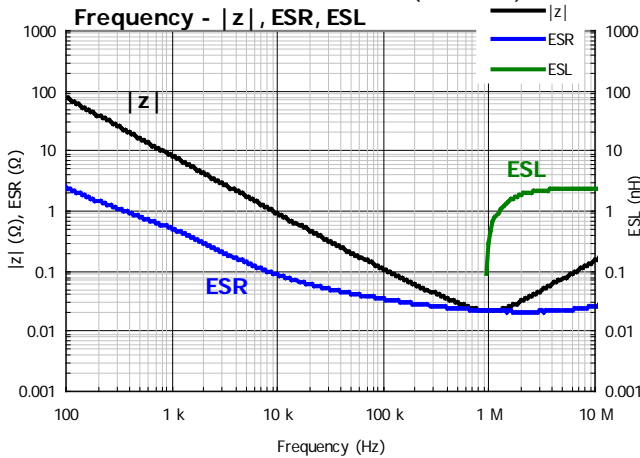


	(mm)
D	5.0
L	5.8±0.3
A, B	5.3
H	6.5 max.
I	2.2
W	0.65±0.10
P	1.5
K	0.35+0.15/-0.20

(): Reference Size

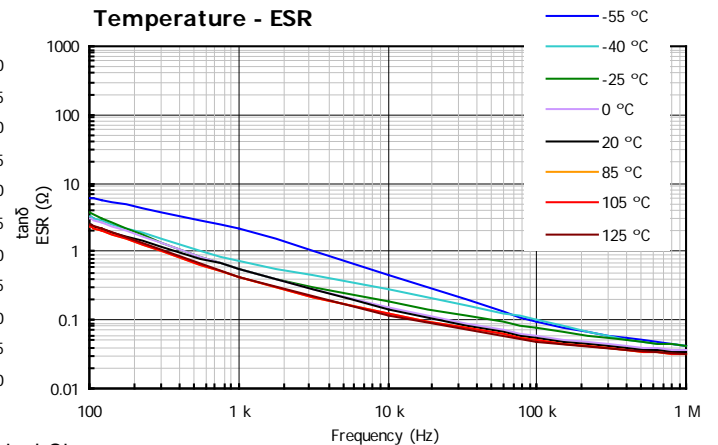
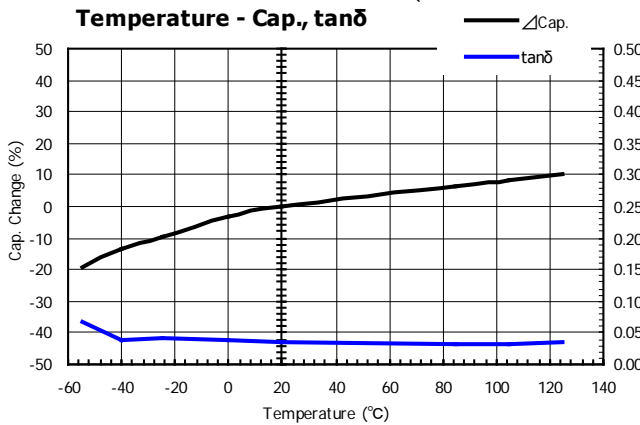
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

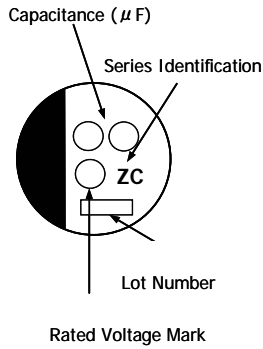
Part Number: EEHZC1V470P

φ6.3×5.8 mm / 35 V / 47 μF / 125 °C, 4000 h

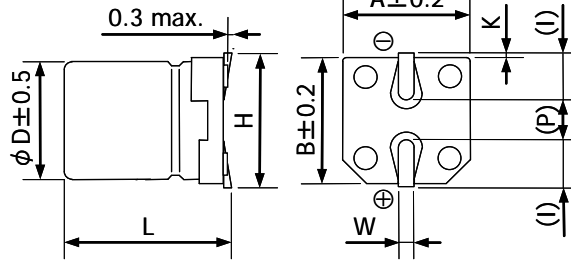
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 35 V
Nominal Capacitance Range	47 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	16.4 μA (0.01CV) max. (at W.V., After 2 min)
ESR	60 mΩ max. (at 100 kHz)
Ripple Current	900 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D

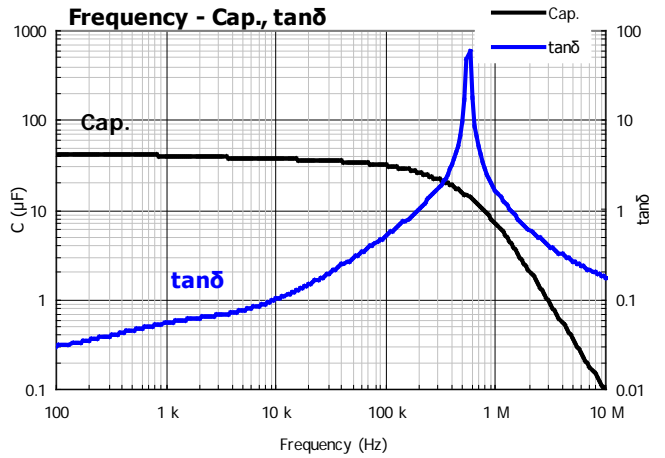
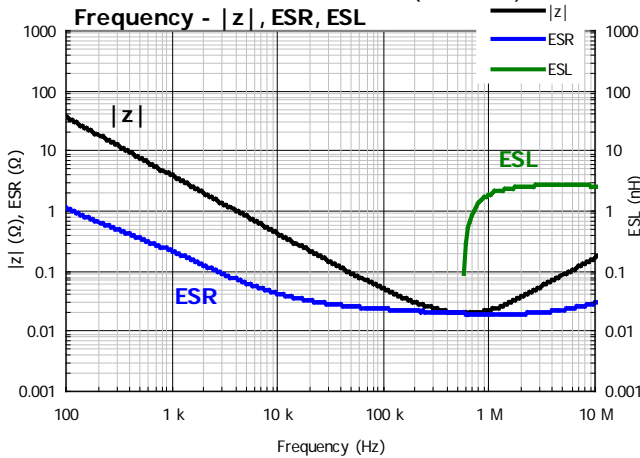


	(mm)
D	6.3
L	5.8±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

(): Reference Size

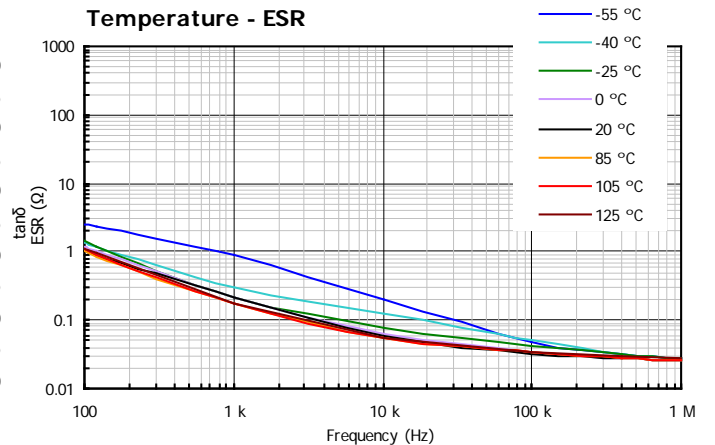
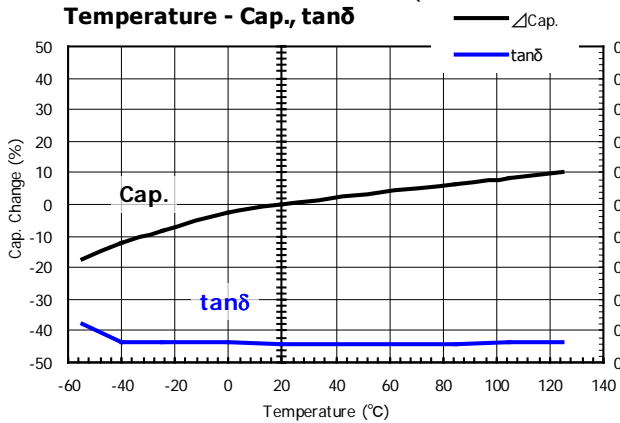
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

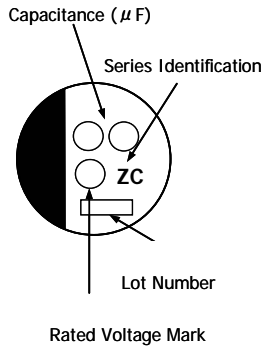
Part Number: EEHZC1V680XP

φ6.3×7.7 mm / 35 V / 68 μF / 125 °C, 4000 h

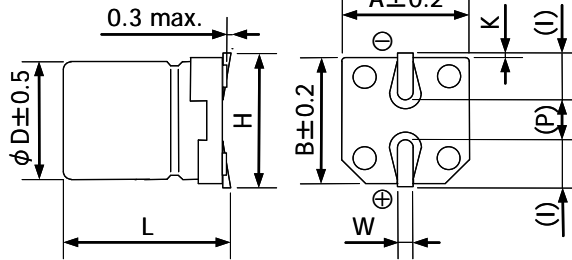
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 35 V
Nominal Capacitance Range	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	23.8 μA (0.01CV) max. (at W.V., After 2 min)
ESR	35 mΩ max. (at 100 kHz)
Ripple Current	1400 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D8

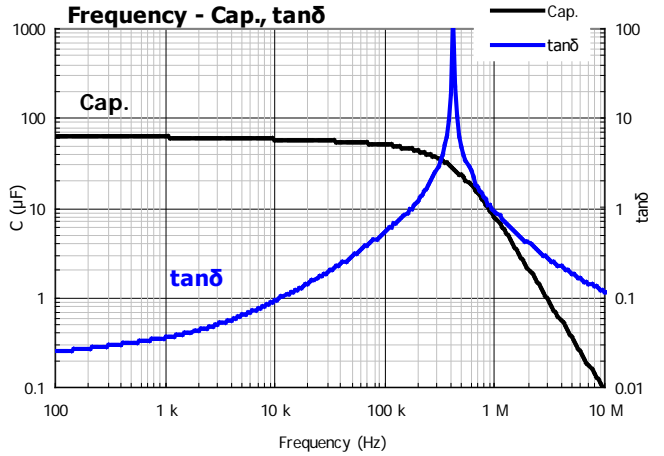
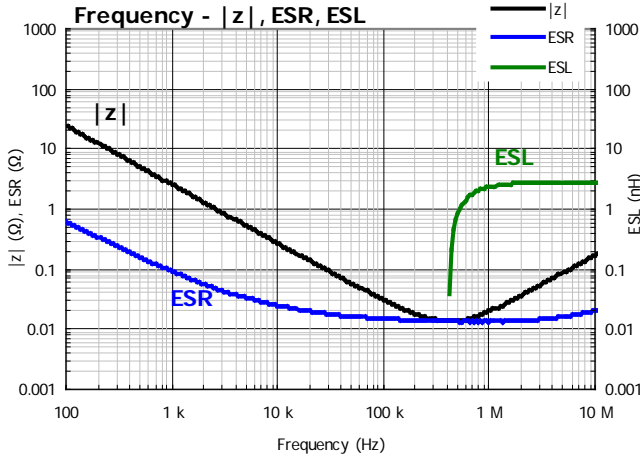


	(mm)
D	6.3
L	7.7±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

(): Reference Size

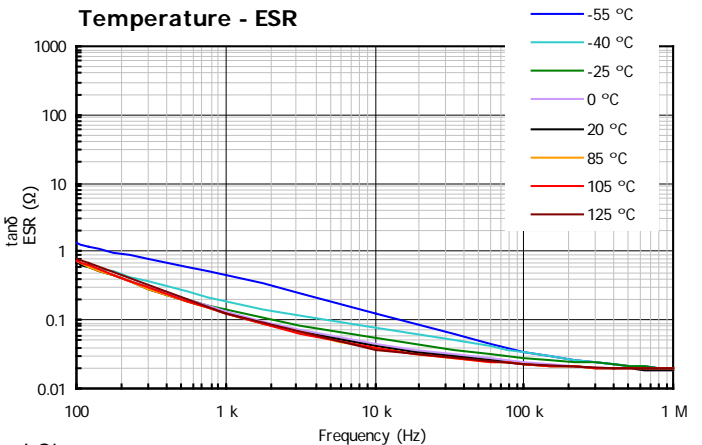
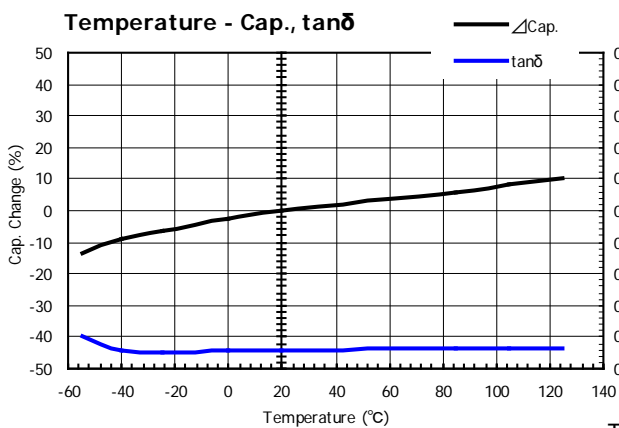
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

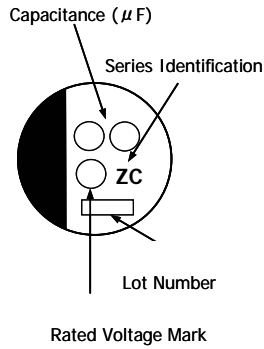
Part Number: EEHZC1V151P

φ8.0×10.2 mm / 35 V / 150 μF / 125 °C, 4000 h

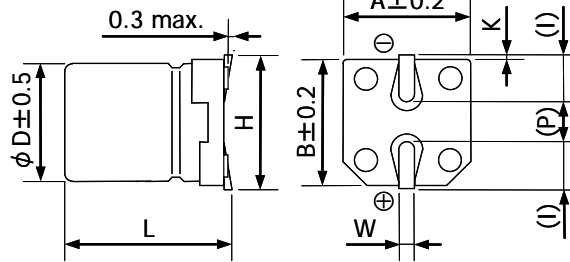
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 35 V
Nominal Capacitance Range	150 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	52.5 μA (0.01CV) max. (at W.V., After 2 min)
ESR	27 mΩ max. (at 100 kHz)
Ripple Current	1600 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: F

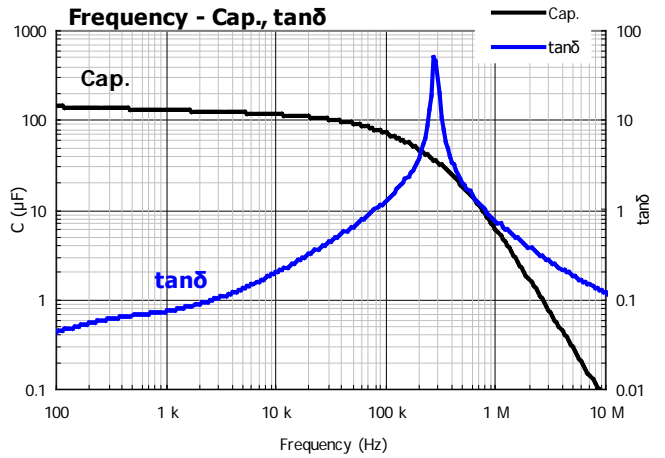
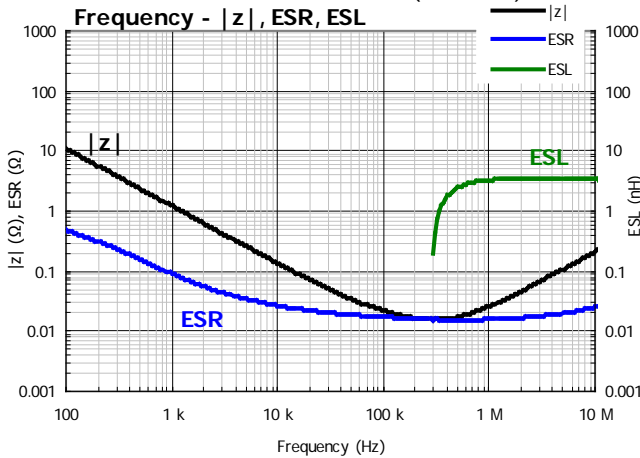


	(mm)
D	8.0
L	10.2±0.3
A, B	8.3
H	10.0 max.
I	3.4
W	0.9±0.2
P	3.1
K	0.7±0.2

() : Reference Size

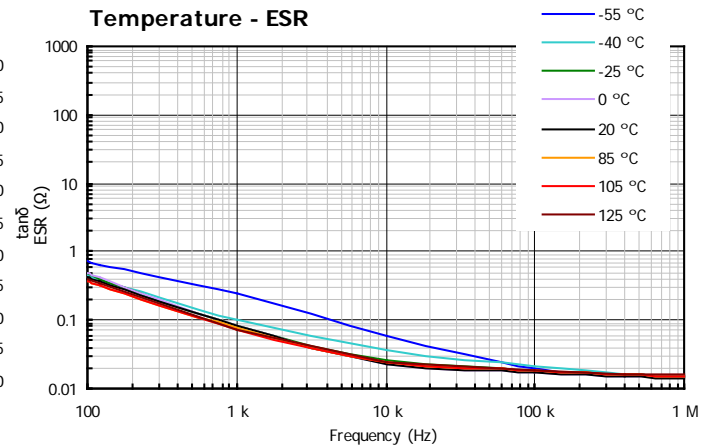
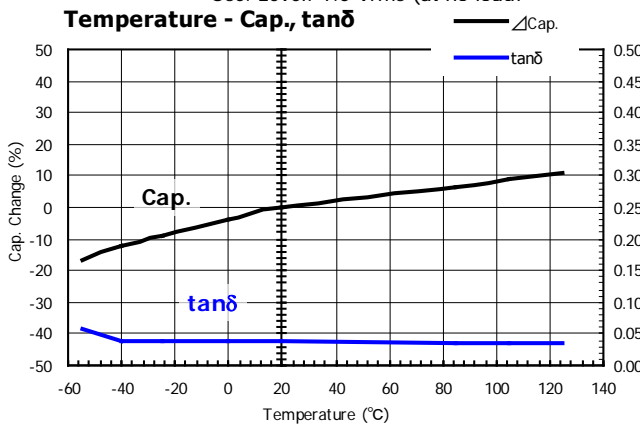
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

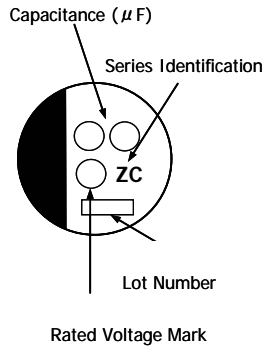
Part Number: EEHZC1V271P

φ10.0×10.2 mm / 35 V / 270 μF / 125 °C, 4000 h

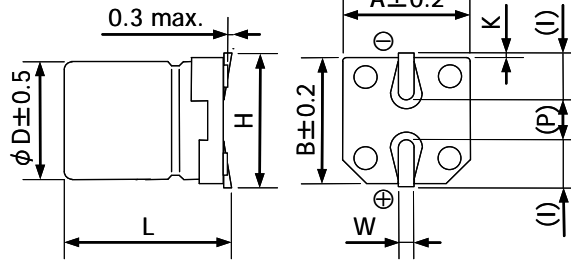
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 35 V
Nominal Capacitance Range	270 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.12 max. (at 120 Hz)
DC Leakage Current	94.5 μA (0.01CV) max. (at W.V., After 2 min)
ESR	20 mΩ max. (at 100 kHz)
Ripple Current	2000 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

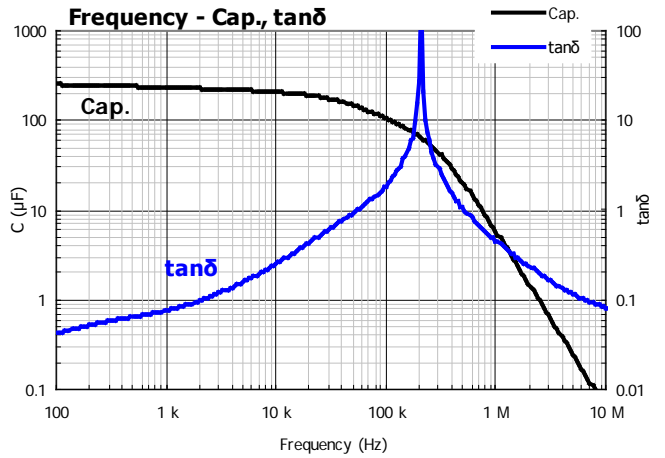
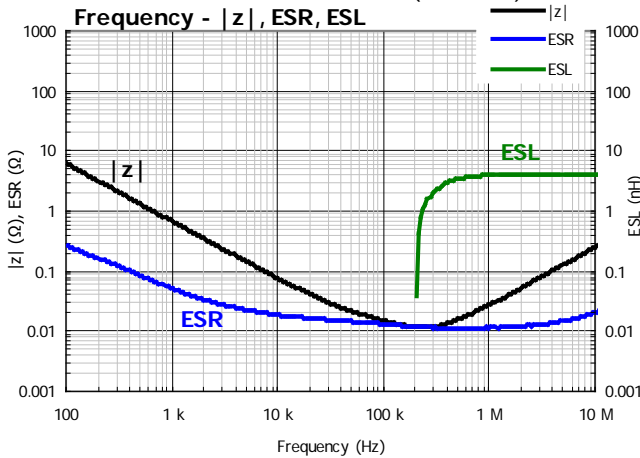


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

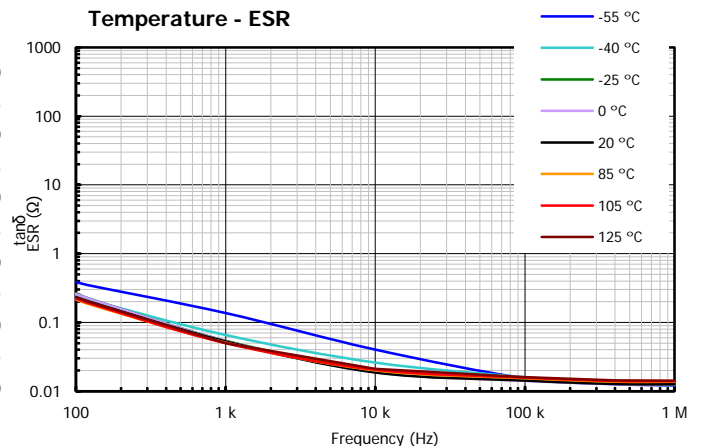
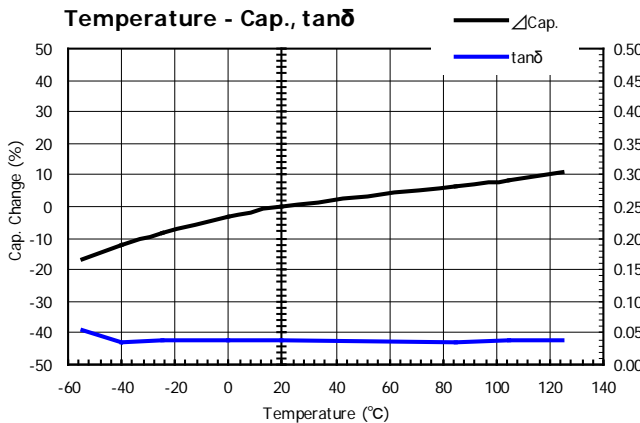
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

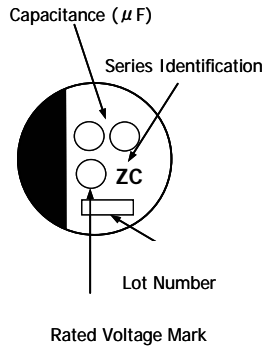
Part Number: EEHZC1H100R

φ5.0×5.8 mm / 50 V / 10 μF / 125 °C, 4000 h

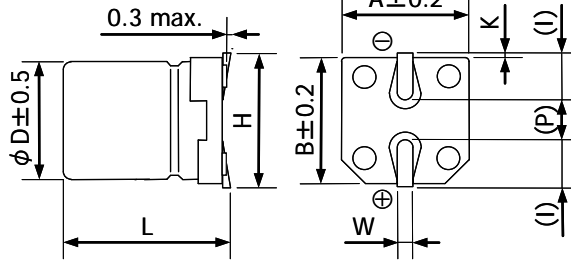
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	10 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.1 max. (at 120 Hz)
DC Leakage Current	5 μA (0.01CV) max. (at W.V., After 2 min)
ESR	120 mΩ max. (at 100 kHz)
Ripple Current	500 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



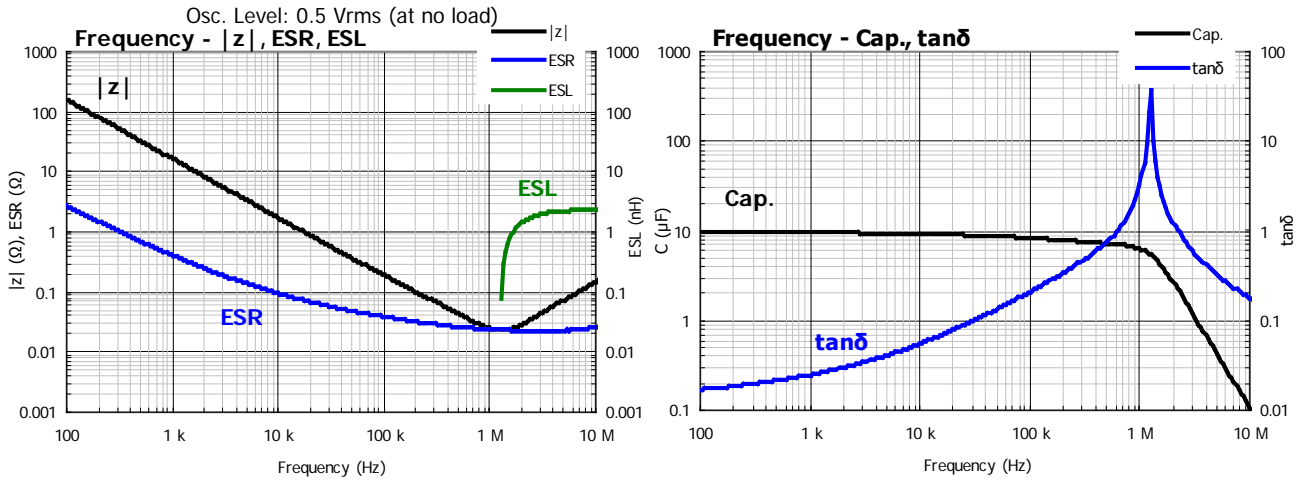
Size Code: C



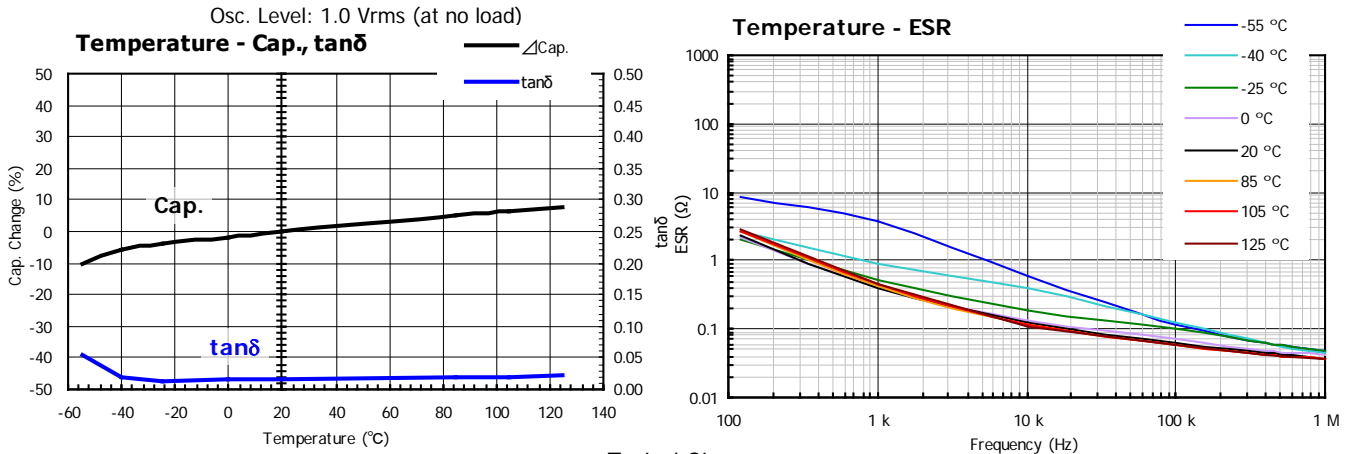
	(mm)
D	5.0
L	5.8±0.3
A, B	5.3
H	6.5 max.
I	2.2
W	0.65±0.10
P	1.5
K	0.35+0.15/-0.20

(): Reference Size

Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics



Temperature - Capacitance, tanδ, ESR Characteristics



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

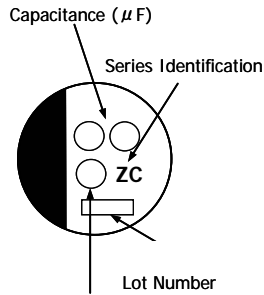
Part Number: EEHZC1H220P

φ6.3×5.8 mm / 50 V / 22 μF / 125 °C, 4000 h

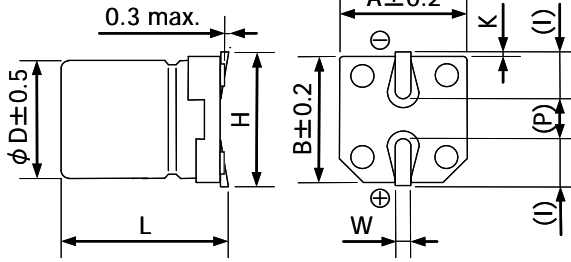
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.10 max. (at 120 Hz)
DC Leakage Current	11 μA (0.01CV) max. (at W.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz)
Ripple Current	750 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D



	(mm)
D	6.3
L	5.8±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

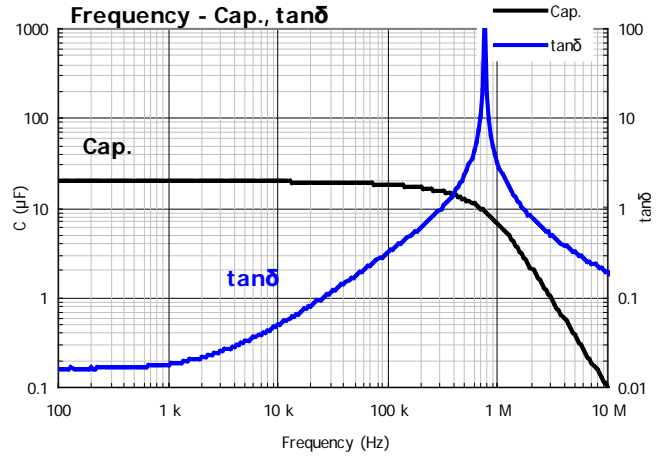
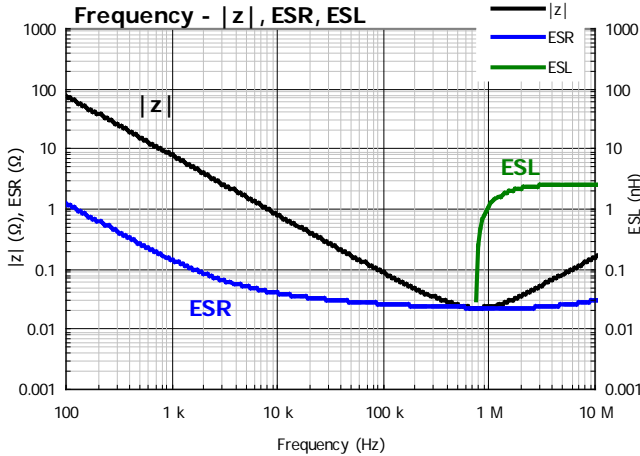
Rated Voltage Mark

():

Reference Size

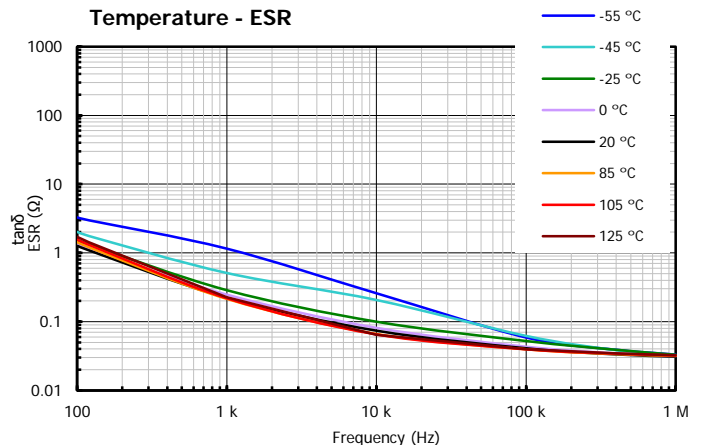
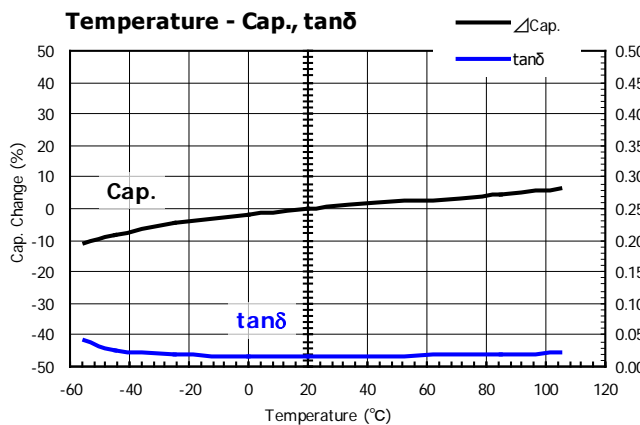
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

V type ZC series

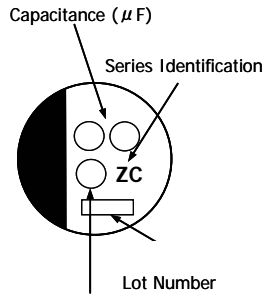
Part Number: EEHZC1H330XP

φ6.3×7.7 mm / 50 V / 33 μF / 125 °C, 4000 h

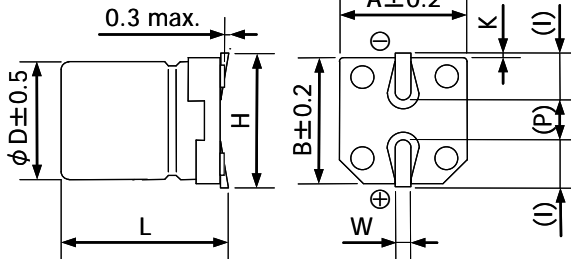
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.10 max. (at 120 Hz)
DC Leakage Current	16.5 μA (0.01CV) max. (at W.V., After 2 min)
ESR	40 mΩ max. (at 100 kHz)
Ripple Current	1100 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D8



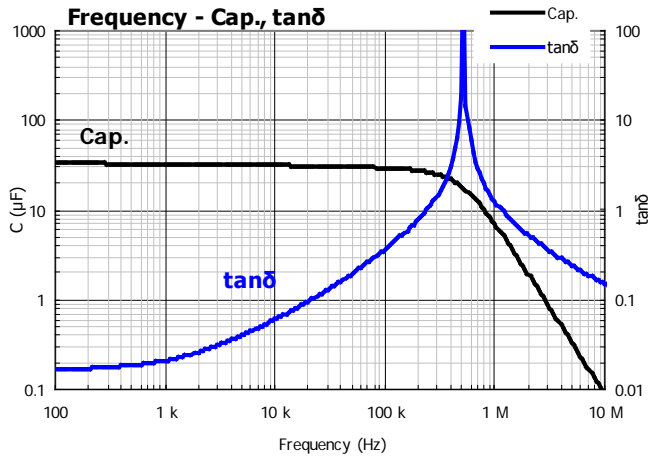
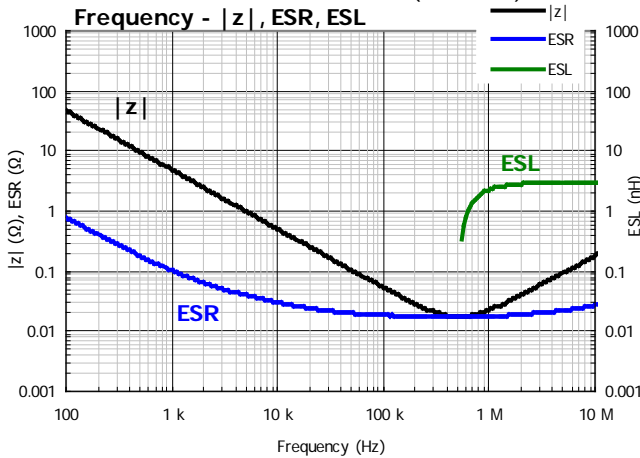
	(mm)
D	6.3
L	7.7±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

Rated Voltage Mark

(): Reference Size

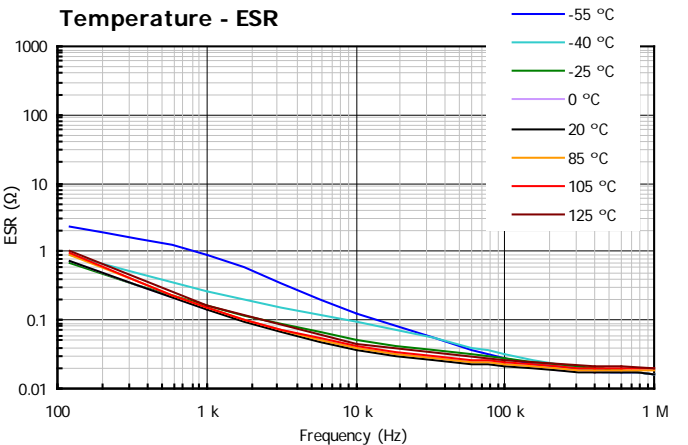
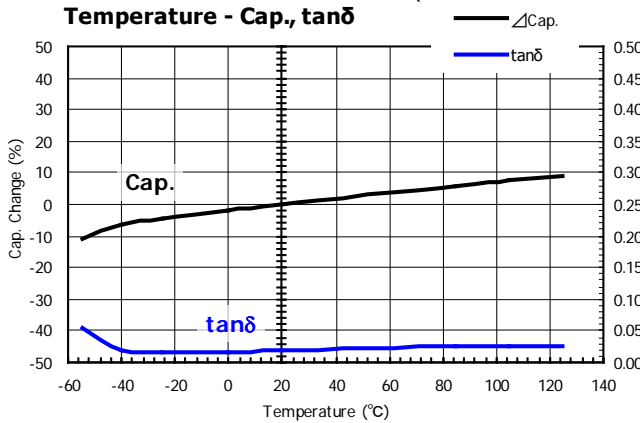
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

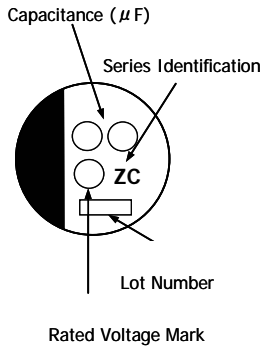
Part Number: EEHZC1H680P

φ8.0×10.2 mm / 50 V / 68 μF / 125 °C, 4000 h

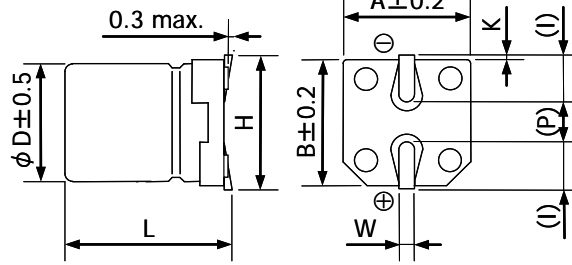
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.1 max. (at 120 Hz)
DC Leakage Current	34 μA (0.01CV) max. (at W.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz)
Ripple Current	1250 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



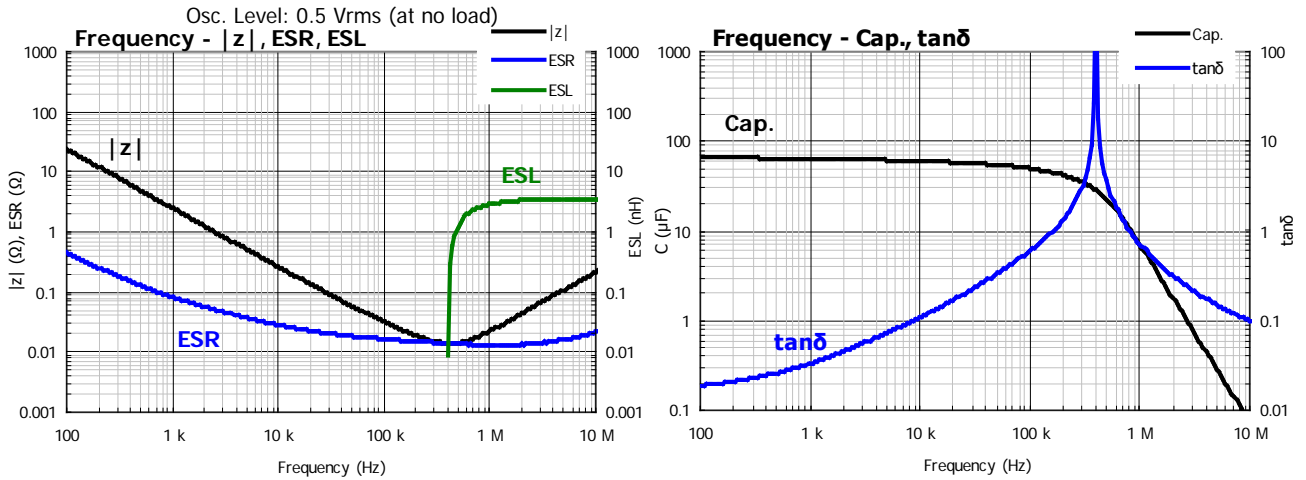
Size Code: F



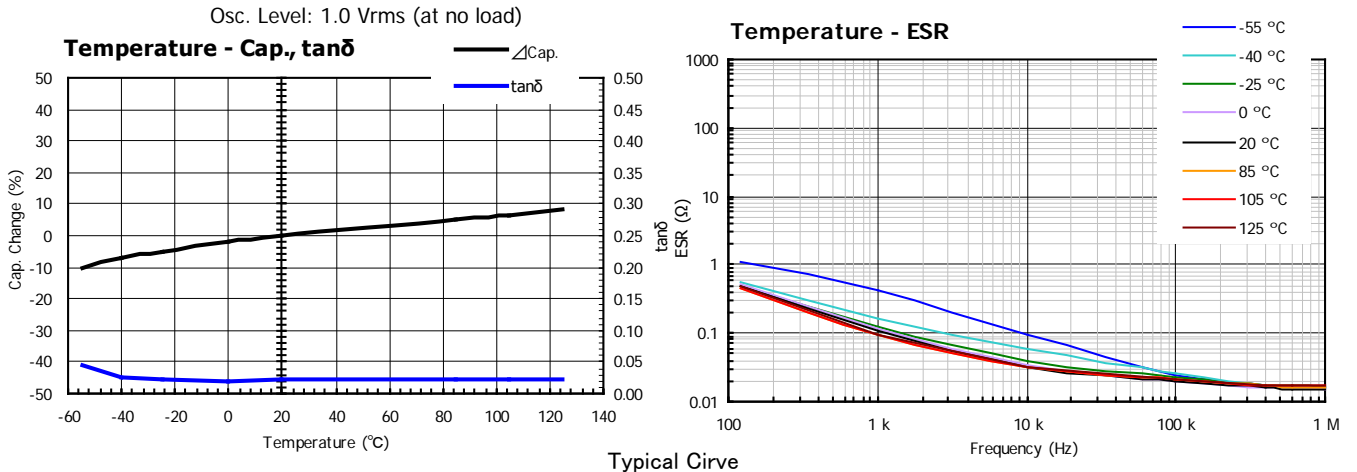
	(mm)
D	8.0
L	10.2±0.3
A, B	8.3
H	10.0 max.
I	3.4
W	0.9±0.2
P	3.1
K	0.7±0.2

() : Reference Size

Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics



Temperature - Capacitance, tanδ, ESR Characteristics



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

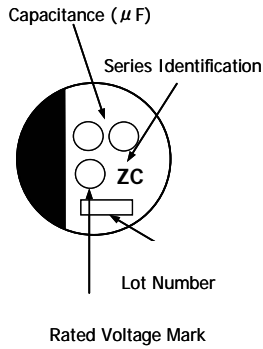
Part Number: EEHZC1H101P

φ10.0×10.2 mm / 50 V / 100 μF / 125 °C, 4000 h

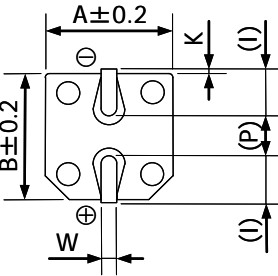
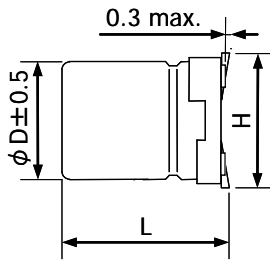
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	100 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.1 max. (at 120 Hz)
DC Leakage Current	50 μA (0.01CV) max. (at W.V., After 2 min)
ESR	28 mΩ max. (at 100 kHz)
Ripple Current	1600 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

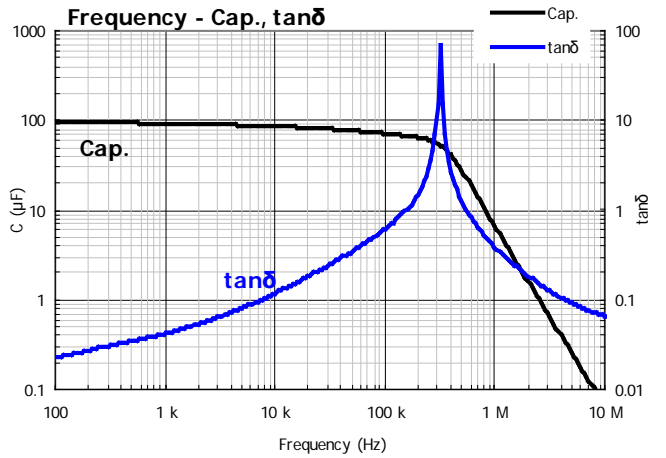
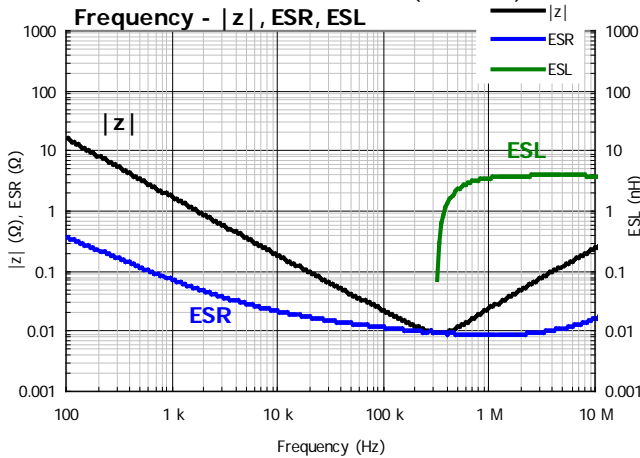


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

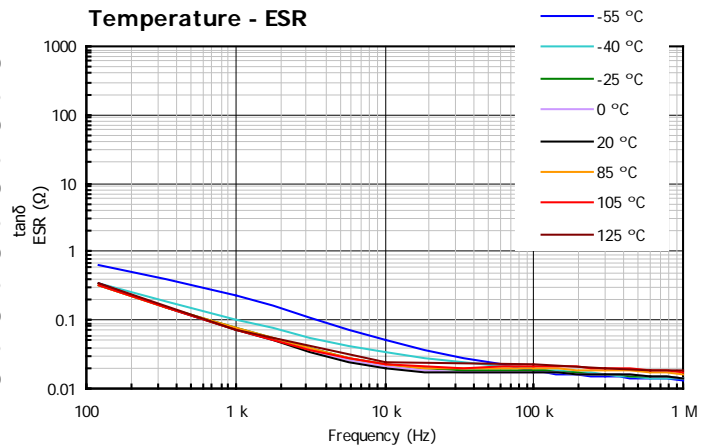
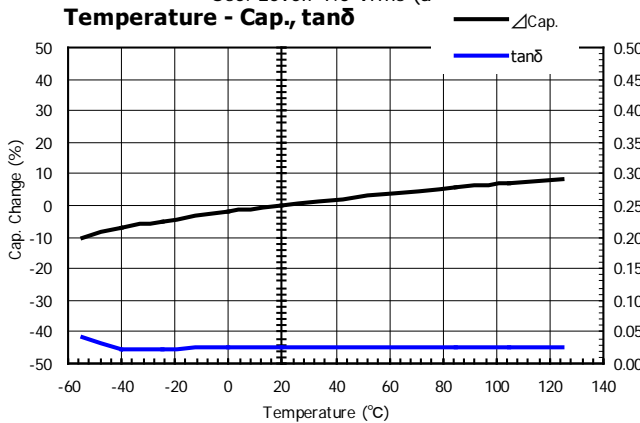
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

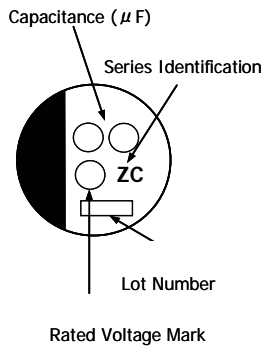
Part Number: EEHC1H121P

φ10.0×10.2 mm / 50 V / 120 μF / 125 °C, 4000 h

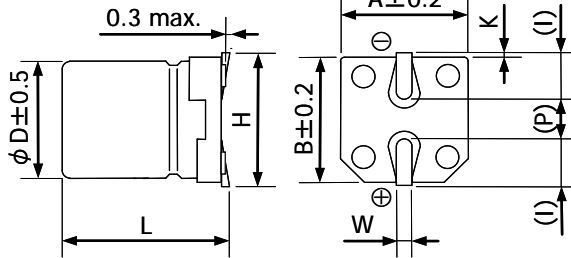
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 50 V
Nominal Capacitance Range	120 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.10 max. (at 120 Hz)
DC Leakage Current	60.0 μA (0.01CV) max. (at W.V., After 2 min)
ESR	28 mΩ max. (at 100 kHz)
Ripple Current	1600 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

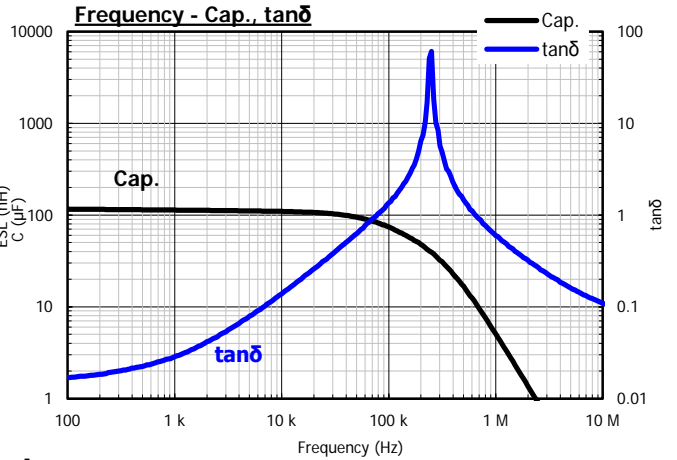
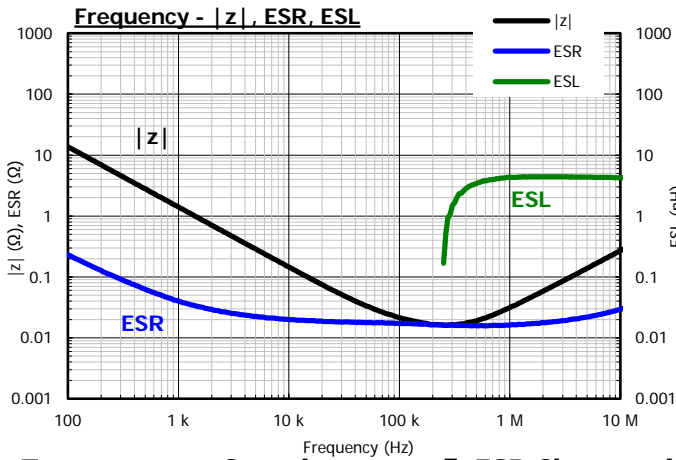


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

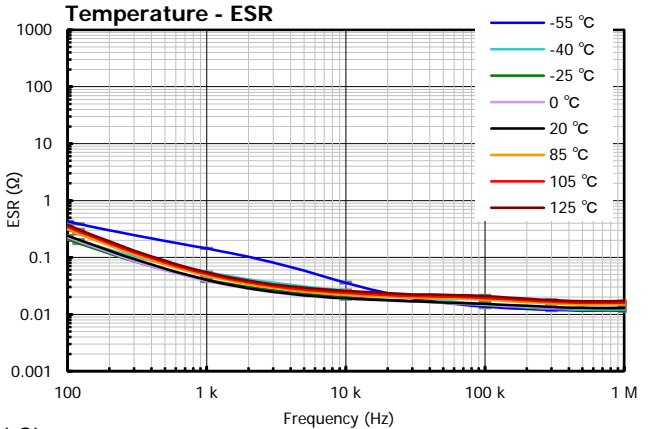
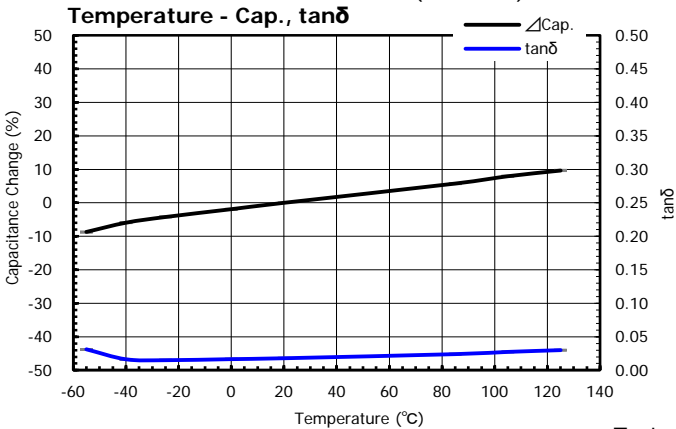
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

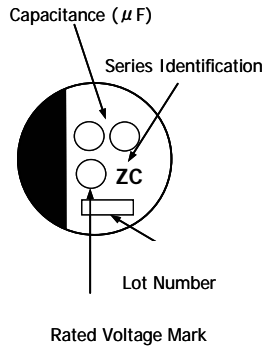
Part Number: EEHZC1J100P

φ6.3×5.8 mm / 63 V / 10 μF / 125 °C, 4000 h

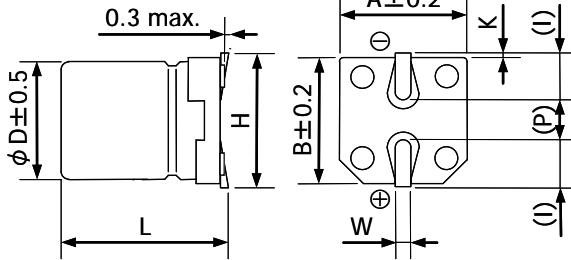
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 63 V
Nominal Capacitance Range	10 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	6.3 μA (0.01CV) max. (at W.V., After 2 min)
ESR	120 mΩ max. (at 100 kHz)
Ripple Current	700 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D

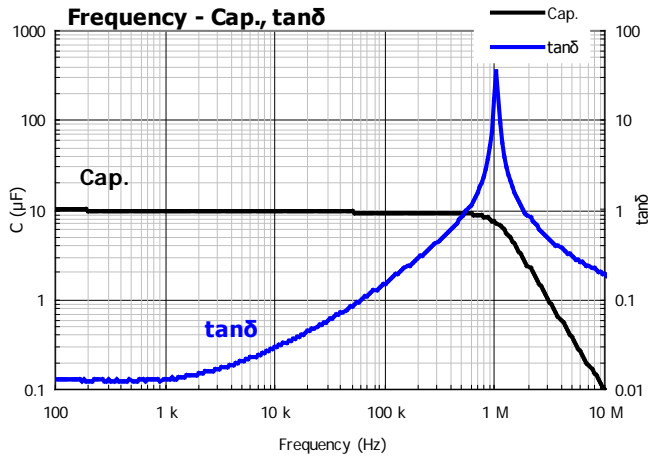
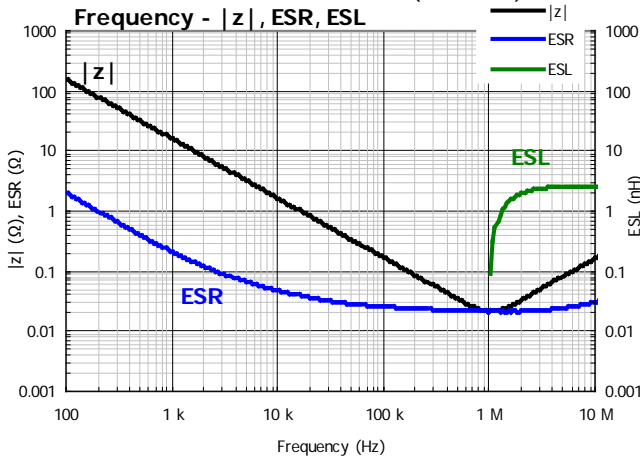


	(mm)
D	6.3
L	5.8±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

(): Reference Size

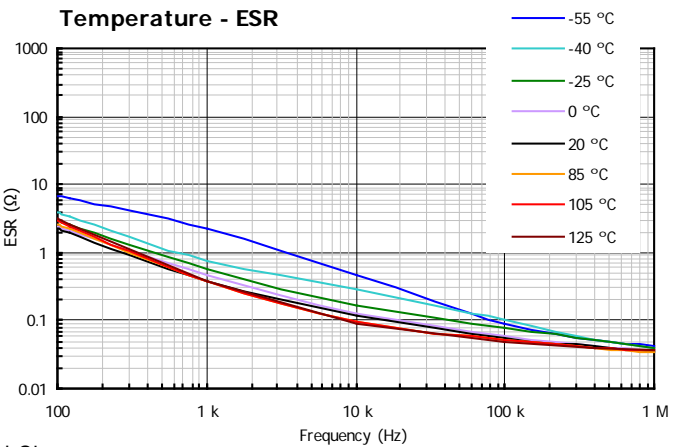
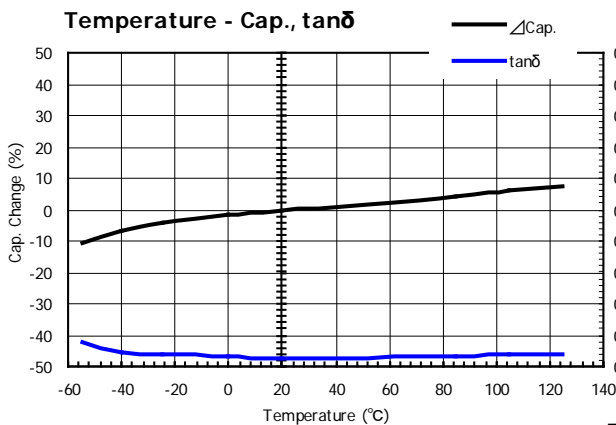
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor

V type ZC series

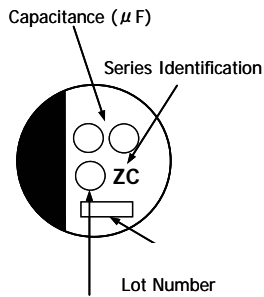
Part Number: EEHZC1J220XP

φ6.3×7.7 mm / 63 V / 22 μF / 125 °C, 4000 h

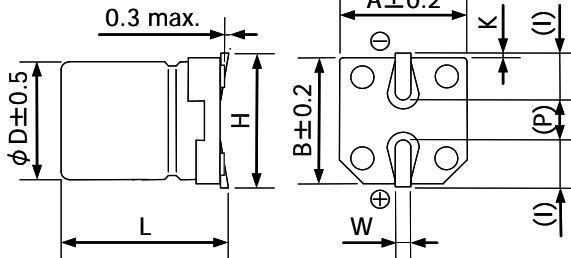
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 63 V
Nominal Capacitance Range	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	13.8 μA (0.01CV) max. (at W.V., After 2 min)
ESR	80 mΩ max. (at 100 kHz)
Ripple Current	900 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: D8

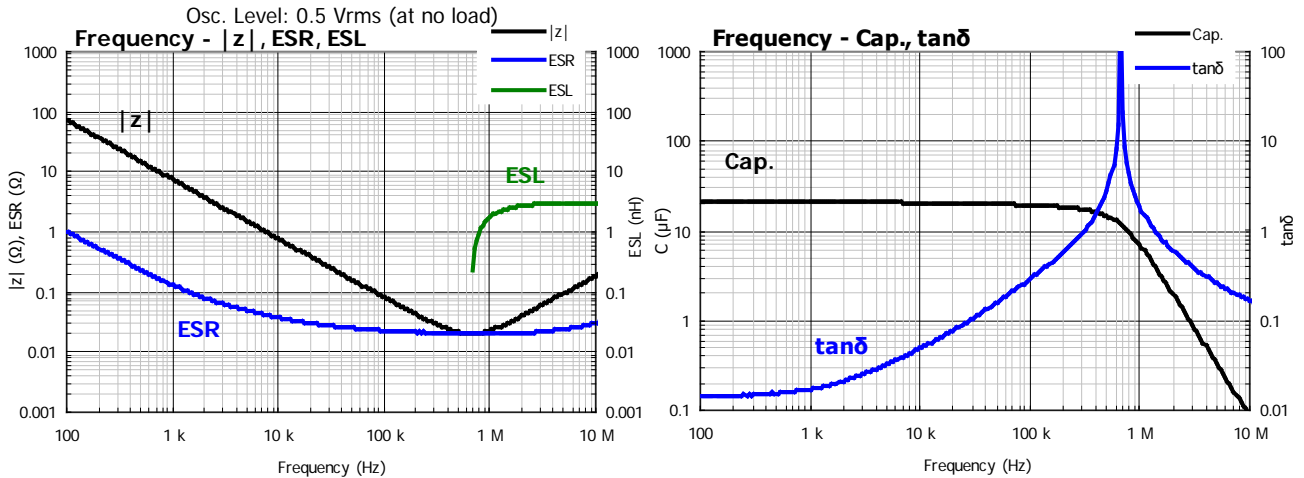


	(mm)
D	6.3
L	7.7±0.3
A, B	6.6
H	7.8 max.
I	2.6
W	0.65±0.10
P	1.8
K	0.35+0.15/-0.20

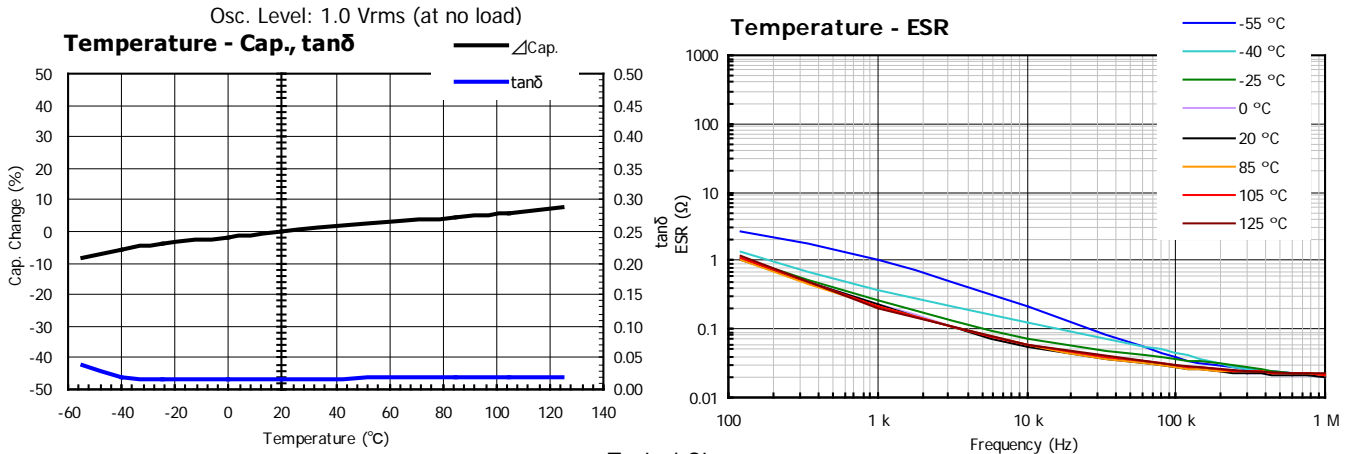
Rated Voltage Mark

(): Reference Size

Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics



Temperature - Capacitance, tanδ, ESR Characteristics



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

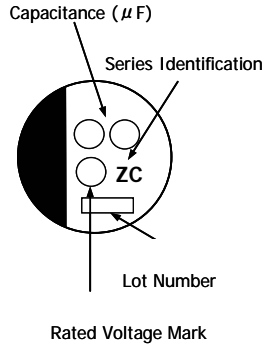
Part Number: EEHZC1J330P

φ8.0×10.2 mm / 63 V / 33 μF / 125 °C, 4000 h

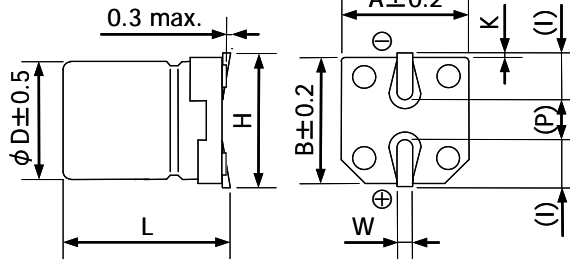
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 63 V
Nominal Capacitance Range	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	20.7 μA (0.01CV) max. (at W.V., After 2 min)
ESR	40 mΩ max. (at 100 kHz)
Ripple Current	1100 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: F

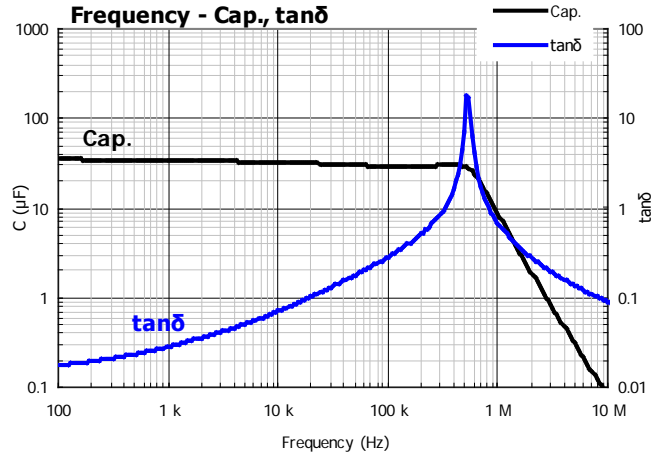
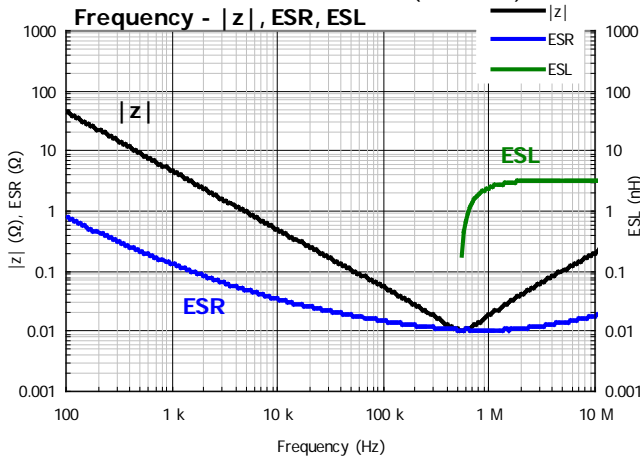


	(mm)
D	8.0
L	10.2±0.3
A, B	8.3
H	10.0 max.
I	3.4
W	0.9±0.2
P	3.1
K	0.7±0.2

(): Reference Size

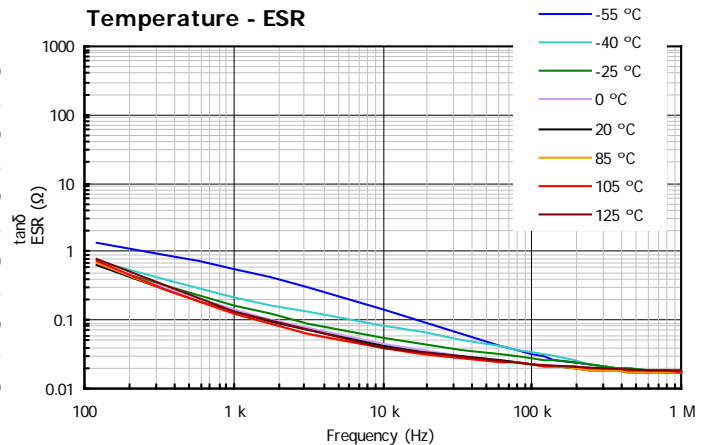
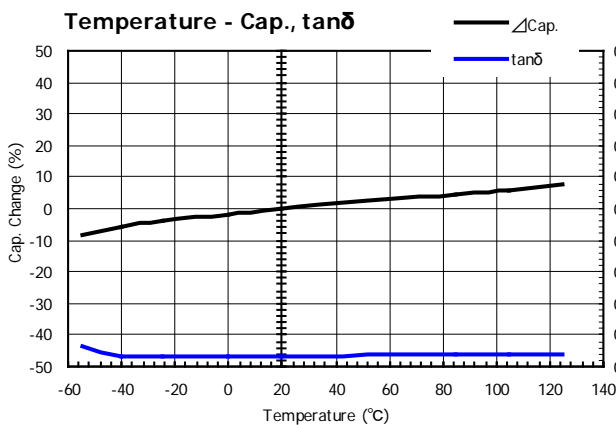
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

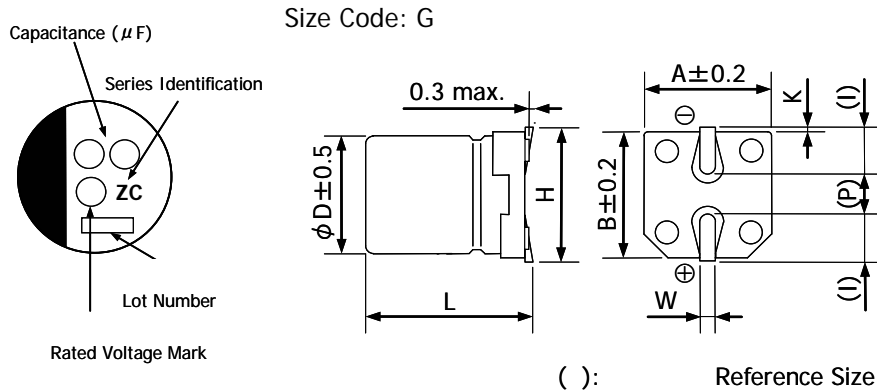
Part Number: EEHZC1J560P

φ10.0×10.2 mm / 63 V / 56 μF / 125 °C, 4000 h

Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 63 V
Nominal Capacitance Range	56 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	35.2 μA (0.01CV) max. (at W.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz)
Ripple Current	1400 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

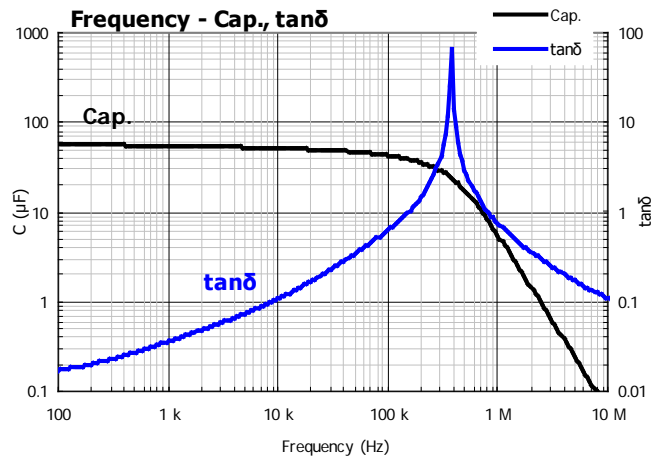
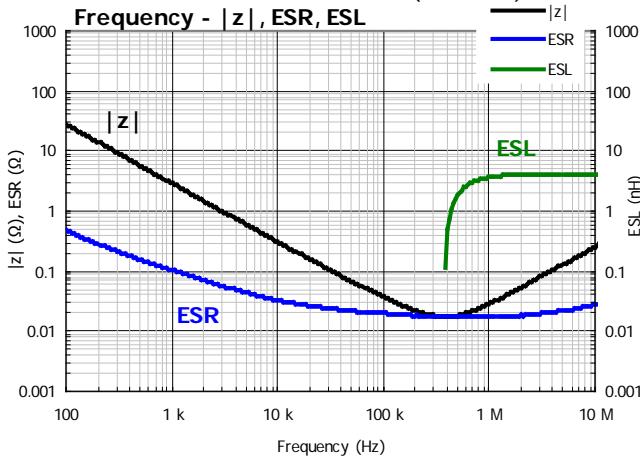
Marking, Dimensions in mm (not to scale)



	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

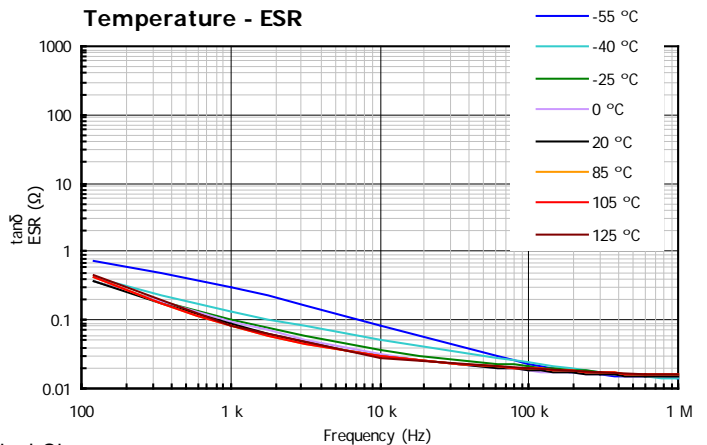
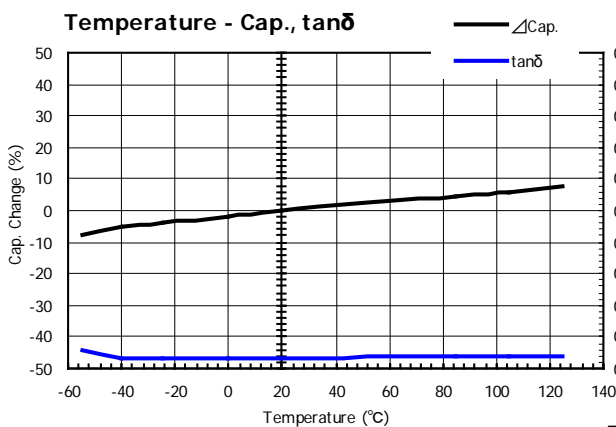
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

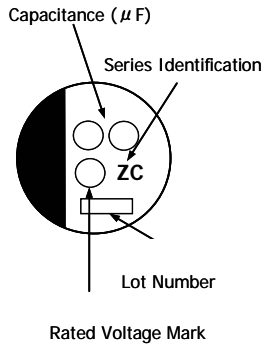
Part Number: EEHZC1J680P

φ10.0×10.2 mm / 63 V / 68 μF / 125 °C, 4000 h

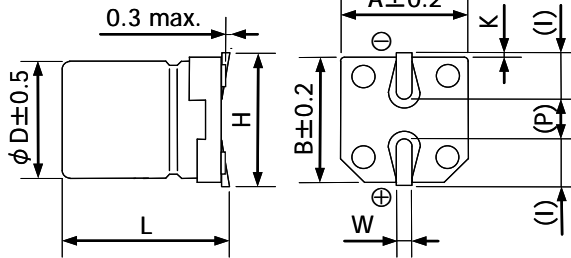
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 63 V
Nominal Capacitance Range	68 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	42.8 μA (0.01CV) max. (at W.V., After 2 min)
ESR	30 mΩ max. (at 100 kHz)
Ripple Current	1400 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

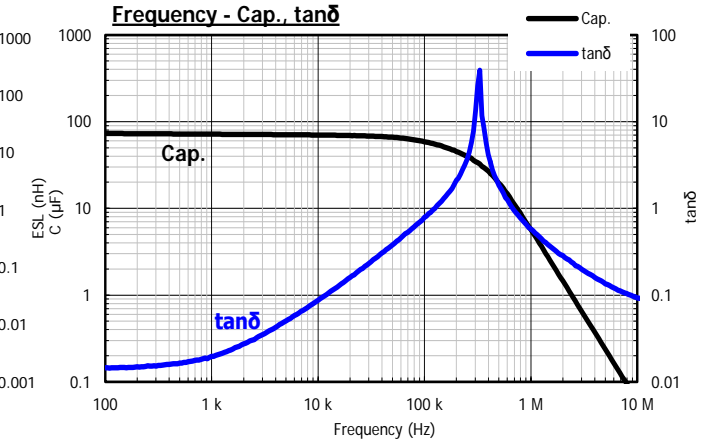
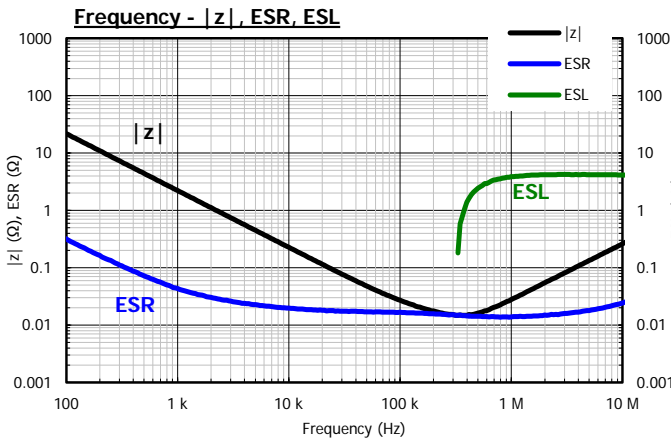


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

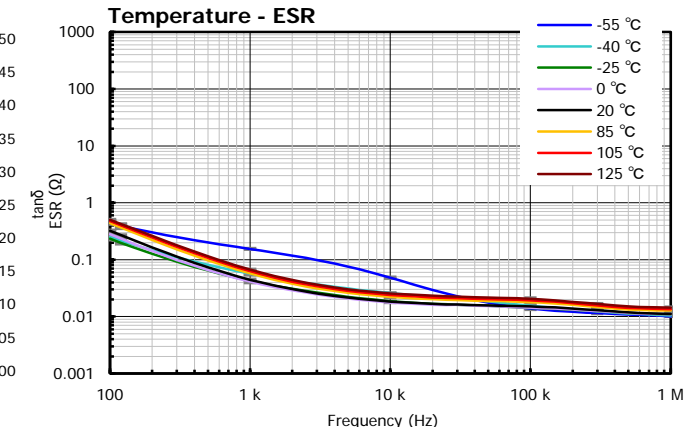
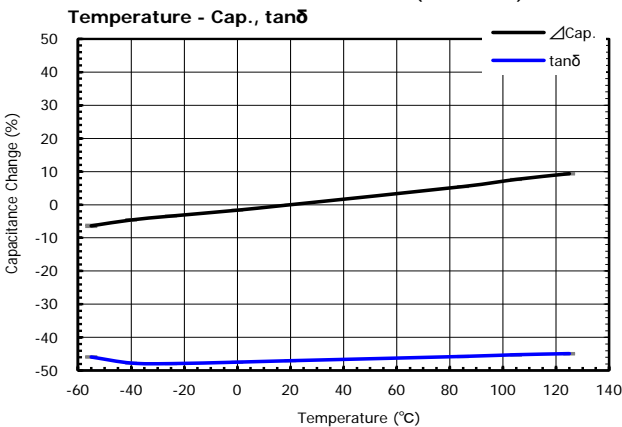
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

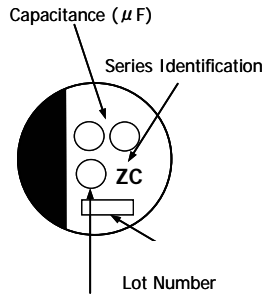
Part Number: EEHZC1K220P

φ8.0×10.2 mm / 80 V / 22 μF / 125 °C, 4000 h

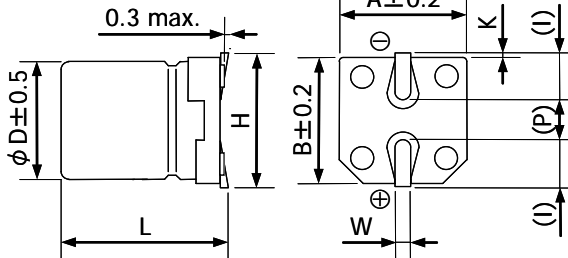
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 80 V
Nominal Capacitance Range	22 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	17.6 μA (0.01CV) max. (at W.V., After 2 min)
ESR	45 mΩ max. (at 100 kHz)
Ripple Current	1050 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: F



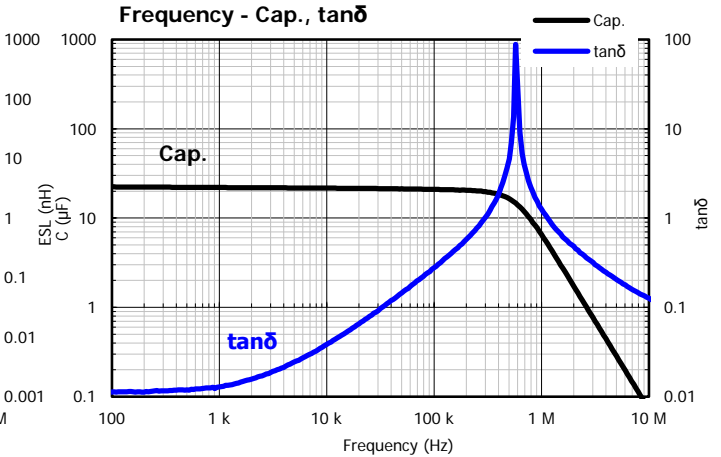
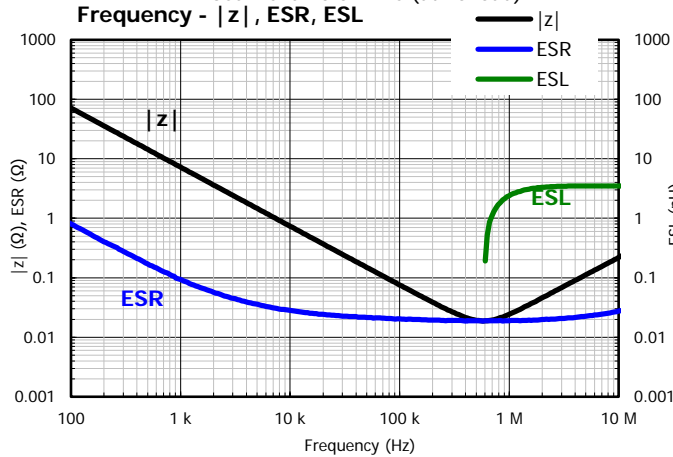
	(mm)
D	8.0
L	10.2±0.3
A, B	8.3
H	10.0 max.
I	3.4
W	0.9±0.2
P	3.1
K	0.7±0.2

Rated Voltage Mark

(): Reference Size

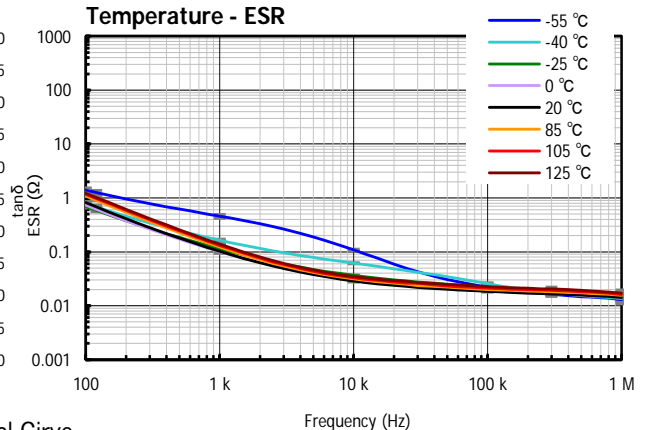
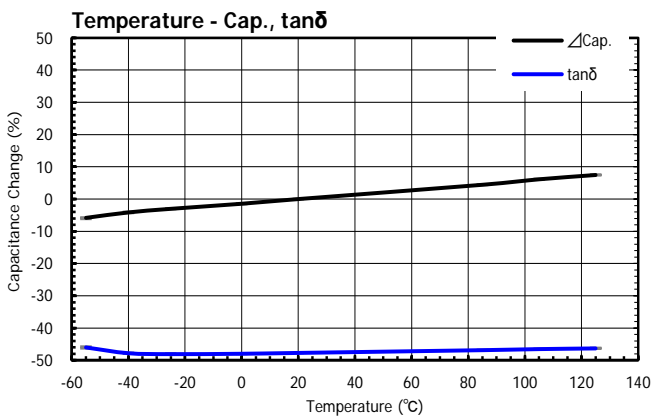
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

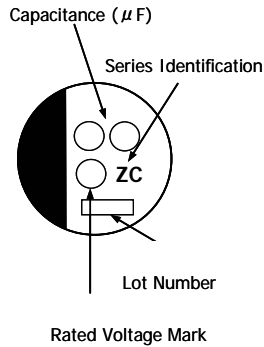
Part Number: EEHZC1K330P

φ10.0×10.2 mm / 80 V / 33 μF / 125 °C, 4000 h

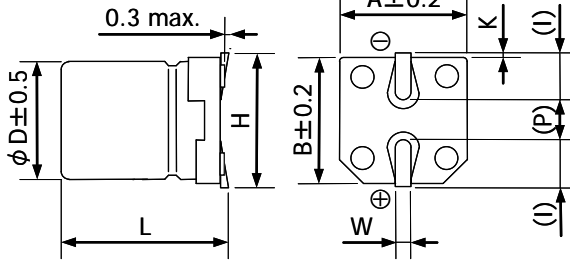
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 80 V
Nominal Capacitance Range	33 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	26.4 μA (0.01CV) max. (at W.V., After 2 min)
ESR	36 mΩ max. (at 100 kHz)
Ripple Current	1360 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

Marking, Dimensions in mm (not to scale)



Size Code: G

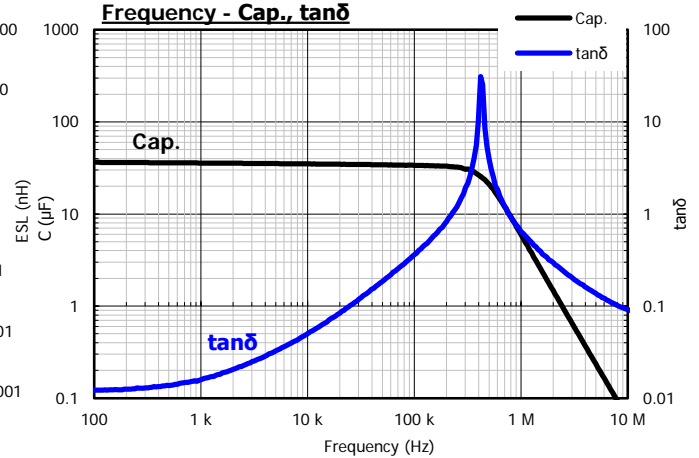
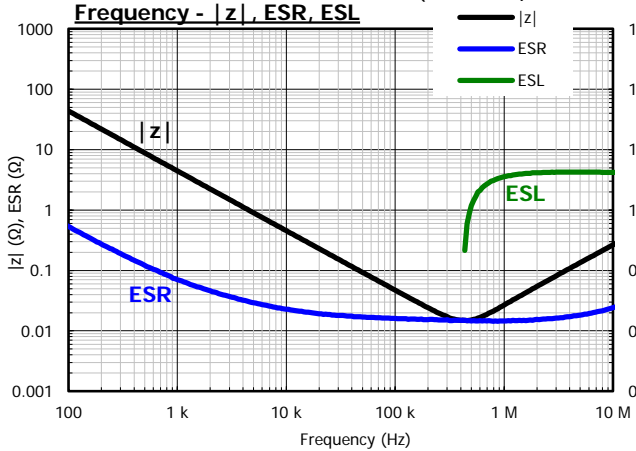


	(mm)
D	10.0
L	10.2±0.3
A, B	10.3
H	12.0 max.
I	3.5
W	0.9±0.2
P	4.6
K	0.7±0.2

(): Reference Size

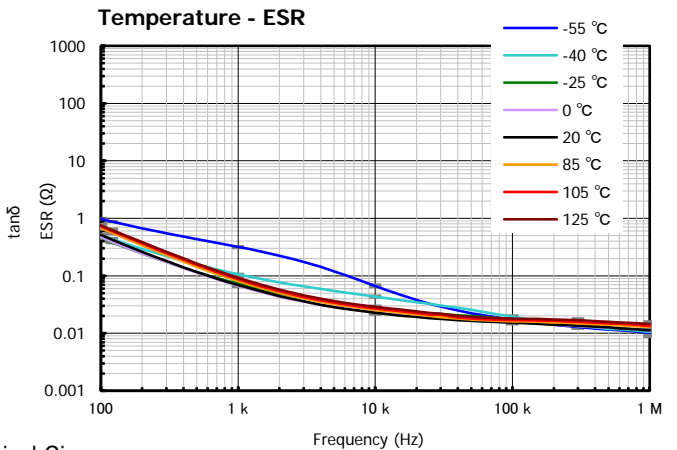
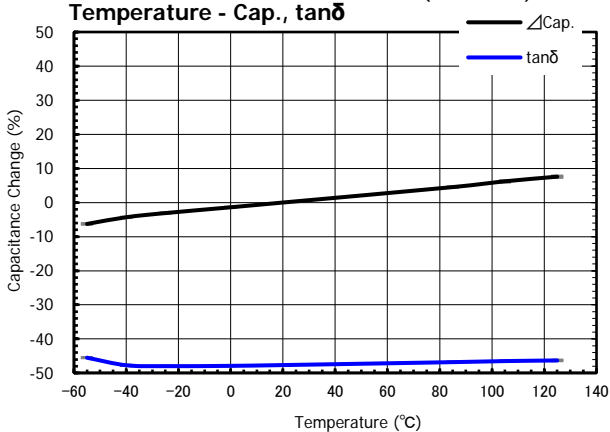
Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics

Osc. Level: 0.5 Vrms (at no load)



Temperature - Capacitance, tanδ, ESR Characteristics

Osc. Level: 1.0 Vrms (at no load)



Typical Curve

Technical Data

Conductive Polymer Hybrid Aluminum Electrolytic Capacitor V type ZC series

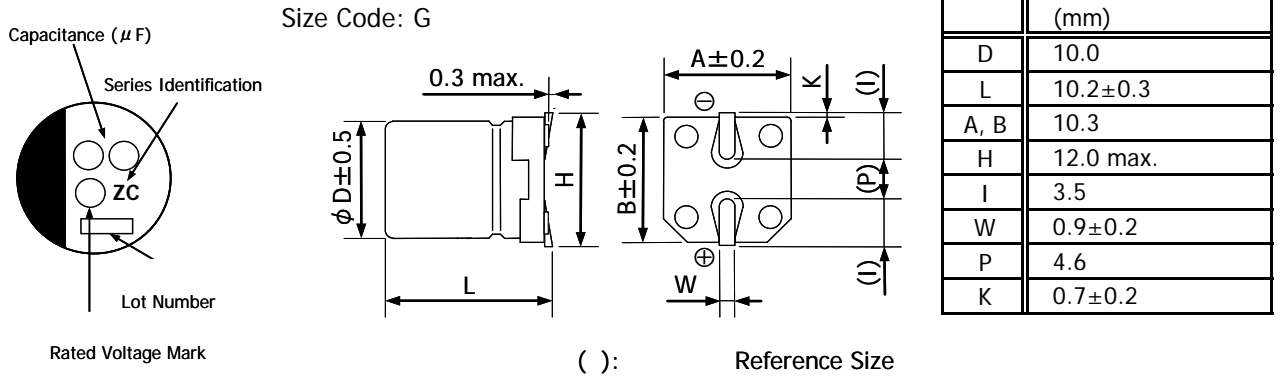
Part Number: EEHZC1K470P

φ10.0×10.2 mm / 80 V / 47 μF / 125 °C, 4000 h

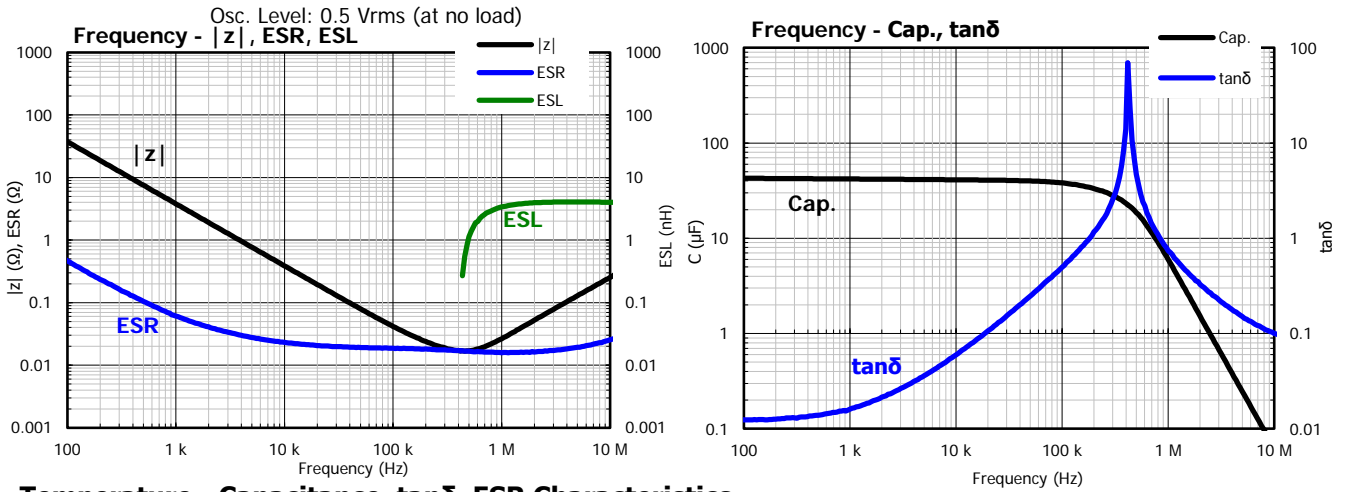
Category Temperature Range	-55 to 125 °C
Rated W.V. Range	DC 80 V
Nominal Capacitance Range	47 μF (at 120 Hz)
Capacitance Tolerance	±20 %

tanδ	0.08 max. (at 120 Hz)
DC Leakage Current	37.6 μA (0.01CV) max. (at W.V., After 2 min)
ESR	36 mΩ max. (at 100 kHz)
Ripple Current	1360 mArms max. (at 100 kHz, 125 °C)
Endurance	125 °C, 4000 h

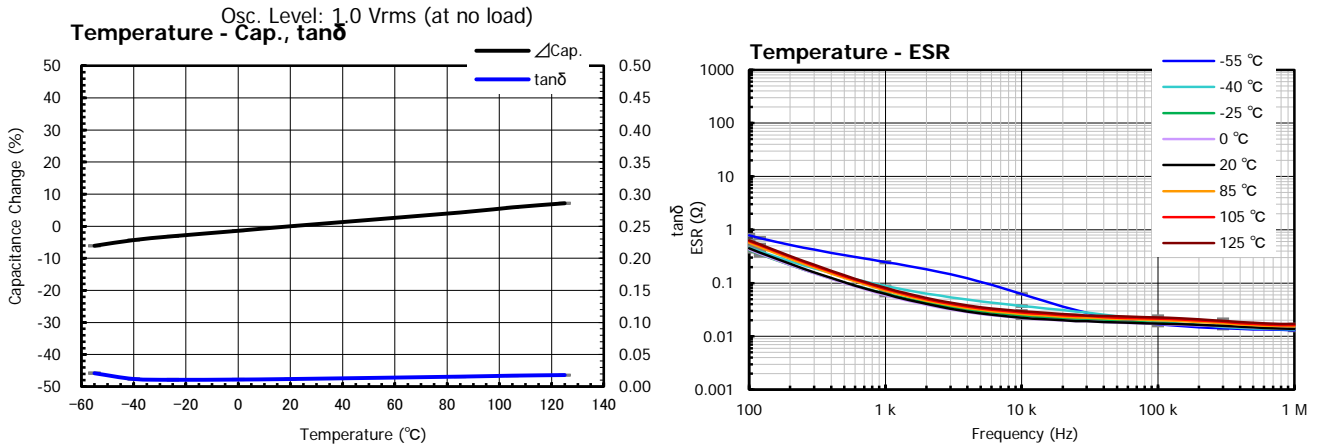
Marking, Dimensions in mm (not to scale)



Frequency - |z|, ESR, ESL, Capacitance, tanδ Characteristics



Temperature - Capacitance, tanδ, ESR Characteristics



Typical Curve

M E M O

M E M O

M E M O

**Technical Data of Conductive Polymer Hybrid
Aluminum Electrolytic Capacitors**

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Yamaguchi Plant, Device Solutions Business Division

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