Radial Lead Type

Series : **ZF** Type : **A** **NEW**

Features

- Endurance : 1000 h at 150 °C (High temperature)
- High temperature compared with ZC series
- High-withstand voltage (25 V to 63 V), Low LC (0.01 CV or 3 μF)
- Equivalent to conductive polymer type Aluminum Electrolytic Capacitor (There are little characteristics change by temperature and frequency)
- AEC-Q200 compliant
- RoHS compliant

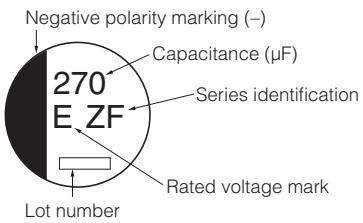
Specifications

Size code	F	G
Category temp. range	–55 °C to +150 °C	
Rated voltage range	25 V.DC to 63 V.DC	
Nominal cap.range	33 μF to 150 μF	56 μF to 270 μF
Capacitance tolerance	±20 % (120 Hz/+20 °C)	
DC leakage current	I ≦ 0.01 CV or 3 (μA) After 2 minutes (whichever is greater)	
Dissipation factor (tan δ)	Please see the attached standard products list	
Endurance	+150 °C±2 °C, 1000 h, apply the rated ripple current without exceeding the rated voltage	
	Capacitance change	Within ±30% of the initial value
	tan δ	≦ 200 % of the initial limit
	E. S. R.	≦ 200 % of the initial limit
	DC leakage current	Within the initial limit
	ESR after Endurance (Ω/100 kHz) (–40 °C)	Size code: F: 0.4, G: 0.3
Shelf life	After storage for 1000 hours at +150 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment)	
Damp heat (Load)	+85 °C±2 °C, 85 % to 90 %, 2000 h, rated voltage applied	
	Capacitance change	Within ±30% of the initial value
	tan δ	≦ 200 % of the initial limit
	E. S. R.	≦ 200 % of the initial limit
	DC leakage current	Within the initial limit

Marking

Example : 25 V.DC 270 μF

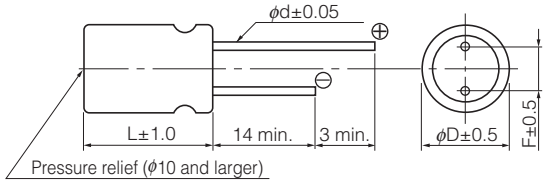
Marking color : BLACK



Rated voltage mark

E	25 V.DC	H	50 V.DC
V	35 V.DC	J	63 V.DC

Dimensions (not to scale)



(Unit : mm)

Size code	ϕD	L	ϕd	F
F	8.0	9.5	0.6	3.5
G	10.0	9.5	0.6	5.0

Standard products

Endurance : 150 °C 1000 h

Rated voltage (V.DC)	Capacitance (±20 %) (μF)	Case size (mm)		Size code	Specification			Part number	Min. packaging q'ty
		φD	L		Ripple current (100 kHz) (+150 °C) (mA r.m.s.)	E.S.R. (100 kHz) (+20 °C) (mΩ)	tan δ (120 Hz) (+20 °C)		Long lead (pcs)
25	150	8	9.5	F	800	27	0.14	EEHAZF1E151	200
	270	10	9.5	G	1000	20	0.14	EEHAZF1E271	200
35	100	8	9.5	F	770	30	0.12	EEHAZF1V101	200
	150	10	9.5	G	950	23	0.12	EEHAZF1V151	200
50	56	8	9.5	F	700	35	0.10	EEHAZF1H560	200
	100	10	9.5	G	900	28	0.10	EEHAZF1H101	200
63	33	8	9.5	F	650	40	0.08	EEHAZF1J330	200
	56	10	9.5	G	840	30	0.08	EEHAZF1J560	200

Frequency correction factor for ripple current

Rated capacitance	Frequency	100 Hz ≦ f < 200 Hz	200 Hz ≦ f < 300 Hz	300 Hz ≦ f < 500 Hz	500 Hz ≦ f < 1 kHz
C < 47 μF	Correction factor	0.10	0.10	0.15	0.20
47 μF ≦ C < 150 μF		0.15	0.20	0.25	0.30
150 μF ≦ C		0.15	0.25	0.25	0.30

Rated capacitance	Frequency	1 kHz ≦ f < 2 kHz	2 kHz ≦ f < 3 kHz	3 kHz ≦ f < 5 kHz	5 kHz ≦ f < 10 kHz
C < 47 μF	Correction factor	0.30	0.40	0.45	0.50
47 μF ≦ C < 150 μF		0.40	0.45	0.55	0.60
150 μF ≦ C		0.45	0.50	0.60	0.65

Rated capacitance	Frequency	10 kHz ≦ f < 15 kHz	15 kHz ≦ f < 20 kHz	20 kHz ≦ f < 30 kHz	30 kHz ≦ f < 40 kHz
C < 47 μF	Correction factor	0.60	0.65	0.70	0.75
47 μF ≦ C < 150 μF		0.70	0.75	0.80	0.80
150 μF ≦ C		0.75	0.80	0.85	0.85

Rated capacitance	Frequency	40 kHz ≦ f < 50 kHz	50 kHz ≦ f < 100 kHz	100 kHz ≦ f < 500 kHz	500 kHz ≦ f
C < 47 μF	Correction factor	0.80	0.85	1.00	1.05
47 μF ≦ C < 150 μF		0.85	0.90	1.00	1.00
150 μF ≦ C		0.85	0.90	1.00	1.00