NEW

Surface Mount Type

Series: **ZA** Type: **V**

High temperature Lead-Free reflow

■ Features

- Endurance: 5000 h at 105 °C
- Low ESR and High ripple current (70 % over, Lower ESR than Current V-FP)
- Low LC (0.01 CV or 3 μA)
- Equivalent to conductive polymer type Aluminum Electrolytic Capacitor (There are little characteristics change by temperature and frequency)
- RoHS directive compliant

■ Specifications

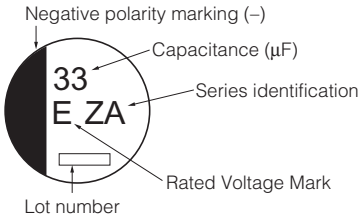
Category Temp. Range	−55 °C to +105 °C					
Rated W.V.Range	25 V.DC to 63 V.DC					
Nominal Cap.Range	10 μF to 330 μF					
Capacitance Tolerance	±20 % (120 Hz/+20 °C)					
DC Leakage Current	I ≦ 0.01 CV or 3 (μA) After 2 minutes (whichever is greater)					
tan δ	Please see the attached Standard Products list					
Endurance	The capacitor shall be subjected to application of the D.C. voltage with full rated ripple current at +105 °C for 5000 hours. After stabilizing at room temperature(+15 to 35 °C), the capacitor shall not exceed the specified limits. (The sum of DC voltage and ripple peak voltage shall not exceed the rated voltage.)					
	Capacitance change	±30 % of initial measured value				
	tan δ	≦ 200 % of initial specified value				
	E. S. R.	≦ 200 % of initial specified value				
	DC leakage current	≦ initial specified value				
	ESR after Endurance (Ω/100 kHz) (−40 °C)	Size Code				
		C	D	D8	F	G
		2.0	1.4	0.8	0.4	0.3
Shelf Life	After storage for 1000 hours at +105 °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)					
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.					
	Capacitance change	±10 % of initial measured value				
	tan δ	≦ initial specified value				
	DC leakage current	≦ initial specified value				

■ Frequency correction factor for ripple current

	Frequency (Hz)			
	120	1 k	10 k	100 k to
Correction factor	0.10	0.30	0.60	1.00

■ Marking

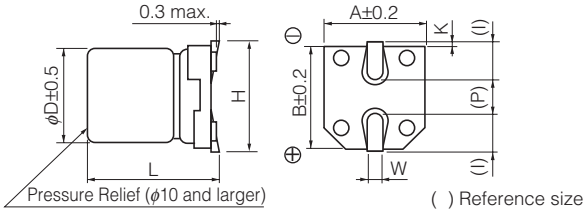
Example:25 V 33 μF Marking color : BLACK



Rated Voltage Mark

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

■ Dimensions in mm (not to scale)



(mm)

Size code	D	L	A, B	H	I	W	P	K
C	5.0	5.8±0.3	5.3	6.5 max.	2.2	0.65±0.1	1.5	$0.35^{+0.15}_{-0.20}$
D	6.3	5.8±0.3	6.6	7.8 max.	2.6	0.65±0.1	1.8	$0.35^{+0.15}_{-0.20}$
D8	6.3	7.7±0.3	6.6	7.8 max.	2.6	0.65±0.1	1.8	$0.35^{+0.15}_{-0.20}$
F	8.0	10.2±0.3	8.3	10.0 max.	3.4	0.90±0.2	3.1	0.70±0.2
G	10.0	10.2±0.3	10.3	12.0 max.	3.5	0.90±0.2	4.6	0.70±0.2

■ Standard Products

Endurance : 105 °C 5000 h

W.V. (V)	Cap. (±20 %) (μF)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia. (mm)	Length (mm)	Size Code	Ripple Current (100 kHz) (+105 °C) (mA r.m.s.)	E.S.R. (100 kHz) (+20 °C) (mΩ)	tan δ (120 Hz) (+20 °C)			Taping (pcs)
25	33	5	5.8	C	900	80	0.14	EEHZA1E330R	(5)	1000
	56	6.3	5.8	D	1300	50	0.14	EEHZA1E560P	(5)	1000
	100	6.3	7.7	D8	2000	30	0.14	EEHZA1E101XP	(5)	900
	220	8	10.2	F	2300	27	0.14	EEHZA1E221P	(6)	500
	330	10	10.2	G	2500	20	0.14	EEHZA1E331P	(6)	500
35	22	5	5.8	C	900	100	0.12	EEHZA1V220R	(5)	1000
	27	6.3	5.8	D	1300	60	0.12	EEHZA1V270P	(5)	1000
	47	6.3	5.8	D	1300	60	0.12	EEHZA1V470P	(5)	1000
	68	6.3	7.7	D8	2000	35	0.12	EEHZA1V680XP	(5)	900
	150	8	10.2	F	2300	27	0.12	EEHZA1V151P	(6)	500
	270	10	10.2	G	2500	20	0.12	EEHZA1V271P	(6)	500
50	10	5	5.8	C	750	120	0.10	EEHZA1H100R	(5)	1000
	22	6.3	5.8	D	1100	80	0.10	EEHZA1H220P	(5)	1000
	33	6.3	7.7	D8	1600	40	0.10	EEHZA1H330XP	(5)	900
	68	8	10.2	F	1800	30	0.10	EEHZA1H680P	(6)	500
	100	10	10.2	G	2000	28	0.10	EEHZA1H101P	(6)	500
63	10	6.3	5.8	D	1000	120	0.08	EEHZA1J100P	(5)	1000
	22	6.3	7.7	D8	1500	80	0.08	EEHZA1J220XP	(5)	900
	33	8	10.2	F	1600	40	0.08	EEHZA1J330P	(6)	500
	56	10	10.2	G	1800	30	0.08	EEHZA1J560P	(6)	500

The taping dimensions are explained on EE188 of our Catalog. Please use it as a reference guide.
Reflow Profile(Fig-5, Fig-6) listed on EE186 of our Catalog.