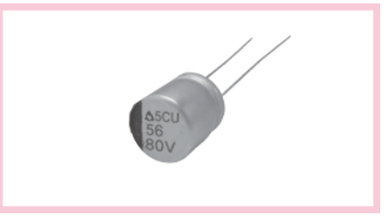
FSA Series



- Hybrid electrolyte Standard
- High reliability and high voltage are realized by hybrid electrolyte
- −55℃~+105℃
- Endurance 105℃, 5,000~10,000hrs
- AEC-Q200 compliant : Please contact us for more details, test data, information.

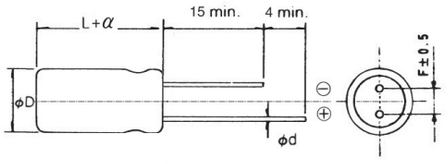
SPECIFICATIONS

Item	Characteristics
Category temperature range	−55 to +105℃
Rated voltage range	25 to 63Vdc
Surge voltage	Rated Voltage(WV): 25 / 35 / 50 / 63 — Surge Voltage(SV): 31.3 / 43.8 / 62.5 / 78.8
Capacitance tolerance	±20% (M) (at 20℃, 120Hz)
Tangent of loss angle	Shall not exceed the value in Ratings of FSA series. (at 20℃, 120Hz)
Leakage Current ※ 1	Shall not exceed the value in Ratings of FSA series. (at 20℃, 2minutes)
ESR	Shall not exceed the value in Ratings of FSA series. (at 20℃, 100kHz)
Impedance Ratio (Characteristics at low temp.)	Z(−25℃) / Z(+20℃) 〈 1.5; Z(−55℃) / Z(+20℃) 〈 2.0 (at 100kHz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 10,000 hours (F61:5,000 hours) at 105℃. Capacitance change ≤ ±30% of the initial value; Tanδ ≤ ±200% of the initial specified value; ESR ≤ ±200% of the initial specified value; Leakage current ≤ The initial specified value. Case Code F61: 5,000; F80, H10, J10: 10,000
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at lest 24hours and not more than 48 hours and not more than 48 hours before the measurements. Capacitance change ≤ ±30% of the initial value; Tanδ ≤ ±200% of the initial specified value; ESR ≤ ±200% of the initial specified value; Leakage current ≤ The initial specified value
Bias Humidity	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to the DC rated voltage at 85℃, 85% RH for 2000hours. Capacitance change ≤ ±30% of the initial value; Tanδ ≤ ±200% of the initial specified value; ESR ≤ ±200% of the initial specified value; Leakage current ≤ The initial specified value

※ 1. if any doubt arises, measure the leakage current after following voltage treatment.
(Voltage treatment : Applying rated voltage for 120minutes at 105℃)

DIMENSIONS

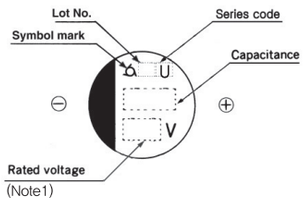
Coating Case Type



UNIT(mm)

ΦD(+0.5max.)	6.3	6.3	8	10
L	6	8	10	10
α	0.5			
Φd(±0.05)	0.45	0.5	0.6	0.6
F(±0.5)	2.5	2.5	3.5	5

MARKING



RATED RIPPLE CURRENT MULTIPLIES

Capacitance(μF) \ Frequency(Hz)	120	1K	5K	10K	20K	30K	100K ~500K
~ 10	0.03	0.30	0.50	0.60	0.70	0.75	1.00
15 ~ 33	0.07	0.30	0.50	0.60	0.70	0.75	1.00
47 ~ 180	0.10	0.40	0.60	0.70	0.80	0.80	1.00
220 ~ 560	0.13	0.45	0.65	0.75	0.85	0.85	1.00

RATINGS OF FSA Series

Case Code	Rated Voltage (V)	Rated Capacitance(μF)	ESR(mΩ) (at 100kHz)	Rated Ripple Current (mArms/105℃,100Khz)	Tangent of loss angle	Leakage Current (μA)
6.3X6	16	82	45	1,600	0.16	13
	16	100	45	1,600	0.16	16
	25	47	50	1,300	0.14	12
	25	56	50	1,300	0.14	14
	35	27	60	1,300	0.12	9
	35	47	60	1,300	0.12	16
	50	10	80	1,100	0.10	5
	50	22	80	1,100	0.10	11
	63	6.8	120	1,000	0.08	4
	63	10	120	1,000	0.08	6
6.3X8	16	150	27	2,200	0.16	24
	16	180	27	2,200	0.16	29
	25	68	30	2,000	0.14	17
	25	100	30	2,000	0.14	25
	35	47	35	2,000	0.12	16
	35	68	35	2,000	0.12	24
	50	15	40	1,600	0.10	8
	50	33	40	1,600	0.1	17
	63	10	80	1,500	0.08	6
	63	22	80	1,500	0.08	14
8X10	16	270	22	2,500	0.16	43
	16	330	22	2,500	0.16	53
	25	150	27	2,300	0.14	38
	25	220	27	2,300	0.14	55
	35	100	27	2,300	0.12	35
	35	150	27	2,300	0.12	53
	50	33	30	1,800	0.10	17
	50	47	30	1,800	0.10	24
	50	68	30	1,800	0.10	34
	50	82	30	1,800	0.10	41
	63	22	40	1,600	0.08	14
	63	33	40	1,600	0.08	21
	63	47	40	1,600	0.08	30
	80	27	45	1,600	0.08	22
10X10	16	470	18	2,600	0.16	75
	16	560	18	2,600	0.16	90
	25	270	20	2,500	0.14	68
	25	330	20	2,500	0.14	83
	25	390	20	2,500	0.14	98
	35	150	20	2,500	0.12	53
	35	270	20	2,500	0.12	95
	50	56	25	2,400	0.10	28
	50	100	25	2,400	0.10	50
	50	120	25	2,400	0.10	60
	63	33	30	2,400	0.08	21
	63	56	30	2,400	0.08	35
	63	82	30	2,400	0.08	52
	63	100	30	2,400	0.08	63
	80	56	33	2,400	0.08	45