VUH

Surface mount type

series

Ultra-High Voltage, High Capacitance
Low ESR, High ripple current
Load life of 3,000h at 105°C

• Specifications

Items	Characteristics	
Temperature range	-55 to +105°C	
Rated voltage range	63 to 125Vdc	
Capacitance range	8.2 to 56μF	
Capacitance tolerance	±20% [M] (at 20°C, 120Hz)	
Tangent of loss angle	Less than or equal to the value of Standard Ratings (at 20°C, 120Hz)	
Leakage current	Less than or equal to the value of Standard Ratings (at 20°C, after 2 minutes)	
ESR	Less than or equal to the value of Standard Ratings	
Characteristics of impedance	$Z_{+105°C}/Z_{+20°C} \leq 1.25$, $Z_{-55°C}/Z_{+20°C} \leq 1.25$ at 100kHz	
Endurance	105°C, 3,000 hrs at rated voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Damp Heat (Steady State)	60°C, 90 to 95% RH, 1,000 hrs, No-applied Voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Resistance to soldering heat	VPS (230°C, 75s)	
	Appearance	No significant damage
	Capacitance change	Within±10% of the initial value
	Tangent of loss angle (tanδ)	≤130% of the initial specified value
	ESR(mΩ)	≤130% of the initial specified value
	Leakage current	≤The initial specified value

*In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C

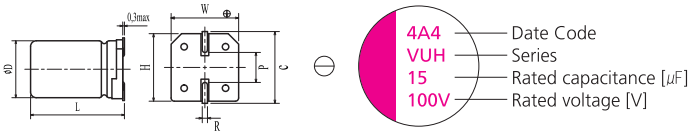
• Size List

(unit: mm)

μF \ RV (SV)	63 (72.4)	80 (92)	100 (115)	125 (143)
8.2	6.3×5.9			
10	8×6.9		8×11.9	8×11.9
12		8×11.9		
15	8×6.9		8×11.9	8×11.9
18			10×12.6	
22		8×11.9 10×12.6	8×11.9 10×12.6	
27	8×11.9	10×12.6		
33	8×11.9		10×12.6	10×12.6
39	8×11.9		10×12.6	
47	10×12.6	8×11.9 10×12.6	10×12.6	
56	10×12.6			
68		10×12.6	10×12.6	
82		10×12.6		
120	10×12.6			

RV: Rated Voltage [V] SV: Surge Voltage [V] (at room temperature)

• Marking and Dimensions

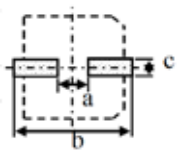


(unit: mm)

Size	ØD±0.5	L +0.1 -0.4	W±0.2	H±0.2	C±0.2	R	P±0.2
6.3×5.9	6.3	5.9	6.6	6.6	7.3	0.6~0.8	2.1
8×6.9	8.0	6.9	8.3	8.3	9.0	0.8~0.11	3.2
8×11.9	8.0	11.9	8.3	8.3	9.0	0.8~0.11	3.2
10×12.6	10.0	12.6	10.3	10.3	11.0	0.8~0.11	4.6

• Recommended Land Pattern Dimension of PCB

(unit: mm)



Size	a	b	c
6.3×5.9	2.1	9.1	1.6
8×6.9	2.8	11.1	1.9
8×11.9	2.8	11.1	1.9
10×12.6	4.3	13.1	1.9

• Standard Ratings

Rated Voltage [Vdc]	Rated Capacitance [μF]	Size ØD x L [mm]	ESR (20°C, 100kHz) [mΩ] [max.]	Rated Ripple Current (105°C, 100kHz) [mArms]	Tangent of Loss Angel [max]	Leakage Current [μA, max]	Part Number
63	8.2	6.3 x 5.9	55	1200	0.12	103	63VUH8R2MB6
	10	8 x 6.9	50	1400	0.12	126	63VUH10MD7
	15	8 x 6.9	50	1500	0.12	189	63VUH15MD7
	27	8 x 11.9	35	2800	0.12	340	63VUH27MD12
	33	8 x 11.9	30	3000	0.12	416	63VUH33MD12
	39	8 x 11.9	29	3400	0.12	491	63VUH39MD12
	47	10 x 12.6	29	3300	0.12	592	63VUH47ME12
	56	10 x 12.6	28	3400	0.12	706	63VUH56ME12
	120	10 x 12.6	25	4000	0.12	1512	63VUH120ME12
80	12	8 x 11.9	38	1900	0.12	192	80VUH12MD12
	22	8 x 11.9	38	2000	0.12	352	80VUH22MD12
	22	10 x 12.6	35	2300	0.12	352	80VUH22ME12
	27	10 x 12.6	35	2400	0.12	432	80VUH27ME12
	47	8 x 11.9	35	2600	0.12	752	80VUH47MD12
	47	10 x 12.6	28	3000	0.12	752	80VUH47ME12
	68	10 x 12.6	30	3000	0.12	1088	80VUH68ME12
	82	10 x 12.6	30	3200	0.12	1312	80VUH86ME12
100	10	8 x 11.9	42	1800	0.12	200	100VUH10MD12
	15	8 x 11.9	40	2000	0.12	300	100VUH15MD12
	18	10 x 12.6	38	2200	0.12	360	100VUH18ME12
	22	8 x 11.9	40	2000	0.12	440	100VUH22MD12
	22	10 x 12.6	38	2300	0.12	440	100VUH22ME12
	33	10 x 12.6	36	2400	0.12	660	100VUH33ME12
	39	10 x 12.6	35	2500	0.12	780	100VUH39ME12
	47	10 x 12.6	35	2600	0.12	940	100VUH47ME12
	68	10 x 12.6	30	2800	0.12	1360	100VUH68ME12
125	10	8 x 11.9	50	1500	0.12	250	125VUH10MD12
	15	8 x 11.9	50	1800	0.12	375	125VUH15MD12
	33	10 x 12.6	40	2000	0.12	825	125VUH33ME12