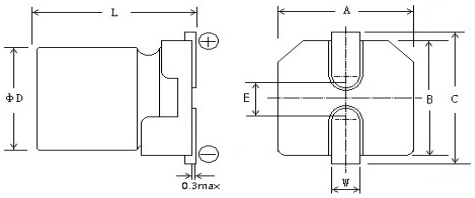
VUL Series

- Chip type, Designed for surface mounting on high density board
- Wide temperature range from -55°C to +105°C
- Suitable for STB,Industrial controlling Automation,LED,Tuner,Computer Server...
- Life time: +105°C 5000 hours
- RoHs Compliant

◆ SPECIFICATIONS

Items	Characteristics													
Category Temperature Range	-55°C to +105°C(6.3 to 100Vdc) -40°C to +105°C(160 to 400Vdc)													
Rated Voltage Range	6.3 to 400Vdc													
Capacitance Tolerance	±20%(M)												(at 20°C, 120Hz)	
Leakage Current	6.3 to 100Vdc :I=0.01CV(μA) or 3μA, which is greater.											160 to 400Vdc : I≤0.04CV +100μA		
	Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage(V) (at 20°C after 1 minutes)													
Dissipation Factor (tan δ)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160	200	250	400	(at 20°C 120Hz)
	tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.12	0.12	0.12	0.14	0.14	0.14	0.20	
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160	200	250	400	(at 120Hz)
	Z(-40°C)/Z(+20°C)	4	3	3	2	2	2	2	2	3	3	3	6	
	Z(-55°C)/Z(+20°C)	4	4	4	3	3	3	4	4	6	6	6	8	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to the rated voltage is applied for 5000 hours(6.3 to 400V: 5000 hours) at 105°C.													
	Capacitance change	≤±20% of the initial value.												
	D.F. (tan δ)	≤200% of the initial specified value.												
	Leakage current	≤ The initial specified value.												
Shelf Life	The following specifications shall be satisfied when the capacitors performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C after exposing them for 1000hours at 105°C without voltage applied.													
	Capacitance change	≤±20% of the initial value.												
	D.F. (tan δ)	≤200% of the initial specified value.												
	Leakage current	≤The initial specified value.												

◆ DIMENSIONS [mm]



◆ RATED RIPPLE CURRENT MULTIPLIERS

FREQUENCY COEFFICIENT

Freq.(Hz) / μF	120	1K	10K	100K
10 ~ 100	1.00	1.87	2.25	2.50
220 ~ 470	1.00	1.70	1.88	2.00
1,000 ~ 1,500	1.00	1.45	1.58	1.67

Size	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×10.2	10×10.2	12.5×13.5	16×16.5
A/B±0.2	4.3	5.3	6.6	6.6	8.3	10.3	13.0	17.0
D±0.5	4.0	5.0	6.3	6.3	8.0	10	12.5	16.0
E±0.2	1.0	1.3	2.2	2.2	3.1	4.5	5.2	6.5
L	5.4	5.4	5.4	7.7	10.2	10.2	13.5	16.5
C±0.2	5.0	6.0	7.2	7.2	9.0	11.0	13.8	18
W	0.5 ~ 0.9		0.8 ~ 1.1		1.1 ~ 1.4			

Part number system for Radial type:

1	2	3	4	5	6	7	8	9	10
V	U	L	1	J	1	0	0	M	C
Type of Series			Voltage code(V)		Capacitance code(μF)			Capacitance tolerance	Case Code

◆ Standard Rating of VUL Series

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Ripple current mArms/105°C,120Hz
6.3(0J)	22	4×5.4	33
	33	4×5.4	52
	47	4×5.4	64
	68	5×5.4	126
	100	5×5.4	144
	150	6.3×5.4	158
	220	6.3×5.4	201
	330	6.3×7.7	395
	470	8×10.2	631
	560	8×10.2	664
	680	8×10.2	704
	820	8×10.2	810
	1000	8×10.2	843
	1500	10×10.2	821
10(1A)	22	5×5.4	45
	33	5×5.4	64
	47	5×5.4	84
	68	5×5.4	126
	100	6.3×5.4	158
	150	6.3×5.4	167
	220	6.3×5.4	395
	330	8×10.2	560
	470	8×10.2	594
	560	8×10.2	606
	680	10×10.2	640
	820	10×10.2	964
	1000	10×10.2	1033
16(1C)	10	4×5.4	29
	22	4×5.4	64
	33	5×5.4	84
	47	5×5.4	103
	68	6.3×5.4	158
	100	6.3×5.4	182
	150	6.3×7.7	316
	220	6.3×7.7	407
	330	8×10	586
	470	8×10	627
	560	10×10	804
	680	10×10	1013
	820	10×10	1094
	1000	10*10	1119
25(1E)	10	4×5.4	67
	22	5×5.4	87
	33	5×5.4	93
	47	6.3×5.4	158
	68	6.3×5.4	170
	100	6.3×7.7	316
	150	8×10.2	460
	220	8×10.2	560
	330	8×10.2	598
	470	10×10.2	784
	560	10×10.2	855

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Ripple current mArms/105°C,120Hz
35(1V)	10	4×5.4	69
	22	5×5.4	109
	33	6.3×5.4	159
	47	6.3×5.4	170
	68	6.3×7.7	318
	100	6.3×7.7	344
	150	8×10.2	447
	220	8×10.2	484
	330	10×10.2	784
50(1H)	1.0	4×5.4	11
	2.2	4×5.4	16
	4.7	5×5.4	26
	10	6.3×5.4	71
	22	6.3×5.4	114
	33	6.3×7.7	166
	47	6.3×7.7	183
	68	8×10.2	332
	100	8×10.2	355
	150	10×10.2	464
	220	10×10.2	510
63(1J)	10	6.3×5.4	75
	22	6.3×7.7	126
	33	8×10.2	174
	47	10×10.2	210
	68	10×10.2	355
	100	10×10.2	384
100(2A)	10	6.3×7.7	80
	22	8×10.2	125
	33	10×10.2	185
	47	10×10.2	309
	68	12.5×13.5	370
	100	12.5×13.5	469
160(2C)	6.8	8×10.2	47
	8.2	8×10.2	73
	10	8×10.2	99
	12	8×10.2	104
	15	10×10.2	133
	22	12.5×13.5	182
	33	12.5×13.5	219
200(2D)	4.7	8×10.2	67
	10	10×10.2	110
	22	12.5×13.5	191
250(2E)	4.7	8×10.2	81
	10	10×10.2	129
	15	12.5×13.5	167
	22	12.5×13.5	224
400(2G)	1.0	8×10.2	27
	2.2	8×10.2	35
	3.3	8×10.2	56
	4.7	8×10.2	88
	6.8	10×10.2	133
	10	12.5×13.5	191