Chip Type, 105˚C Use, Large Capacitance Capacitors Series RVJ

- **Compatible with surface mounting.**
- **Supplied with carrier taping.**
- **Guarantees 2000 hours at 105˚C.**

RVJ

High temperature

RV

Marking color : Black print (ø8x6.5L)
White print on a brown sleeve (ø8x10L · ø10x10L)

Specifications

Item	Performance
Category temperature range (˚C)	−55 to +105
Tolerance at rated capacitance (%)	±20 (20˚C,120Hz)
Leakage current (μA)	Less than 0.01CV or 3 whichever is larger(after 2 minutes) C: Rated capacitance(μF); V: Rated voltage(V) (20˚C)

Tangent of loss angle (tanδ)

Rated voltage (V)	6.3	10	16	25	35	50	63	100
tanδ (max.)	0.30	0.24	0.22	0.16	0.13	0.12	0.11	0.10

(20˚C,120Hz)

Characteristics at high and low temperature

Rated voltage (V)		6.3	10	16	25	35	50	63	100
Impedance ratio (max.)	Z–25˚C / Z+20˚C	4	3	2	2	2	2	2	2
	Z–40˚C / Z+20˚C	8	5	4	3	3	3	3	3

(120Hz)

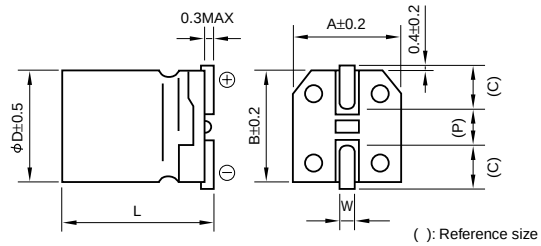
Endurance (105˚C) (Applied ripple current)

Test time	2000 hours
Leakage current	The initial specified value or less
Percentage of capacitance change	Within ±20% of initial value
Tangent of the loss angle	200% or less of the initial specified value

Shelf life (105˚C)	Test time : 1000 hours; other items are the same as those for the endurance. Voltage application treatment : According to JIS C5101-1
Applicable standards	JIS C5101-1, -18 1998 (IEC 60384-1 1992, -18 1993)

Outline Drawing

Unit: mm



ø D	L	A	B	C	W	P	Casing symbol
8	6.5±0.3	8.4	8.4	3.4	0.5 to 0.8	2.3	G68
8	10±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	G10
10	10±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	H10

• Soldering conditions and land size are described on page 14.
The taping spesifications are described on page 15.

Coefficient of Frequency for Rated Ripple Current

Frequency(Hz) / Rated voltage(V)	50 · 60	120	1k	10k · 100k
6.3 to 16	0.80	1	1.15	1.25
25 to 35	0.80	1	1.25	1.40
50 to 63	0.80	1	1.35	1.50
100	0.70	1	1.35	1.50

Part numbering system (example: 16V470μF)

Environmental item	RVJ	—	16	V	471	M	H10	□	U	—	□	
	Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Additional symbol			Taping symbol	
Former item	RVJ	—	16	V	471	M	H10	□		—	□	
	Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Additional symbol			Taping symbol	

Standard Ratings

Rated voltage (V) / Item / Rated capacitance (μF)	6.3				10				16				25				35				50				63				100			
	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	ESR Ω	Rated ripple current mArms
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8x10	G10	16.6	67
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8x6.5	G68	9.1	110	8x10	G10	8.3	99	10x10	H10	7.5	133
33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8x6.5	G68	6.5	110	8x10	G10	6.0	178	10x10	H10	5.5	160	10x10	H10	5.0	133
47	—	—	—	—	—	—	—	—	—	—	—	—	8x6.5	G68	5.7	110	8x6.5 8x10	G68 G10	4.6 4.6	110 178	8x10	G10	4.2	178	10x10	H10	3.9	160	—	—	—	—
100	—	—	—	—	8x6.5	G68	4.3	110	8x6.5 8x10	G68 G10	3.6	110 178	8x10	G10	2.7	178	10x10	H10	2.2	324	8x10 10x10	G10 H10	2.0 2.0	178 324	—	—	—	—	—	—	—	—
220	8x10	G10	2.3	178	8x10	G10	2.0	178	10x10	H10	1.7	324	10x10	H10	1.2	324	10x10	H10	0.98	324	—	—	—	—	—	—	—	—	—	—	—	—
330	8x10	G10	1.5	178	10x10	H10	1.3	324	10x10	H10	1.1	324	10x10	H10	0.80	324	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
470	10x10	H10	1.0	324	10x10	H10	0.92	324	10x10	H10	0.78	324	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1000	10x10	H10	0.50	324	10x10	H10	0.40	324	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105˚C, 120Hz ; ESR : 20˚C, 120Hz

NOTE
Design, Specifications are subject to change without notice.
Ask factory for technical specifications before purchase and/or use.

Chip Type, 105˚C Use, Large Capacitance Capacitors Series RVJ (large)

- **Surface mount device.**
- **Supplied with taping.**
- **Guarantees 5000 hours at 105˚C.**

RVJ (large)

High temperature

RV (large)

Marking color : White print on a brown sleeve

Specifications

Item	Performance
Category temperature range (˚C)	–55 to +105
Tolerance at rated capacitance (%)	±20 (20˚C,120Hz)
Leakage current (μA)	Less than 0.01CV (after 2 minutes) C: Rated capacitance(μF); V: Rated voltage(V) (20˚C)
Tangent of loss angle (tanδ)	See table below
Characteristics at high and low temperature	See table below
Endurance (105˚C) (Applied ripple current)	See table below
Shelf life (105˚C)	Test time : 1000 hours; other items are the same as those for the endurance. Voltage application treatment : According to JIS C5101-1
Applicable standards	JIS C5101-1, -18 1998 (IEC 60384-1 1992, -18 1993)

Tangent of loss angle (tanδ)

Rated voltage (V)	6.3	10	16	25	35	50	63	100
tanδ (max.)	0.30	0.26	0.22	0.16	0.13	0.12	0.11	0.10

0.02 is added to every 1000μF increase over 1000μF. (20˚C,120Hz)

Characteristics at high and low temperature

Rated voltage (V)		6.3	10	16	25	35	50	63	100
Impedance ratio (max.)	Z–25˚C / Z+20˚C	4	3	2	2	2	2	2	2
	Z–40˚C / Z+20˚C	8	5	4	3	3	3	3	3

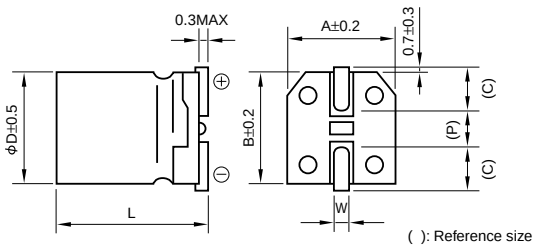
(120Hz)

Endurance (105˚C) (Applied ripple current)

Test time	5000 hours
Leakage current	The initial specified value or less
Percentage of capacitance change	Within ±20% of initial value
Tangent of the loss angle	200% or less of the initial specified value

Outline Drawing

Unit: mm



ø D	L	A	B	C	W	P	Casing symbol
12.5	13.5±0.5	13.0	13.0	4.9	1.2±0.2	4.6	IE
12.5	17.5±0.5	13.0	13.0	4.9	1.2±0.2	4.6	II

• Soldering conditions and land size are described on page 14.
The taping spesifications are described on page 15.

Coefficient of Frequency for Rated Ripple Current

Rated capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
47	0.50	0.76	0.87	1
100 to 220	0.70	0.85	0.90	1
330 to 1000	0.80	0.93	0.98	1

Part numbering system (example: 10V1000μF)

RVJ	—	10	V	102	M	IE	—	R5
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol		Taping symbol

Standard Ratings

Rated voltage (V) / Item / Rated capacitance (μF)	6.3				10				16				25				35				50				63				100			
	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms	Case ø D(mm)	Casing symbol	Imp. Ω	Rated ripple current mArms
47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5x13.5	IE	0.26	475	—	—	—	—
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5x13.5	IE	0.176	577	—	—	—	—
220	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5x13.5	IE	0.136	655	—	—	—	—	—	—	—	—
330	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5x13.5	IE	0.105	747	12.5x17.5	II	0.121	763	—	—	—	—	—	—	—	—
470	—	—	—	—	—	—	—	—	—	—	—	—	12.5x13.5	IE	0.105	747	12.5x17.5	II	0.093	871	—	—	—	—	—	—	—	—	—	—	—	—
1000	12.5x13.5	IE	0.105	747	12.5x13.5	IE	0.105	747	12.5x13.5	IE	0.105	747	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105˚C, 120Hz ; Impedance(Imp.) : 20˚C, 100kHz