

◆CHIP TYPE PART NUMBER

Rated Voltage		Series		Capacitance		Capacitance Tolerance		Option ※1	D×L Case Size
Rated Voltage(Vdc)	Code	Cap.(μF)	Code	Tolerance	Code				
6.3	6.3	4.7	4R7	±20%	M				4×6.1 8×10.5 16×21.5
10	10	220	220						
25	25	3300	3300						
100	100								

Please indicate the above information, when ordering.

Example
35 TZV 330 M 10×10.5

※1 Option : Standard item is blank.

◆RADIAL LEAD TYPE PART NUMBER

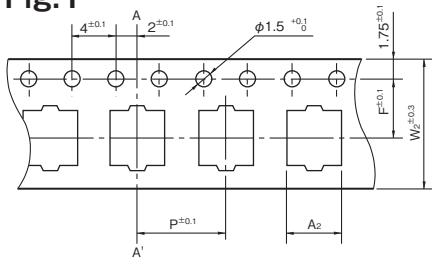
Rated Voltage		Series		Capacitance		Capacitance Tolerance		Option ※2	Lead Forming ※3	D×L Case Size
Rated Voltage(Vdc)	Code	Cap.(μF)	Code	Tolerance	Code			EFC etc	TA, KC, CA etc	5×11 10×12.5 12.5×40
6.3	6.3	0.1	0R1	±20%	M					
10	10	0.47	0R47							
25	25	1	1							
100	100	10	10							
		1000	1000							

Please indicate the above information, when ordering.

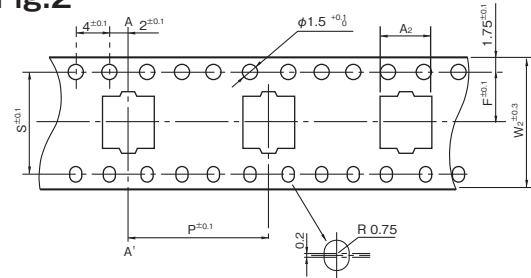
Example
 •Long lead type 50 PX 2R2 M EFC 5×11
 •Taping type 35 ZLJ 220 M TA 8×16

※2 Option : Please confirm each series page.

※3 Lead Forming : Please refer to TAPING SPECIFICATIONS and LEAD CUTTING FORMING SPECIFICATIONS. (P46~48)

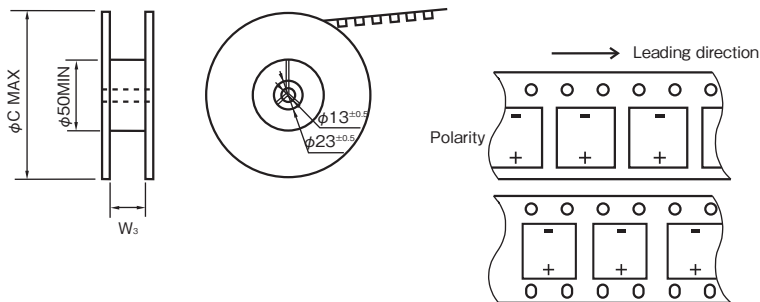
Chip type capacitors
◆TAPING DIMENSIONS
Fig.1


Cross section of A-A'

Fig.2


Cross section of A-A'

Size	W ₂ (mm)	A ₂ (mm)	B ₂ (mm)	P (mm)	t ₂ (mm)	F (mm)	t ₁ (mm)	S (mm)	Applicable
φ4×6.1	12.0	4.7	4.7	8	6.2	5.5	0.4	—	Fig.1
φ5×6.1	12.0	5.7	5.7	12	6.2	5.5	0.4	—	
φ6.3×6.1	16.0	7.0	7.0	12	6.2	7.5	0.4	—	
φ6.3×8	16.0	7.0	7.0	12	8.2	7.5	0.4	—	
φ8×6.5	16.0	8.7	8.7	12	6.8	7.5	0.4	—	
φ8×10.5	24.0	8.7	8.7	16	11.0	11.5	0.4	—	
φ10×10.5	24.0	10.7	10.7	16	11.0	11.5	0.4	—	Fig.2
φ12.5×13.5	32.0	13.4	13.4	24	14.4	14.2	0.5	28.4	
φ12.5×16	32.0	13.4	13.4	24	16.3	14.2	0.5	28.4	
φ16×16.5	44.0	17.5	17.5	28	17.4	20.2	0.5	40.4	
φ16×21.5	44.0	17.5	17.5	28	22.4	20.2	0.5	40.4	
φ18×16.5	44.0	19.5	19.5	32	17.4	20.2	0.5	40.4	
φ18×21.5	44.0	19.5	19.5	32	22.4	20.2	0.5	40.4	

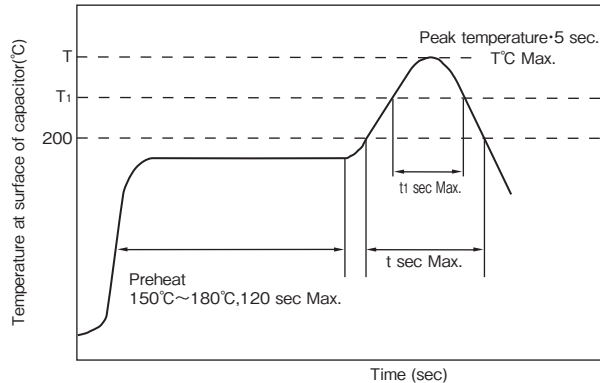
◆TAPING REEL AND PACKING QUANTITY


Size (mm)	W3 (mm)	φC (mm)	Q'ty (pcs/reel)	Standard Shipping Carton Quantity (pcs/Box)
φ4×6.1	14	382	2,000	10,000
φ5×6.1	14	382	1,000	5,000
φ6.3×6.1	18	382	1,000	5,000
φ6.3×8	18	382	900	4,500
φ8×6.5	18	382	1,000	5,000
φ8×10.5	26	382	500	2,000
φ10×10.5	26	382	500	2,000
φ12.5×13.5	34	332	200	600
φ12.5×16	34	332	150	450
φ16×16.5, φ18×16.5	46	332	125	250
φ16×21.5, φ18×21.5	46	332	75	150

Reuseable reels are available according to your request.
Please consult in regard to establishing supply and withdrawal system.

◆LEAD FREE TYPE REFLOW SOLDERING CONDITION
●Size $\phi 4 \sim \phi 10$

- 1) Temperature at surface of capacitor shall not exceed $T^{\circ}\text{C}$.
- 2) Period that temperature at surface of capacitor becomes more than 200°C and $T_1^{\circ}\text{C}$ shall not exceed t and t_1 seconds, respectively.
- 3) Preheat shall be made at $150^{\circ}\text{C} \sim 180^{\circ}\text{C}$ and for maximum 120 seconds.



Series	Size	Rated Voltage	T(°C) ①	T ₁ (°C)	t(sec) ②	t ₁ (sec) ③	Reflow Cycle
SEV SKV SGV	$\phi 4 \sim \phi 6.3$	$\leq 50\text{Vdc}$	250	230	70	30	2
TZV TKV	$\phi 8$	$\leq 100\text{Vdc}$	245	230	70	30	2
TPV TLV	$\phi 10$		240	230	60	30	2
TRV TXV THV TGV	$\phi 8, 10$	$\geq 160\text{Vdc}$	240	230	50	20	2
SJV SLV	$\phi 4 \sim \phi 6.3$	$\leq 50\text{Vdc}$	240	220	60	40	1
JGV JZV	$\phi 4 \sim \phi 6.3$	$\leq 50\text{Vdc}$	260	217	—	60	2
	$\phi 8, \phi 10$		250	217	—	60	2

① Peak temperature

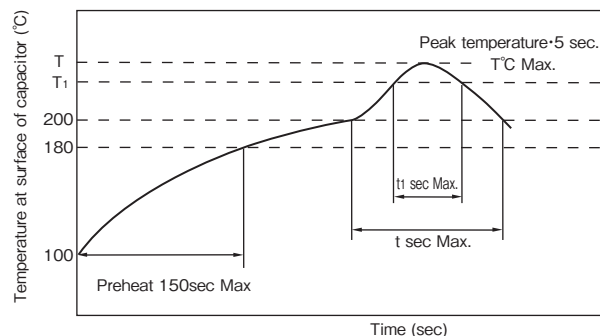
 ② Time more than 200°C (MAX)

 ③ Time more than T_1 (MAX)

※ Please contact us if the condition is over the maximum.

●Size $\phi 12.5 \sim \phi 18$

- 1) Temperature at surface of capacitor shall not exceed $T^{\circ}\text{C}$.
- 2) Period that temperature at surface of capacitor becomes more than 200°C and $T_1^{\circ}\text{C}$ shall not exceed t and t_1 seconds, respectively.
- 3) Preheat shall be made at $100^{\circ}\text{C} \sim 180^{\circ}\text{C}$ and for maximum 150 seconds.



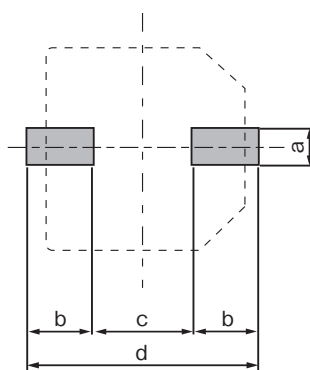
Series	Size	Rated Voltage	T(°C) ①	T ₁ (°C)	t(sec) ②	t ₁ (sec) ③	Reflow cycle
SEV SKV SGV	$\phi 12.5 \sim \phi 18$	$\leq 50\text{Vdc}$	240	230	60	30	2
TLV		63Vdc	240	230	50	20	2
TRV		100Vdc	240	230	50	20	2
TGV		$\geq 160\text{Vdc}$	230	220	50	20	2

① Peak temperature

 ② Time more than 200°C (MAX)

 ③ Time more than T_1 (MAX)

※ Please contact us if the condition is over the maximum.

◆RECOMMENDED LAND SIZE


Size	a	b	c	d
$\phi 4$	1.6	2.6	1.0	6.2
$\phi 5$	1.6	3.0	1.4	7.4
$\phi 6.3$	1.6	3.5	2.1	9.1
$\phi 8 \times 6.5$	1.6	4.5	2.1	11.1
$\phi 8 \times 10.5$	2.2	4.1	3.0	11.2
$\phi 10 \times 10.5$	2.2	4.3	4.5	13.1
$\phi 12.5$	2.5	6.0	5.0	17
$\phi 16$	3	6.5	8.0	21
$\phi 18$	3	7.5	8.0	23

◆Vibration proof packages with the supporting terminal

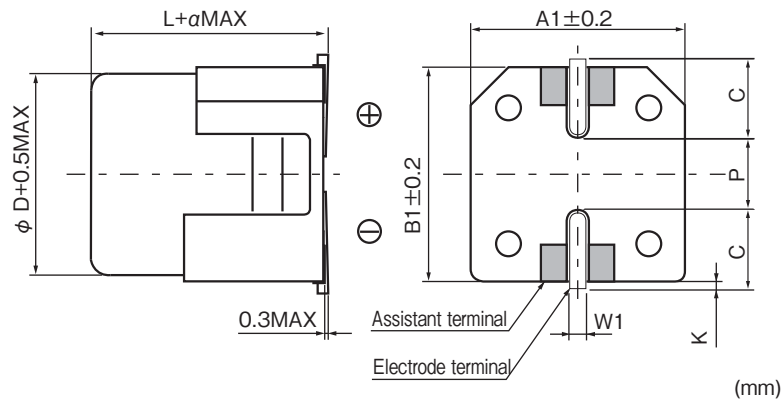
- For chip Aluminum electrolytic capacitors more than case size $\phi 8$, vibration proof packages supports.



◆PART NUMBER

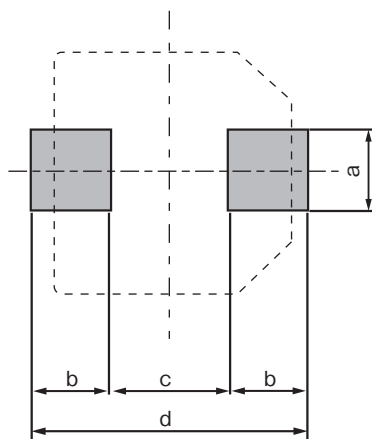
					VB	DxL
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Vibration proof package No.	Case Size

◆ DIMENSIONS



Size	A1	B1	C	W1	P	K	α
$\phi 8 \times 10.5$	8.3	8.3	3.1	0.9 ± 0.2	3.1	0.5 ± 0.4	0.5
$\phi 10 \times 10.5$	10.3	10.3	3.4	0.9 ± 0.2	4.5	0.5 ± 0.4	0.5
$\phi 12.5 \times 13.5$	13	13	4.9	1.1 ± 0.3	4.5	0.7 ± 0.4	1
$\phi 12.5 \times 16$	13	13	4.9	1.1 ± 0.3	4.5	0.7 ± 0.4	1
$\phi 16 \times 16.5$	17	17	6	1.1 ± 0.3	6.8	0.7 ± 0.4	1
$\phi 16 \times 21.5$	17	17	6	1.1 ± 0.3	6.8	0.7 ± 0.4	1
$\phi 18 \times 16.5$	19	19	7	1.1 ± 0.3	6.8	0.7 ± 0.4	1
$\phi 18 \times 21.5$	19	19	7	1.1 ± 0.3	6.8	0.7 ± 0.4	1

◆RECOMMENDED LAND SIZE



	(mm)			
Size	a	b	c	d
φ8×10.5	4.2	4.5	2.5	11.5
φ10×10.5	4.2	4.8	3.9	13.5
φ12.5	6.4	6.2	3.9	16.3
φ16	7	7.8	4.7	20.3
φ18	7	8.8	4.7	22.3