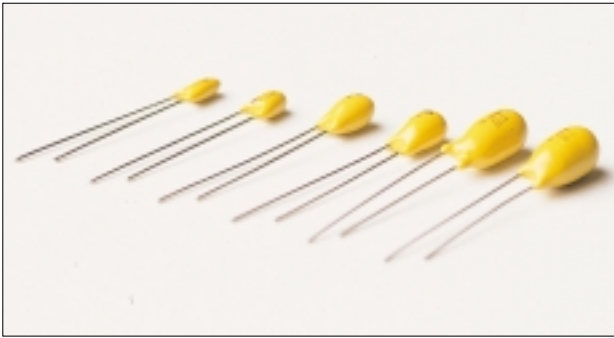


## TB / TD SERIES

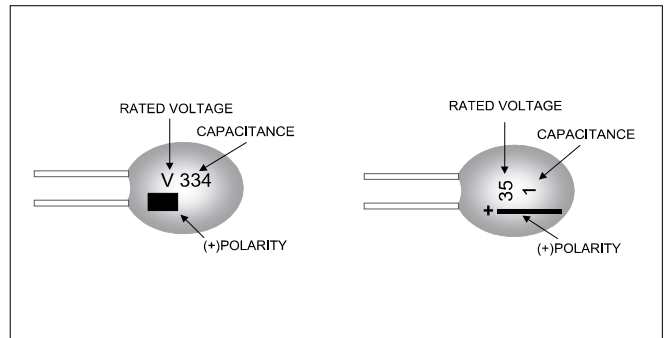
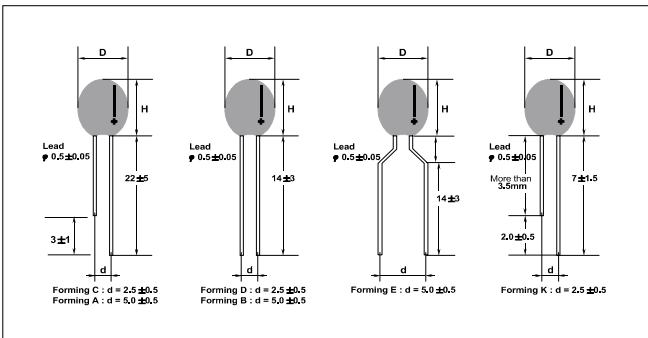
TANTALUM CAPACITOR



### FEATURES

- Capacitance : 0.1 $\mu$ F to 330 $\mu$ F
- Current Test on Each Size
- Capacitance Tolerance :  $\pm 10\%$ (K),  $\pm 20\%$ (M)
- Voltage : 3.15V DC to 50V DC

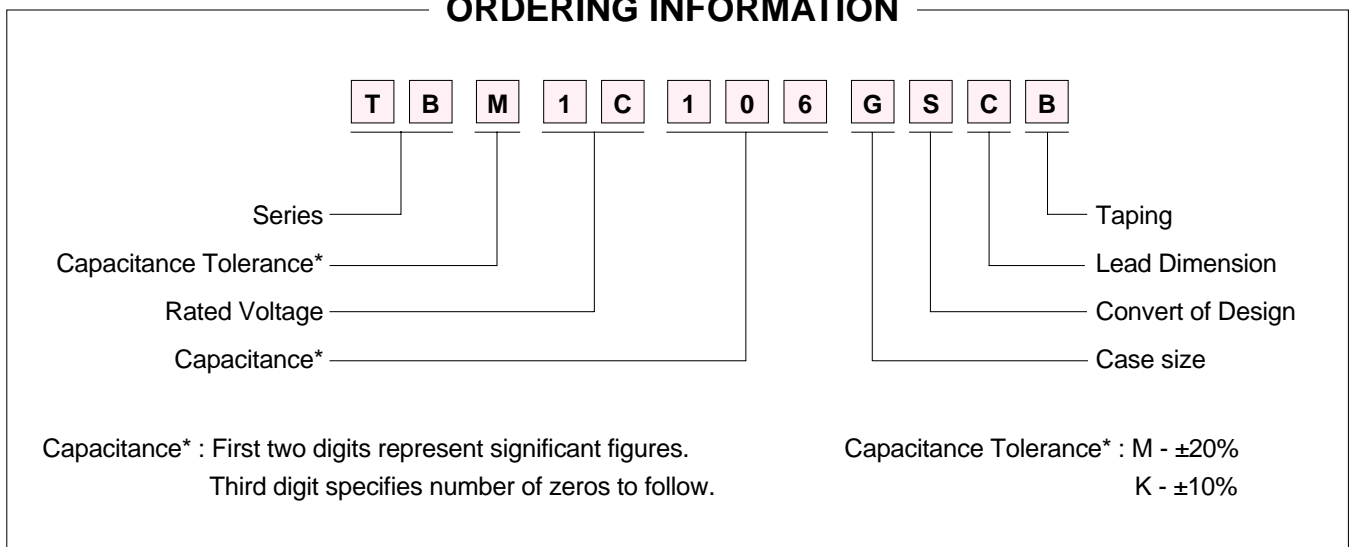
### CASE DIMENSIONS AND MARKINGS



(unit : mm)

SIZE CODE																
Series	D/H	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
TB Series	D max	4.5	4.5	5.0	5.0	5.0	5.5	5.5	6.0	6.0	6.5	7.0	7.5	8.5	9.0	9.5
	H max	7.5	8.0	8.0	9.0	9.5	10.0	10.5	10.5	11.0	11.0	12.5	13.5	14.5	15.5	16.0
TD Series	D max	3.4	3.7	3.9	4.0	4.0	4.5	5.0	5.2	5.5	6.0	-	-	-	-	-
	H max	5.4	6.0	6.5	7.0	7.5	8.0	8.0	8.0	10.0	10.0	-	-	-	-	-

### ORDERING INFORMATION



# TB / TD SERIES

TANTALUM CAPACITOR

## SPECIFICATIONS

Capacitance	Range	0.01 $\mu$ F to 330 $\mu$ F							
	Tolerance	$\pm$ 20%(M), $\pm$ 10%(K)							
Dissipation Factor (tan $\delta$ )	$C \leq 1.0\mu\text{F}$	D.F $\leq$ 4.0%							
	$1.5\mu\text{F} \leq C \leq 6.8\mu\text{F}$	D.F $\leq$ 6.0%							
	$10\mu\text{F} \leq C \leq 68\mu\text{F}$	D.F $\leq$ 8.0%							
	$100\mu\text{F} \leq C \leq 150\mu\text{F}$	D.F $\leq$ 10.0%							
	$C \geq 220\mu\text{F}$	D.F $\leq$ 12.0%							
Leakage Current		between 0.01CV and 0.5 $\mu$ A, whichever is higher							
Rated Voltage (V <sub>R</sub> )		<b>4.0</b>	<b>6.3</b>	<b>10.0</b>	<b>16.0</b>	<b>20.0</b>	<b>25.0</b>	<b>35.0</b>	<b>50.0</b>
Operating Voltage (V <sub>O</sub> )	$T \leq 85^{\circ}\text{C}$	4.0	6.3	10.0	16.0	20.0	25.0	35.0	50.0
	$85 < T \leq 125^{\circ}\text{C}$	2.5	4.0	6.3	10.0	13.0	16.0	22.0	32.0
Surge Voltage (V <sub>S</sub> )	$T \leq 85^{\circ}\text{C}$	5.2	8.0	13.0	20.0	25.0	32.0	44.0	63.0
	$85 < T \leq 125^{\circ}\text{C}$	3.2	5.0	8.0	13.0	16.0	20.0	28.0	40.0
Operating Temperature		-55 $^{\circ}$ C to 125 $^{\circ}$ C							

## CAPACITANCE AND VOLTAGE RANGE of TB series

Cap( $\mu$ F) \backslash W.V	3.15	6.3	10	16	20	25	35	50
0.1							A	B
0.15							A	B
0.22							B	B
0.33							B	C
0.47						B	B	D
0.68					B	B	B	E
1.0				A	B	B	C	F
1.5				B	B	B	D	H
2.2			B	B	C	C	E	J
3.3		B	B	C	D	D	G	L
4.7	B	B	C	D	E	E	H	L
6.8	B	C	D	E	F	G	I	M
10	B	D	E	G	H	I	J	N
15	C	E	F	I	J	J	L	
22	D	F	H	J	K	L	M	
33	E	H	I	K	L	M	N	
47	F	I	K	L	M	N	N	
68	H	K	L	M	N	N		
100	I	L	M	N	P			
150	K	M	N	P				
220	L	N	P					
330	M	P						

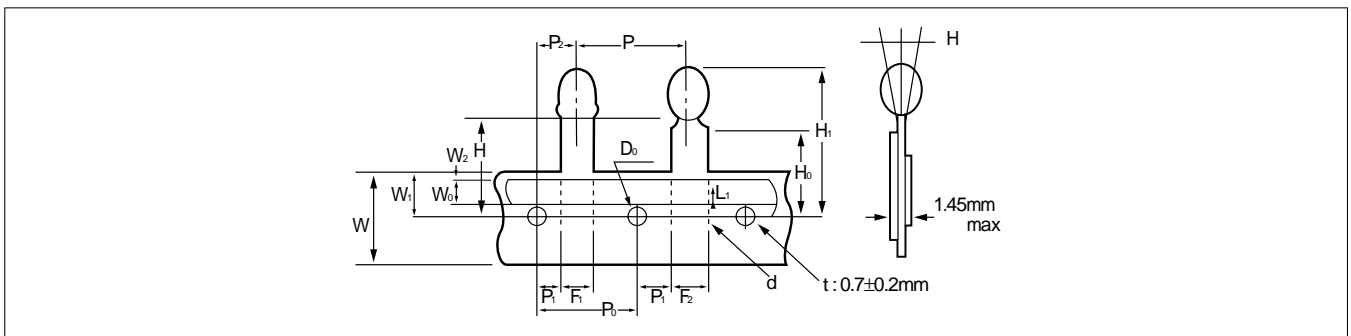
# TB / TD SERIES

TANTALUM CAPACITOR

## CAPACITANCE AND VOLTAGE RANGE of TD series

Cap(μF) \ W.V	3.15	6.3	10	16	20	25	35	50
0.1							A	
0.15							A	
0.22							A	
0.33					A	A	B	
0.47				A	B	B	B	
0.68				A	B	B	C	
1.0			A	A	C	C	D	
1.5		A	A	B	D	D	E	
2.2	A	A	B	C	E	E	F	
3.3	A	B	C	D	E	E	G	
4.7	B	C	D	E	G	G	H	
6.8	C	D	E	F	H	H	I	
10	D	E	F	G	I	I		
15	F	G	H	H				
22	F	G	H	I				
33	G	H	I	J				
47	H	I	J					
68	I	J						
100	J							

## TB/TD SERIES TAPING AND PACKING



Item	Symbol	Length (mm)	Tolerance (mm)
lead diameter	d	0.5	±0.05
pitch per parts	p	12.7	±1.0
pitch per hole	p <sub>0</sub>	12.7	±0.2
interval(hole to lead)	P <sub>1</sub> / P <sub>1</sub>	3.85/5.1	±0.7
interval(hole to part)	P <sub>2</sub>	6.35	±0.5
interval(lead to lead)	F <sub>1</sub> / F <sub>2</sub>	2.2/5.0	±0.5
parts alignment(F-R)	▲H	0	±2.0
tape width	W	18.0	±0.5

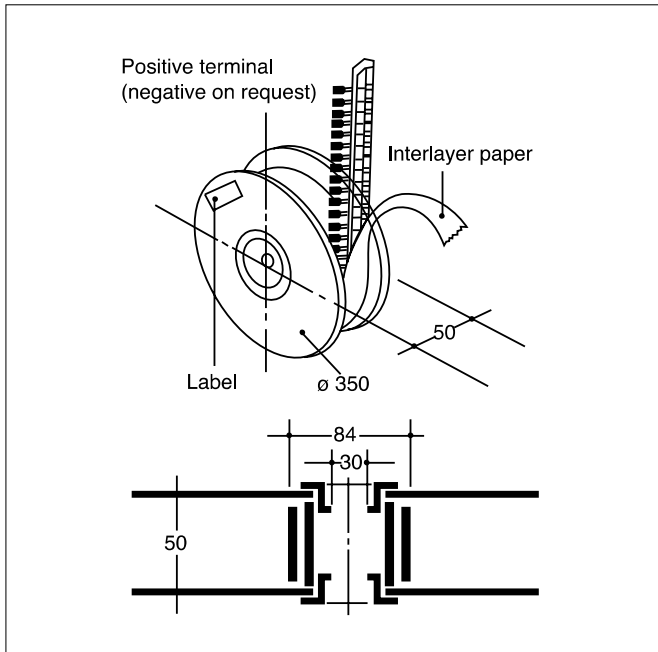
Item	Symbol	Length (mm)	Tolerance (mm)
hole to down tape width	W <sub>0</sub>	6.0	±0.5
hole position	W <sub>1</sub>	9.0	+0.75, -0.5
hole to down tape width	W <sub>2</sub>	2.0	max.
part to tape center	H	19.0	±0.5
lead forming H	H <sub>0</sub>	16.0	±0.5
part H	H <sub>1</sub>	32.25	max.
feed hole diameter	D <sub>0</sub>	4.0	±0.3
lead exposure	L <sub>1</sub>	7.0	+2.0, -2.5

# TB / TD SERIES

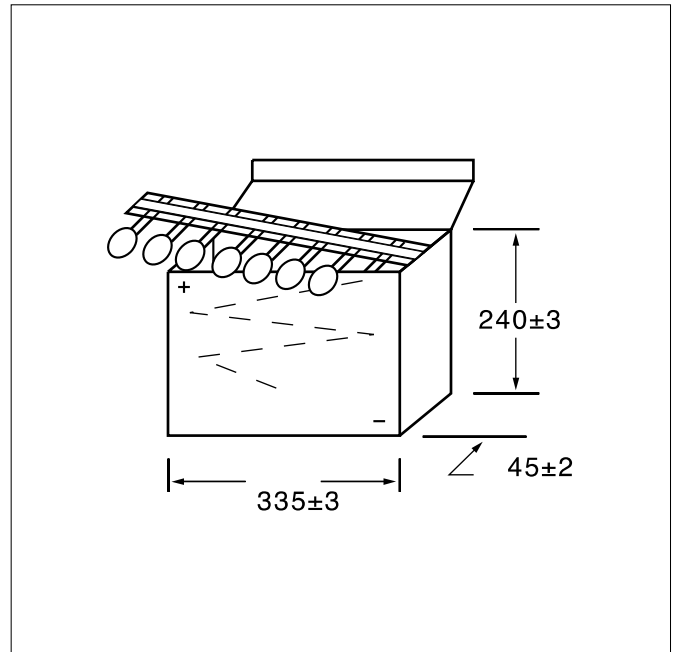
TANTALUM CAPACITOR

## TB/TD SERIES TAPING AND PACKING

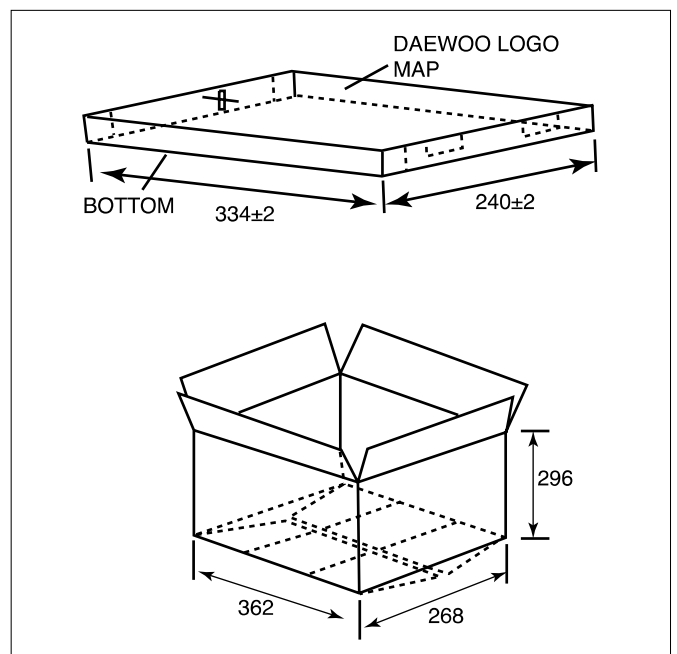
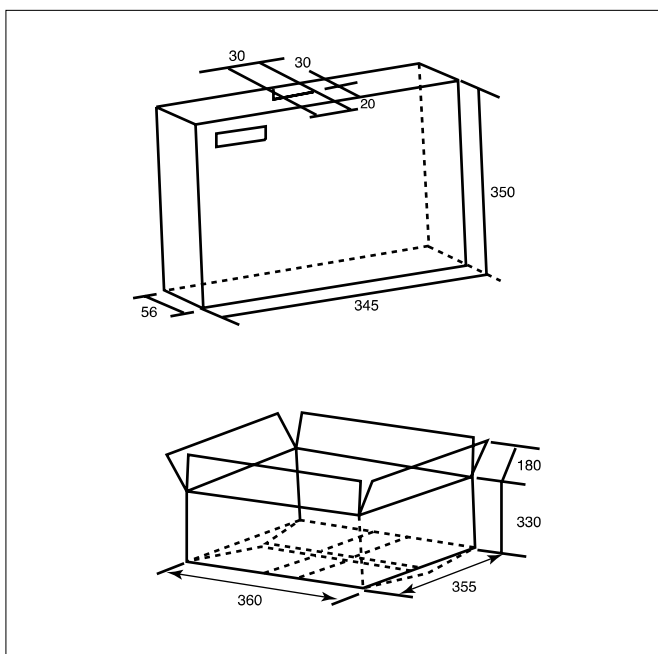
### • Reel Taping



### • Ammo Taping



### • Packing



SIZE	Quantity	Inner Box	Outer Box
A~C	2.0KP	1 Reel	5(10.0KP)
D~G	1.5KP	1 Reel	5(7.5KP)
H~J	1.0KP	1 Reel	5(5.0KP)

SIZE	Inner Box	Outer Box
A~C	4.0 KP	6 (24.0KP)
D~G	3.0 KP	6 (18.0KP)
H~J	2.5 KP	6 (15.0KP)
K~L	2.0 KP	6 (12.0KP)