

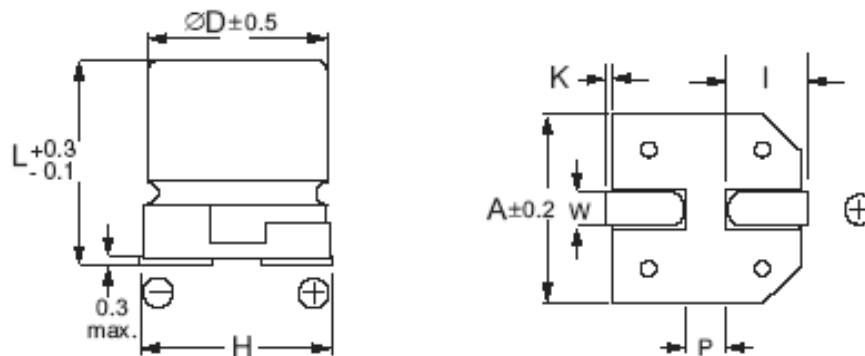
SMD High Temperature Electrolytic Capacitors

Features

- Lifetime: 1000 hours at 105°C
- Low profile vertical chip
- Higher temperature range than TCE
- RoHS compliant



Dimensions (in mm)



$\Phi 8 \sim \Phi 10 \& \Phi 6.3 \times 7.7 = L \pm 0.3$

Case Code	$\Phi D \times L$	A	H (Max.)	I	W	P	K
B	4.0x5.4	4.3	5.5	1.8	0.65±0.1	1.0±0.2	0.35+0.15/-0.20
C	5.0x5.4	5.3	6.5	2.2	0.65±0.1	1.5±0.2	0.35+0.15/-0.20
D	6.3x5.4	6.6	7.8	2.6	0.65±0.1	1.8±0.2	0.35+0.15/-0.20
E	6.3x7.7	6.6	7.8	2.6	0.65±0.1	1.8±0.2	0.35+0.15/-0.20
G	8.0x10.2	8.3	10.0	3.4	0.90±0.2	3.1±0.2	0.70±0.20
H	10.0x10.2	10.3	12.0	3.5	0.90±0.2	4.6±0.2	0.70±0.20

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TVE Series

Specification

Description		Value									Conditions
Capacitance Tolerance		M: $\pm 20\%$									at 120Hz, 20 °C
Rated Voltage Range (WV)		4 ~ 100 VDC									
Working Voltage Range (WV)		4	6.3	10	16	25	35	50	63	100	
Surge Voltage (V)		5	8	13	20	32	44	63	79	125	
Max. Low Temperature Stability Impedance Ratio	Z(-25°C)/ Z(+20°C)	7	4	3	2	2	2	2	2	2	at 120Hz
	Z(-40°C)/ Z(+20°C)	15	8	6	4	4	3	3	3	3	
Rated Capacitance Range (C)		1 ~ 1500 μ F									
Operation Temperature Range(TOP)		-40 ~ +105 °C									
Max. Dissipation Factor (tan δ)		Shown in the table of standard rating									at 120Hz, 20 °C
Max. Leakage Current at 20°C		≤ 0.01 CV or 3 μ A, whichever is greater									After applying rated voltage for 2 minutes
Endurance	Capacitance Change	Within $\pm 20\%$ of the initial value									After applying rated voltage for 1000 hours at 105°C
	Dissipation Factor	Not more than 200% of the specified value									
	Leakage Current	Not more than the specified value									
Shelf Life		Shall meet the same requirement as Endurance									After placing at 105°C without applying voltage for 1000 hours

Multiplier for Ripple Current

Frequency (Hz)	60	120	1K	10K
Frequency Coefficient	0.85	1.00	1.15	1.25

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Case Size (mm) / $\tan \delta$ / Max. Ripple Current (mA)

C(μ F)	Rated (Surge) Voltage					
	4(5)			6.3(8)		
	Φ DxL	$\tan \delta^*$	RC**	Φ DxL	$\tan \delta^*$	RC**
22	4x5.4	0.35	20	4x5.4	0.30	29
33	4x5.4	0.35	26	4x5.4	0.30	43
47	4x5.4	0.35	34	4x5.4	0.30	43
				5x5.4	0.30	46
100	5x5.4	0.35	61	5x5.4	0.35	47
				6.3x5.4	0.35	71
220	6.3x5.4	0.35	82	6.3x5.4	0.35	74
				6.3x7.7	0.35	120
330				6.3x7.7	0.35	175
				8x10.2	0.35	230
470				8x10.2	0.35	300
1000				8x10.2	0.35	300
				10x10.2	0.35	400
1500				10x10.2	0.35	480

C(μ F)	Rated (Surge) Voltage					
	10(13)			16(20)		
	Φ DxL	$\tan \delta^*$	RC**	Φ DxL	$\tan \delta^*$	RC**
4.7				4x5.4	0.16	20
10	4x5.4	0.30	24	4x5.4	0.16	28
22	4x5.4	0.30	36	4x5.4	0.16	30
				5x5.4	0.16	39
33	4x5.4	0.30	45	5x5.4	0.20	39
	5x5.4	0.30	46	6.3x5.4	0.20	65
47	5x5.4	0.30	46	5x5.4	0.20	39
	6.3x5.4	0.30	70	6.3x5.4	0.20	70
100	6.3x5.4	0.30	71	6.3x5.4	0.20	70
	6.3x7.7	0.30	110	6.3x7.7	0.20	130
220	6.3x7.7	0.30	115	6.3x7.7	0.20	105
	8x10.2	0.26	160	8x10.2	0.20	150
330	8x10.2	0.26	200	8x10.2	0.20	170
				10x10.2	0.20	230
470	8x10.2	0.26	230	8x10.2	0.20	230
	10x10.2	0.26	270	10x10.2	0.20	340
680				10x10.2	0.20	380
1000	10x10.2	0.26	390			

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C(μ F)	Rated (Surge) Voltage								
	25(32)			35(44)			50(63)		
	Φ DxL	$\tan \delta^*$	RC**	Φ DxL	$\tan \delta^*$	RC**	Φ DxL	$\tan \delta^*$	RC**
1							4x5.4	0.12	10
2.2				4x5.4	0.12	15	4x5.4	0.12	16
3.3				4x5.4	0.12	18	4x5.4	0.12	16
4.7	4x5.4	0.14	22	4x5.4	0.12	22	5x5.4	0.12	23
10	4x5.4	0.14	22	4x5.4	0.12	25	6.3x5.4	0.12	35
	5x5.4	0.14	28	5x5.4	0.12	30			
22	5x5.4	0.14	35	5x5.4	0.14	35	6.3x7.7	0.12	65
	6.3x5.4	0.14	55	6.3x5.4	0.14	60			
33	5x5.4	0.14	45	6.3x5.4	0.14	60	6.3x7.7	0.12	70
	6.3x5.4	0.16	65	6.3x7.7	0.14	84	8x10.2	0.12	91
47	6.3x5.4	0.16	70	6.3x7.7	0.14	84	6.3x7.7	0.12	75
	6.3x7.7	0.16	91	8x10.2	0.14	98	8x10.2	0.12	95
100	6.3x7.7	0.16	95	6.3x7.7	0.14	105	8x10.2	0.12	110
	8x10.2	0.16	130	8x10.2	0.14	120	10x10.2	0.12	145
220	8x10.2	0.16	160	8x10.2	0.14	170	10x10.2	0.12	210
	10x10.2	0.16	273	10x10.2	0.14	240			
330	8x10.2	0.16	180	10x10.2	0.14	250			
	10x10.2	0.16	340						
470	10x10.2	0.16	360						

C(μ F)	Rated (Surge) Voltage					
	63(79)			100(125)		
	Φ DxL	$\tan \delta^*$	RC**	Φ DxL	$\tan \delta^*$	RC**
3.3				8x10.2	0.18	30
4.7	6.3x5.4	0.18	20	8x10.2	0.18	50
10	6.3x5.4	0.18	20	8x10.2	0.18	55
22	8x10.2	0.18	30	10x10.2	0.18	60
33	8x10.2	0.18	30	10x10.2	0.18	65
47	8x10.2	0.18	45	10x10.2	0.18	65
100	10x10.2	0.18	60			

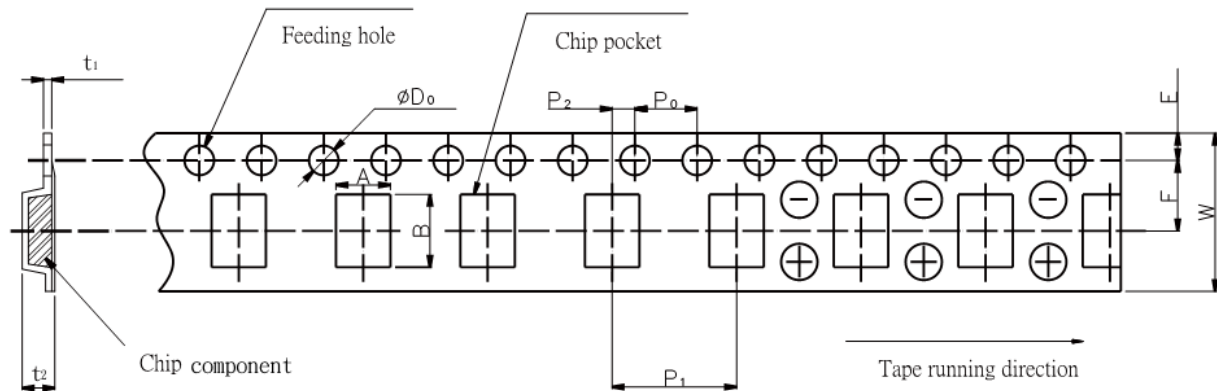
Note: *Max. Dissipation Factor: $\tan \delta$ at 120Hz, 20°C
 **Max. Permissible Ripple Current in mA(RMS)/120Hz, 105°C

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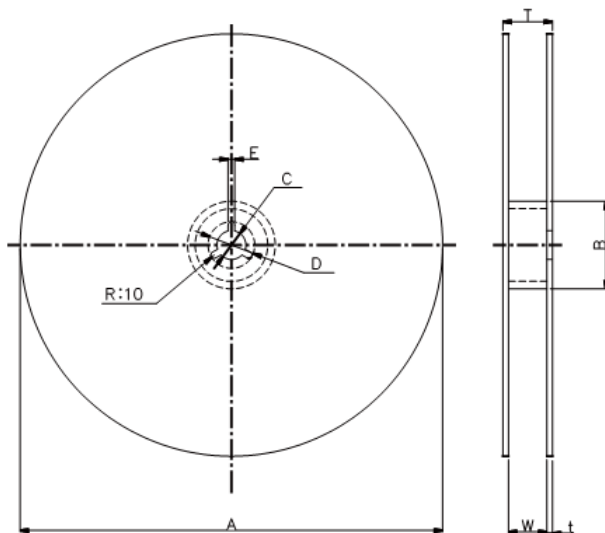
Packing Information:

Carrier Tape Dimensions (in mm)



Symbol Size	A	B	E	F	W	P0±0.1	P1	P2±0.1	ΦD0	t1	t2
4.0x5.4	4.7	4.7	1.75	5.5	12.0	4.0	8.0	2.0	1.5+0.1-0	0.4	5.8
5.0x5.4	5.7	5.7	1.75	5.5	12.0	4.0	12.0	2.0	1.5+0.1-0	0.4	5.8
6.3x5.4	7.0	7.0	1.75	7.5	16.0	4.0	12.0	2.0	1.5+0.1-0	0.4	5.8
6.3x7.7	7.0	7.0	1.75	7.5	16.0	4.0	12.0	2.0	1.5+0.1-0	0.4	8.3
8.0x10.2	8.7	8.7	1.75	11.5	24.0	4.0	16.0	2.0	1.5+0.1-0	0.4	11.0
10.0x10.2	10.7	10.7	1.75	11.5	24.0	4.0	16.0	2.0	1.5+0.1-0	0.4	11.0

Reel Dimensions (in mm)



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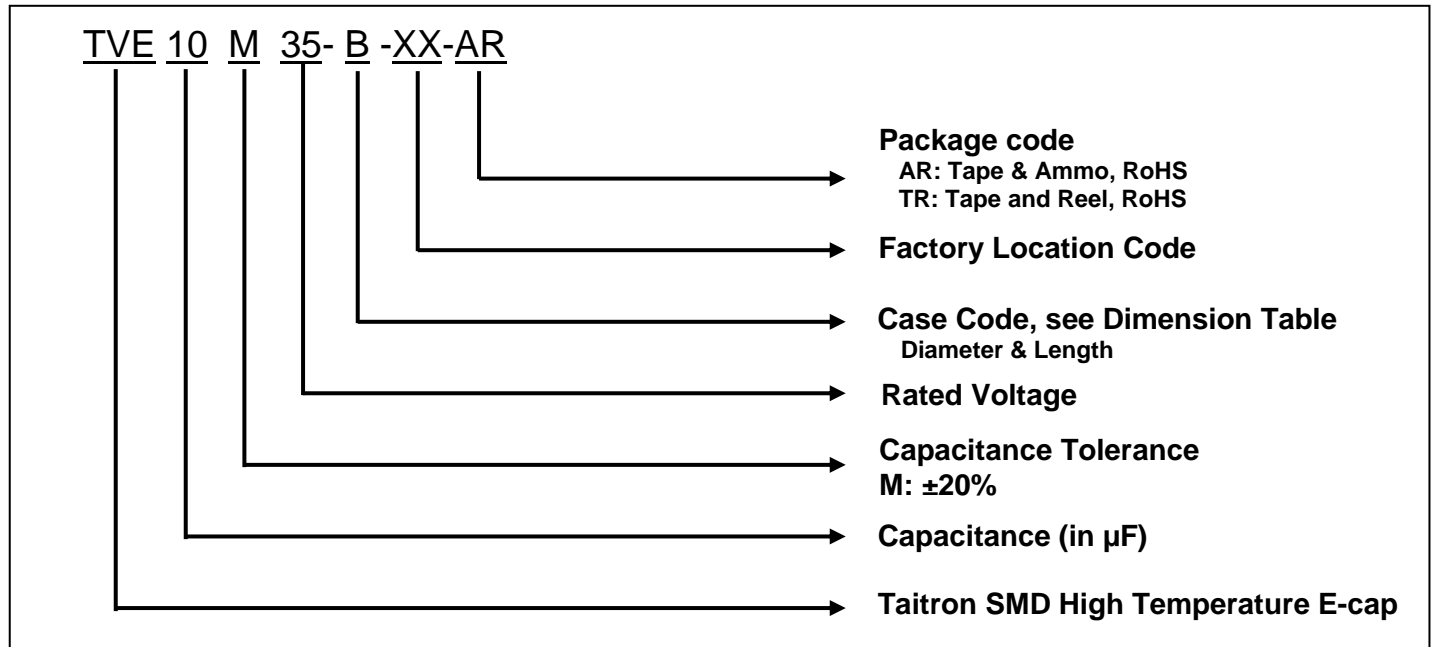
TVE Series

Size	A	B	C	D	E	W	T	t
4Φ ~ 5Φ	380±2	50min	13.0±0.5	21.0±0.8	2.0±0.5	14±1	20±1	3.0
6.3Φ	380±2	50min	13.0±0.5	21.0±0.8	2.0±0.5	18±1	24±1	3.0
8x10.2 ~ 10Φ	380±2	50min	13.0±0.5	21.0±0.8	2.0±0.5	26±1	32±1	3.0

Carton Information

Size(mm)	Q'ty per reel	Inner box / measurement (mm)		Out carton / measurement (mm)	
4.0x5.4	2000	20,000	390x195x395	40,000	420x410x414
5.0x5.4	1000	10,000	390x195x395	20,000	420x410x414
6.3x5.4 & 6.3x7.7	1000	10,000	390x235x405	20,000	420x410x492
8.0x10.2	500	4,000	390x255x405	8,000	420x410x530
10.0x10.2	500	4,000	390x255x405	8,000	420x410x530

How to Order:



SMD High Temperature Electrolytic Capacitors

TVE Series

How to contact us

USA HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800)-TAITRON (800)-824-8766 (661)-257-6060

Fax: (800)-TAITFAX (800)-824-8329 (661)-257-6415

Email: taitron@taitroncomponents.com

Http://www.taitroncomponents.com

TAITRON COMPONENTS INCORPORATED TAIWAN BRANCH

6F., NO.190, SEC. 2, ZHONGXING RD., XINDIAN DIST., NEW TAIPEI CITY 23146, TAIWAN R.O.C.

Tel: 886-2-2913-6238

Fax: 886-2-2913-6239

TAITRON COMPONENT TECHNOLOG SHANGHAI CORPORATION

SUITE 1503, METROBANK PLAZA, 1160 WEST YAN'AN ROAD, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-2302-5027