

特點：

1. 超小型化产品
2. 具备三层电极结构
3. 高可靠性、温度范围广
4. 适用于自动贴片机安装

FEATURES

1. Superviniature size.
2. Three layers of electrodes.
3. High reliability and wide temperature range.
4. Tape package for automatic insertion machine.

產品型號代號 ORDERING CODE

例 Ex. : TCB 0J 227 M B A R
 ① ② ③ ④ ⑤ ⑥ ⑦

① 類別碼 TYPE CODE

② 電壓碼 RATED VOLTAGE CODE

代碼 Symbol	電壓 DC Rated Voltage	代碼 Symbol	電壓 DC Rated Voltage
0E	2.5	1C	16
0G	4	1D	20
0J	6.3	1E	25
1A	10	1V	35

③ 容量容值碼 CAPACITANCE CODE

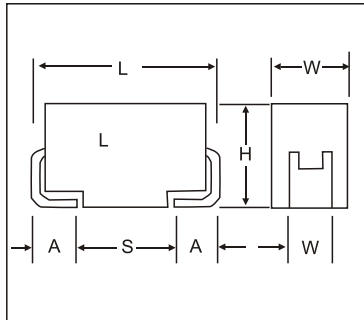
代碼 Symbol	Capacitance(uF)	Pico Farad(pF)	Symbol	Capacitance(uF)	Pico Farad(pF)
105	1.0	10x10 ⁵	684	0.68	68x10 ⁴
106	10.0	10x10 ⁶	475	4.7	47x10 ⁵

片式钽电容 CHIP TANTALUM CAPACITORS

④ 容量误差码 CAPACITANCE TOLERANCE CODE

代碼 Symbol	Tolerance(%)	Symbol	Tolerance(%)
K	±10	M	±20

⑤ 尺寸碼 CASE SIZE CODE =MM(INCHES)



For Part Marking See Page 50

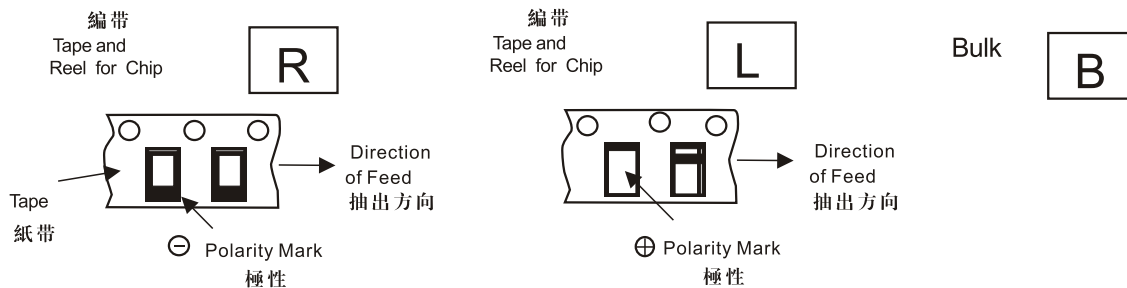
代碼 Code	ELA Code	L±0.2(0.008)	W+0.2(0.008) -0.1(0.004)	H+0.2(0.008) -0.1(0.004)	W1±0.2(0.008)	A+0.3(0.012) -0.2(0.008)	8 Min.
A	3216	3.2(0.126)	1.6(0.063)	1.6(0.063)	1.2(0.047)	0.8(0.031)	1.1(0.043)
B	3528	3.5(0.138)	2.8(0.110)	1.9(0.075)	2.2(0.087)	0.8(0.031)	1.4(0.055)
C	6032	6.0(0.236)	3.2(0.126)	2.6(0.102)	2.2(0.087)	1.3(0.051)	2.9(0.114)
D	7343	7.3(0.287)	4.3(0.169)	2.9(0.114)	2.4(0.094)	1.3(0.051)	4.4(0.173)
E	7343H	7.3(0.287)	4.3(0.169)	4.1(0.162)	2.4(0.094)	1.3(0.051)	4.4(0.173)
V	7361	7.3(0.287)	6.1(0.240)	3.45±0.3 (0.136±0.012)	3.1(0.120)	1.4(0.055)	4.4(0.173)

W₁ Dimension Applies To The Termination Width For A Dimensional Area Only.

⑥ 包裝碼 PACKING CODE

代碼 Code	包裝規格 Packing Code
A	7 inches
C	13 inches

⑦ 包裝極性 PACKING POLARITY CODE



主要性能參數 TECHNICAL SPECIFICATIONS

技術參數 Technical Data	所有技术参数均在室温25℃下测定 All technical data relate to an ambient temperature of +25℃								
容量範圍 Capacitance Range	0,1uF to 680uF								
容量誤差 Capacitance Tolerance	±10%; ±20%								
額定電壓 Rated Voltage(VP)	2	4	6.3	10	16	20	25	35	50
邏輯電壓 Category Voltage(VC) ≤+85℃	1.3	2.7	4	7	10	13	17	23	33
最高耐壓 Surge Voltage(VS) ≤+125℃	2.7	5.2	8	13	20	26	32	46	65
最高耐壓 Surge Voltage(VS) ≤+85℃	1.7	3.2	5	8	12	16	20	28	40
溫度範圍 Temperature Range ≤+125℃									
可靠性 Reliability	在溫度85℃溫度60%環境下，用0.1Ω/V條件測試每1000小時容量變化為1% 1% per 1000hours at 85℃ with 0.1Ω/V series impedance, 60% confidence level								
品質標準 Qualification	CECC 30801-005 issue 2 EIA 535BAAC								

片式钽电容 CHIP TANTALUM CAPACITORS

容量及电压对照表 CAPACITANCE AND RATED VOLTAGE, VR(VOLTAGE CODE)
RANGE (LETTER DENOTES CASE SIZE)

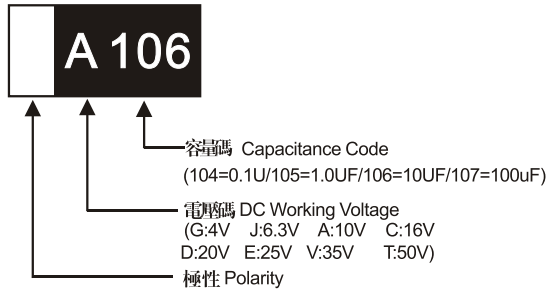
容量 Capacitance		额定电压 Rate voltage (V _r) to 85°C								
μF	Code	2V(F)	4V(G)	6.3V(J)	10V(A)	16V(C)	20V(D)	25V(E)	35V(V)	50V(T)
0.10 0.15 0.22	104 154 224								Ⓐ Ⓐ Ⓐ	Ⓐ Ⓐ Ⓑ Ⓐ Ⓑ
0.33 0.47 0.67	334 474 684						Ⓐ	A A	Ⓐ Ⓐ/Ⓑ Ⓐ/Ⓑ	Ⓑ Ⓒ Ⓒ
1.0 1.5 2.2	105 155 225			Ⓐ	Ⓐ Ⓐ	Ⓐ Ⓐ A/Ⓑ	A A A/Ⓑ	A A/Ⓑ Ⓐ/Ⓑ	A/Ⓑ A/Ⓑ/Ⓒ B/Ⓒ	B/Ⓒ C/Ⓒ C/Ⓒ
3.3 4.7 6.8	335 475 685			Ⓐ Ⓐ Ⓐ/Ⓑ	Ⓐ A/Ⓑ A/Ⓑ	A/Ⓑ A/Ⓑ A/Ⓑ/Ⓒ	A/Ⓑ A/Ⓑ/Ⓒ B/Ⓒ	B/Ⓒ B/Ⓒ B/Ⓒ	B/Ⓒ B/Ⓒ/Ⓒ C/Ⓒ	C/Ⓒ D D
10 15 22	106 156 226		Ⓐ Ⓐ/Ⓑ Ⓐ/Ⓑ	Ⓐ/Ⓑ A/Ⓑ/Ⓒ A/Ⓑ/Ⓒ	A/Ⓑ/Ⓒ A/Ⓑ/Ⓒ A/Ⓑ/Ⓒ/Ⓓ	A/Ⓑ/Ⓒ B/Ⓒ B/Ⓒ/Ⓒ	B/Ⓒ B/Ⓒ/Ⓓ B/Ⓒ/Ⓒ	C/Ⓒ C/Ⓒ C/Ⓒ	C/Ⓒ C/Ⓒ C/Ⓒ	E
33 47 68	336 476 686	A Ⓐ	A/Ⓑ A/Ⓑ Ⓑ/Ⓒ	A/Ⓑ/Ⓒ B/Ⓒ/Ⓒ B/Ⓒ/Ⓒ	B/Ⓒ/Ⓒ B/Ⓒ/Ⓒ C/Ⓒ	B/Ⓒ/Ⓒ C/Ⓒ Ⓒ/Ⓒ/Ⓒ	C/Ⓒ Ⓒ/Ⓒ D/Ⓒ	D/Ⓒ D E/V	D/Ⓒ E	
100 150 220	107 157 227	B Ⓑ	B/Ⓒ B C/Ⓒ	B/Ⓒ/Ⓒ C/Ⓒ C/Ⓒ/Ⓒ	C/Ⓒ C/Ⓒ/Ⓒ D/Ⓒ	D/Ⓒ D Ⓒ/Ⓒ/Ⓒ	D/Ⓒ/Ⓒ Ⓒ/Ⓒ Ⓒ/Ⓒ			
330 470 680	337 477 687	Ⓒ	Ⓒ E D/Ⓒ	Ⓒ/Ⓒ/Ⓒ D/Ⓒ/Ⓒ E/Ⓒ	D/Ⓒ/Ⓒ E/Ⓒ Ⓒ	Ⓒ/Ⓒ				
1000 1500	108 158	Ⓓ Ⓔ	Ⓒ/Ⓒ	Ⓒ						

片式钽电容 CHIP TANTALUM CAPACITORS

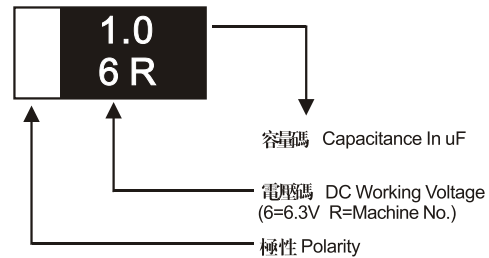
► 包裝形式Packaging

● 等級Marking

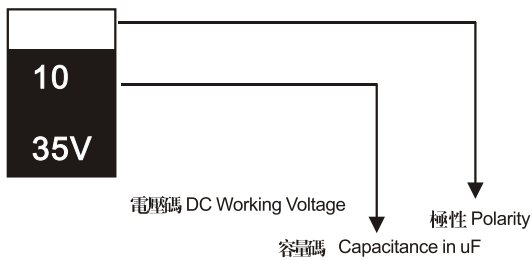
► A級 A Case



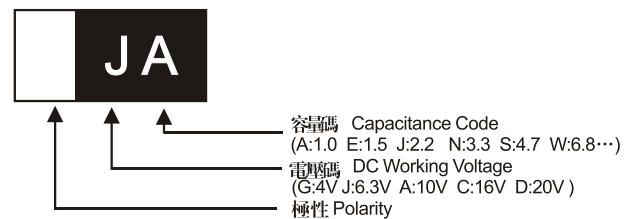
► B級 B Case



► CD級 C,D Case



► P ,A級 P,A Case



容值範圍 Capacitance Range	數碼1 1 DIGIT	數碼2 2 DIGIT
< 1.0uf	A Small Letter	A Small Letter
1.0uf ≤ cap < 10uf	A Capital Letter	A Small Letter
≥ 10uf	A Capital Letter	A Capital Letter

對照碼 REFERENCE CODE

uF \ V	4	6.3	10	16
0.47				GS
0.68				CW
1.0			AA	CA
1.5		JE	AE	
2.2		JJ	AJ	
3.3	GN		AN	
4.7		JS	AS	
6.8		JW		
10	GA	JA	AA7	
15	GE			
22	GJ			

片式钽电容 CHIP TANTALUM CAPACITORS

电压 Rated Volt	容量 Rated Capacitance (μ A)	等级 Case code	电流 Leakage Current (μ A)	误差 Dissipation Factor(%@ 120Hz)	阻值 ESR (Ω @100KHz)
	47	A	1.2	12	2.5
	68	A	1.7	18	2.5
	100	B	2.5	14	0.9
	150	B	3.8	14	0.7
	220	B	5.5	18	0.7
	330	C	8.3	16	0.7
	470	C	11.8	18	0.5
	470	D	11.8	12	0.3
	4.7	A	0.5	6	4.0
	6.8	A	0.5	6	3.5
	10	A	0.5	6	3.0
	15	A	0.6	6	2.9
	22	A	0.9	8	2.5
	22	B	0.9	6	1.9
	33	A	1.3	8	2.5
	33	B	1.3	6	1.4
	47	A	1.9	18	2.5
	47	B	1.9	8	1.0
	68	A	2.7	24	2.5
	68	B	2.7	8	0.8
	100	A	4.0	30	2.0
	100	B	4.0	14	0.9
	150	B	6.0	16	0.7
	220	B	8.8	18	0.7
	220	C	8.8	12	0.7
	330	C	13.2	14	0.7
	330	D	13.2	10	0.5
	470	D	18.8	16	0.3
	680	D	27.2	18	0.3
	1	A	0.5	4	7.5
	1.5	A	0.5	6	6.0
	2.2	A	0.5	6	5.0
	3.3	A	0.5	6	4.5
	4.7	A	0.8	6	4.0
	6.8	A	1.1	6	3.5
	6.8	B	1.1	6	2.5
	10	A	1.6	6	3.0
	10	B	1.6	6	2.0
	15	A	2.4	10	3.0
	15	B	2.4	8	2.0
	22	B	3.5	8	1.9
	22	C	3.5	8	1.1
	33	B	5.3	8	1.9
	33	C	5.3	8	1.1
	47	C	7.5	8	0.9
	47	D	7.5	6	0.7
	68	D	10.9	8	0.6
	100	D	16.0	10	0.6
	1	A	0.5	4	7.5
	1.5	A	0.5	6	6.3
	2.2	A	0.5	6	5.0
	3.3	A	0.7	6	4.5
	4.7	A	0.9	6	4.0
	4.7	B	0.9	6	2.8
	6.8	A	1.4	6	3.5
	6.8	B	1.4	6	2.5
	10	A	2.0	8	3.5
	10	B	2.0	6	2.1
	15	C	3.0	6	1.2
	22	C	4.4	8	1.1
	33	C	6.6	8	1.1
	33	D	6.6	6	0.7
	47	D	9.4	8	0.7

电压 Rated Volt	容量 Rated Capacitance (μ A)	等级 Case code	电流 Leakage Current (μ A)	误差 Dissipation Factor(%@ 120Hz)	阻值 ESR (Ω @100KHz)
6.3V	2.2	A	0.5	6	5.0
	3.3	A	0.5	6	4.5
	4.7	A	0.5	6	4.0
	6.8	A	0.5	6	3.5
	10	A	0.6	6	3.0
	15	A	0.9	8	2.9
	15	B	0.9	6	2.0
	22	A	1.4	8	2.5
	22	B	1.4	6	1.9
	33	A	2.1	8	2.5
	33	B	2.1	8	1.4
	47	A	3.0	18	2.5
	47	B	3.0	8	1.0
	68	B	4.3	8	1.0
	68	C	4.3	8	0.8
	100	B	6.3	14	0.9
	100	C	6.3	10	0.7
	150	B	9.5	18	0.9
	150	C	9.5	12	0.7
	10V	220	C	13.9	14
220		D	13.9	10	0.5
330		D	20.8	14	0.5
470		D	29.6	16	0.3
2.2		A	0.5	6	5.0
3.3		A	0.5	6	4.5
4.7		A	0.5	6	4.0
6.8		A	0.7	6	3.5
10		A	1.0	6	3.0
10		B	1.0	6	2.1
15		A	1.5	8	2.9
15		B	1.5	6	2.0
22		A	2.2	12	2.5
22		B	2.2	8	1.9
33		A	3.3	18	2.5
33		B	3.3	8	1.4
33		C	3.3	6	1.1
47		B	4.7	8	1.0
47		C	4.7	8	0.9
68		C	6.8	8	0.8
68	D	6.8	6	0.6	
100	C	10.0	10	0.7	
100	N	10.0	10	0.6	
150	C	15.0	14	0.7	
150	D	15.0	10	0.6	
220	D	22.0	12	0.5	
330	D	33.0	18	0.5	
25V	0.68	A	0.5	4	7.6
	1	A	0.5	4	7.5
	1.5	A	0.5	6	6.7
	2.2	A	0.6	6	6.3
	3.3	A	0.8	6	6.0
	3.3	B	0.8	6	3.1
	4.7	A	1.2	8	4.0
	4.7	B	1.2	6	2.8
	6.8	C	1.7	6	1.8
	10	C	2.5	6	1.5
35V	15	C	3.8	8	1.2
	22	D	5.5	6	0.7
	33	D	8.3	8	0.7
	47	D	11.8	8	0.7
	0.47	A	0.5	4	10.0
	0.68	A	0.5	4	7.6
	1	A	0.5	4	7.5
	1.5	A	0.5	6	7.5
	2.2	A	0.8	6	7.0
	2.2	B	0.8	6	3.8
3.3	B	1.2	6	3.5	
4.7	C	1.6	6	1.8	
6.8	C	2.4	6	1.8	
10	C	3.5	6	1.6	
15	D	5.3	6	0.7	
22	D	7.7	8	0.7	