

# Solid Tantalum Chip Capacitor



3.2 x 1.60 x 1.6mm  
3.5 x 2.80 x 1.9mm  
2.0 x 1.25 x 1.1mm

ATCC-211(A, B, P) Series



**RoHS**  
Compliant

## FEATURES:

- Meets EIA-535BAAC standard
- Large capacitance in small size
- Exceptional stability in wide temperature range

## APPLICATIONS:

- Widely used in PC, cell phones, notebooks and A/V products
- Noise suppression for power supply circuit
- Filtering for Audio circuit, blocking DC bias into earphone
- Power compensation for CPU to run at speed
- Energy storage for LED driving circuit

## ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ATCC-211(A, B, P) Series
Operating Temperature:	-55°C to +125°C (Including self temperature rise)
Storage Temperature:	-10°C ~ +40°C and 70% R.H. max.

Part Number	Dimensions	Rated DC Voltage @ 85°C	Nominal Capacitance	Max Leakage Current 25°C	Max Dissipation Factor @25°C 120Hz	Max Equivalent Series Resistance @25°C 100kHz	Capacitance Code
Units	—	V	μF	μA	%	Ω	—
Symbol	A, B, P	V <sub>R</sub>	C	I <sub>O</sub> Max	tan δ Max	ESR Max	—
ATCC-211A-004-107	A	4.0	100.0	4.0	18.0	5.0	107
ATCC-211B-004-227	B	4.0	220.0	8.8	18.0	0.5	227
ATCC-211P-006-106	P	6.3	10.0	0.6	8.0	10.0	106
ATCC-211A-006-226	A	6.3	22.0	1.3	6.0	4.0	226
ATCC-211A-006-336	A	6.3	33.0	2.1	8.0	4.5	336
ATCC-211A-006-476	A	6.3	47.0	3.0	8.0	3.5	476
ATCC-211B-006-107	B	6.3	100.0	6.3	10.0	3.0	107
ATCC-211P-010-106	P	10.0	10.0	1.0	15.0	10.0	106
ATCC-211A-010-106	A	10.0	10.0	1.0	6.0	4.0	106
ATCC-211A-010-226	A	10.0	22.0	2.2	8.0	4.0	226
ATCC-211B-010-107	B	10.0	100.0	10.0	15.0	1.5	107
ATCC-211P-016-105	P	16.0	1.0	0.5	6.0	25.0	105
ATCC-211A-016-475	A	16.0	4.7	0.8	6.0	6.0	475
ATCC-211A-016-106	A	16.0	10.0	1.6	8.0	7.0	106
ATCC-211B-016-106	B	16.0	10.0	1.6	6.0	2.8	106
ATCC-211B-016-226	B	16.0	22.0	3.5	8.0	2.2	226
ATCC-211A-025-475	A	25.0	4.7	1.2	8.0	6.0	475
ATCC-211B-025-475	B	25.0	4.7	1.2	6.0	2.0	475
ATCC-211B-025-106	B	25.0	10.0	2.5	6.0	3.0	106
ATCC-211A-035-104	A	35.0	0.1	0.5	4.0	20.0	104
ATCC-211A-035-105	A	35.0	1.0	0.5	4.0	10.0	105
ATCC-211B-035-335	B	35.0	3.3	1.2	6.0	3.5	335
ATCC-211B-035-475	B	35.0	4.7	1.6	6.0	2.0	475
ATCC-211B-050-225	B	50.0	2.2	1.1	6.0	2.0	225



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## Test Conditions and equipment:

- Ambient Temperature:  $25 \pm 10^\circ\text{C}$
- Relative Humidity:  $50\% \pm 30\%$
- Air Pressure: 86kPa to 106kPa

Capacitance (C) & Dissipation Factor ( $\tan \delta$ ): HP4263B or equivalent,  $120 \pm 5\text{Hz}$ ,  $1V_{\text{rms}}$

Leakage Current ( $I_0$ ): TH2686 or equivalent

Equivalent Series Resistance (ESR): HP4263B or equivalent,  $100 \pm 5\text{kHz}$

Rated Voltage ( $V_R$ ): The maximum DC operating voltage for continuous duty at  $-55^\circ\text{C} \sim +85^\circ\text{C}$ .

Derated Voltage ( $V_C$ ): Capacitor may be operated at  $+125^\circ\text{C}$  with voltage derated to two-thirds of rated voltage  $V_R$ .

Surge voltage  $V_S$ : The maximum voltage to which capacitors may be subjected under any momentary conditions, including maximum AC pulse voltage, DC bias voltage and any momentary voltage.

Rated Voltage ( $V_R$ )	4.0V	6.3V	10.0V	16.0V	25.0V	35.0V	50.0V	@-55°C ~ +85°C
Derated Voltage ( $V_C$ )	2.5V	4.0V	6.3V	10.0V	16.0V	20.0V	32.0V	@+125°C
Surge Voltage ( $V_S$ )	5.2V	8.0V	13.0V	20.0V	32.0V	46.0V	65.0V	@-55°C ~ +85°C
Surge Voltage ( $V_S$ )	3.4V	5.0V	8.0V	13.0V	20.0V	28.0V	40.0V	@+125°C

## OPTIONS AND PART IDENTIFICATION

ATCC-211 - [ ] - [ ] - [ ] - [ ]

Dimension Code
P: 2.0x1.25x1.1 mm
A: 3.2x1.6x1.6 mm
B: 3.5x2.8x1.9 mm

Rated Voltage Code
004: 4.0V
006: 6.3V
010: 10.0V
016: 16.0V
025: 25.0V
035: 35.0V
050: 50.0V

Capacitance Code
Please refer to the table above

Capacitance Tolerance
K: $\pm 10\%$
M: $\pm 20\%$

Packaging
T: Tape and Reel (3k pcs/Reel for option P; 2k pcs/reel for A and B)



# Solid Tantalum Chip Capacitor



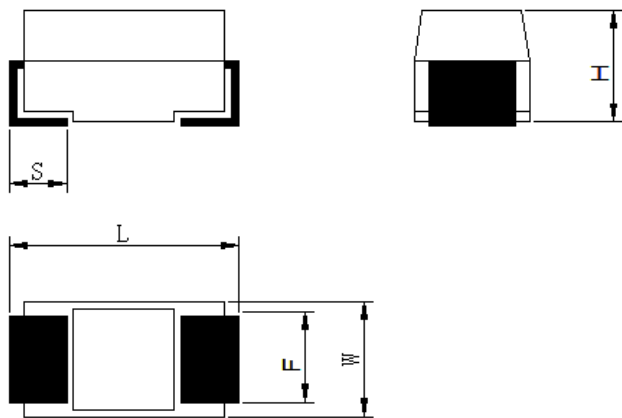
3.2 x 1.60 x 1.6mm  
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## OUTLINE DIMENSIONS:



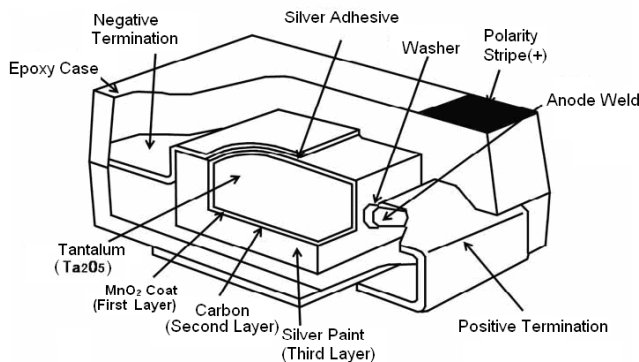
## Recommended Land Pattern



Dimension Code	L	W	H	F(±0.10)	S(±0.30)	A	B	C
P	2.0±0.15	1.25±0.15	1.1±0.15	0.9	0.5	1.1	1.05	1.2
A	3.2±0.20	1.6±0.20	1.6±0.20	1.2	0.8	1.1	1.35	1.5
B	3.5±0.2	2.8±0.2	1.9±0.2	2.2	0.8	1.4	1.35	2.7

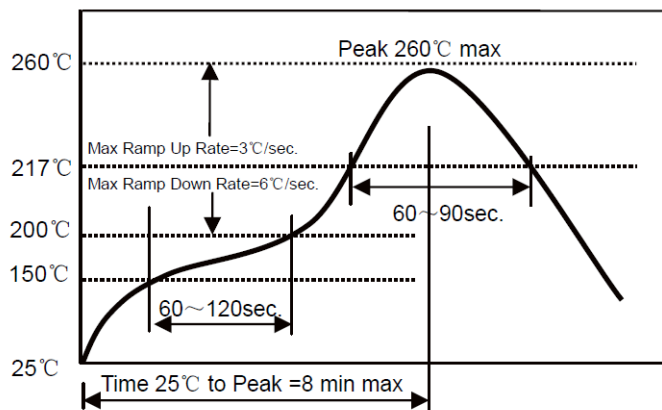
Dimensions: mm

## Materials



\*The Case is black molded

## REFLOW PROFILE:



- Δ Preheat condition: 150 ~200°C /60~120sec.
- Δ Allowed time above 217°C: 60~90sec.
- Δ Max temp: 260°C
- Δ Max time at max temp: 10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Allowed Reflow time: 2x max



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## TAPE & REEL:

### Packaging

T: 3,000pcs / reel – Dimension Code P

2,000pcs / reel – Dimension Code A/B



Dimension Code	A <sub>0</sub>	B <sub>0</sub>	W	F	P <sub>0</sub>	T Max	K Max
P	1.4±0.15	2.20±0.15	8.0±0.3	3.5±0.05	4.0±0.1	0.3	1.45
A	1.90±0.20	3.50±0.20	8.0±0.3	3.5±0.05	4.0±0.1	0.3	2.1
B	3.10±0.20	3.80±0.20	8.0±0.3	3.5±0.05	4.0±0.1	0.3	2.3



Dimension: mm

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