

# Type 211D Wet Tantalum Capacitor Array with Tantalum Cased Tantalum Internal Components for -55 °C to +125 °C Operation



### FEATURES

- Assembly of tantalum case capacitors
- Terminations isolated from case
- 12 case codes
- 3 V reverse capability

### APPLICATIONS

- Military
- Industrial

### PERFORMANCE CHARACTERISTICS

**Operating Temperature:** -55 °C to +125 °C

**Capacitance Tolerance:** at 120 Hz, +25 °C, ± 20 % standard, ± 10 % available

**DC Leakage Current (DCL maximum):**

at +25 °C: leakage current shall not exceed the values listed in the Standard Ratings table.

**Life Test:** capacitors shall withstand 2000 h at a temperature of +85 °C or +125 °C at the rated DC working voltage. Following the life test:

1. DCL shall not exceed the original requirement
2. ESR shall not exceed the original requirement
3. Capacitance shall not change more than ± 10 %

ORDERING INFORMATION				
<b>211D</b> MODEL	<b>228</b> CAPACITANCE TOLERANCE	<b>X</b> CAPACITANCE	<b>030</b> DC VOLTAGE RATING AT +85 °C	<b>A5</b> CASE CODE
	This is expressed in picofarads. The first two digits are significant figures. The third is the number of zeros.	X0 = ± 20 % X9 = ± 10 %	This is expressed in volts. To complete the three digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 V).	See dimensional configurations

DIMENSIONS		CASE CODE	H CASE HEIGHT
<p><b>SERIES "A" CASE</b></p>	<p><b>SERIES "B" CASE</b></p>	A1	1.062 [26.97]
		A2	1.375 [34.93]
		A3	1.625 [41.28]
		A4	2.000 [50.60]
		A5	2.500 [63.50]
		B1	1.500 [38.10]
		B2	1.875 [47.63]
		B3	2.250 [57.15]
B4	2.625 [66.68]		
B5	3.000 [76.20]		
B6	3.375 [85.73]		
B7	3.750 [95.25]		



RATINGS AND CASE CODES							
µF	10 V	30 V	50 V	75 V	100 V	125 V	150 V
70							A2
120				A2			
200				A4			
220				A5			
380						A5	
400				A3			
480				A4			
540					A5		
550							B3
660				A5			
700			A4				
880				B2			
1000			A5				
1100				B3		B5	
1200		A2			B3		
1300		A4					
1400						B7	
1600					B7		
1800		A5 / B1					
3300			B5				
4000				B7			
4500	B1						
5200			B6				
5900			B7				
7500	B3						
10 000	B5						
14 000	B7						



STANDARD RATINGS							
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAXIMUM ESR AT +25 °C ( $\Omega$ )	MAXIMUM IMPEDANCE AT -55 °C ( $\Omega$ )	DCL AT +25 °C ( $\mu$ A)	DCL AT +85 °C / +125 °C ( $\mu$ A)	MAXIMUM RMS RIPPLE 40 kHz (A)
<b>10 V<sub>DC</sub> AT +85 °C; 6.7 V<sub>DC</sub> AT +125 °C</b>							
4500	B1	211D458X0010B1	0.150	3.8	24	96	11
7500	B3	211D758X0010B3	0.090	2.3	40	160	19
10 000	B5	211D109X0010B5	0.063	1.64	56	224	26
14 000	B7	211D149X0010B7	0.049	1.28	72	288	34
<b>30 V<sub>DC</sub> AT +85 °C; 20 V<sub>DC</sub> AT +125 °C</b>							
1200	A2	211D128X0030A2	0.31	3.9	21	63	7.8
1300	A4	211D138X0030A4	0.42	6.0	18	96	5.8
1800	A5	211D188X0030A5	0.45	6.3	32	128	4.8
1800	B1	211D188X0030B1	0.23	4.2	48	192	9.4
<b>50 V<sub>DC</sub> AT +85 °C; 35 V<sub>DC</sub> AT +125 °C</b>							
700	A4	211D707X0050A4	0.23	8.2	24	144	5.8
1000	A5	211D108X0050A5	0.51	7.3	27	108	4.6
3300	B5	211D338X0050B5	0.150	2.2	90	360	15
5200	B6	211D528X0050B6	0.096	1.38	144	576	24
5900	B7	211D598X0050B7	0.085	1.22	162	648	27
<b>75 V<sub>DC</sub> AT +85 °C; 50 V<sub>DC</sub> AT +125 °C</b>							
120	A2	211D127X0075A2	0.99	20	6	36	3.0
200	A4	211D207X0075A4	0.67	15.0	6	60	2.4
220	A5	211D227X0075A5	0.49	10.0	12	72	6.0
400	A3	211D407X0075A3	0.50	13.0	20	120	4.0
480	A4	211D487X0075A4	0.41	10.5	24	144	4.8
660	A5	211D667X0075A5	0.60	8.0	30	120	4.3
880	B2	211D887X0075B2	0.180	3.6	72	288	12
1100	B3	211D118X0075B3	0.150	2.9	90	360	15
4000	B7	211D408X0075B7	0.100	1.33	180	720	26
<b>100 V<sub>DC</sub> AT +85 °C; 70 V<sub>DC</sub> AT +125 °C</b>							
540	A5	211D547X0100A5	0.25	5.7	70	336	15
1200	B3	211D128X0100B3	0.28	3.0	120	480	16
1600	B7	211D168X0100B7	0.085	1.66	162	648	26
<b>125 V<sub>DC</sub> AT +85 °C; 80 V<sub>DC</sub> AT +125 °C</b>							
380	A5	211D387X0125A5	0.25	6.4	70	336	13
1100	B5	211D118X0125B5	0.20	2.3	168	672	21
1400	B7	211D148X0125B7	0.160	1.78	216	864	27
<b>150 V<sub>DC</sub> AT +85 °C; 100 V<sub>DC</sub> AT +125 °C</b>							
70	A2	211D706X0150A2	1.90	45	4	40	2.9
550	B3	211D118X0150B3	0.32	4.8	50	200	7

**Note**

- Other ratings are available. Contact factory with your specific requirements



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