ATC 200 A Series
BX Ceramic
Multilayer Capacitors

- Case A Size (.055” x .055”)
- Capacitance Range 510 pF to 0.01 µF
- Low ESR/ESL
- Mid-K
- Rugged Construction
- High Reliability
- Extended WVDC Available

ATC, the industry leader, offers new improved ESR/ESL performance for the 200 A Series Capacitors. This Series exhibits high volumetric efficiency with superior IR characteristics. Ceramic construction provides a rugged, hermetic package.

Typical functional applications: Bypass, Coupling and DC Blocking.

Typical circuit applications: Switching Power Supplies and High Power Broadband Coupling.

ENVIRONMENTAL TESTS

ATC 200 A Series Capacitors are designed and manufactured to meet and exceed the requirements of EIA-198, MIL-PRF-55681 and MIL-PRF-123.

THERMAL SHOCK:
MIL-STD-202, Method 107, Condition A.

MOISTURE RESISTANCE:

LOW VOLTAGE HUMIDITY:
MIL-STD-202, Method 103, Condition A, with 1.5 Volts DC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours min.

LIFE TEST:

ELECTRICAL AND MECHANICAL SPECIFICATIONS

DISSIPATION FACTOR (DF): 2.5% max. @ 1 KHz

TEMPERATURE COEFFICIENT OF CAPACITANCE (TCC):
±15% maximum (-55°C to +125°C)

INSULATION RESISTANCE (IR):
510 pF to 0.01 M Fd:
10⁴ Megohms min. @ +25°C at rated WVDC.
10³ Megohms min. @ +125°C at rated WVDC.

WORKING VOLTAGE (WVDC):
See Capacitance Values Table, page 2.

DIELECTRIC WITHSTANDING VOLTAGE (DWV):
Case A: 250% of rated WVDC for 5 secs. (125 VDC)

AGING EFFECTS: 3% maximum per decade hour.

PIEZOELECTRIC EFFECTS: Negligible

DIELECTRIC ABSORPTION: 2% typical

OPERATING TEMPERATURE RANGE:
From -55°C to +125°C (No derating of working voltage).

TERMINATION STYLES: Available in various surface mount styles. See Mechanical Configurations, page 3.

TERMINAL STRENGTH: Terminations for chips and pellets withstand a pull of 5 lbs. min., 10 lbs. typical, for 5 seconds in direction perpendicular to the termination surface of the capacitor. Test per MIL-STD-202, method 211.

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THE ENGINEERS’ CHOICE™

THE ENGINES' CHOICE®
ISO 9001 REGISTERED COMPANY

ATC # 801-811 Rev. N, 11/15
**ATC 200 A Capacitance Values**

<table>
<thead>
<tr>
<th>CAP. CODE</th>
<th>CAP. (pF)</th>
<th>TOL.</th>
<th>RATED WVDC</th>
<th>CAP. CODE</th>
<th>CAP. (pF)</th>
<th>TOL.</th>
<th>RATED WVDC</th>
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<td>751</td>
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<tr>
<td>821</td>
<td>820</td>
<td>K, M, N</td>
<td>50</td>
<td>100</td>
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<td>182</td>
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<td></td>
<td>103</td>
<td>10,000</td>
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VRMS = 0.707 x WVDC

Special values, tolerances and matching are available. Consult factory.

*Extended WVDC offering meets X7R characteristics

**CAPACITANCE TOLERANCE**

<table>
<thead>
<tr>
<th>Code</th>
<th>K</th>
<th>M</th>
<th>N</th>
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</thead>
<tbody>
<tr>
<td>Tol.</td>
<td>±10%</td>
<td>±20%</td>
<td>±30%</td>
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</table>

**ATC PART NUMBER CODE**

- **Series**
- **Case Size**
- **Capacitance Code:** First 2 significant digits for capacitance.
- **Indicates number of zeros following digits of capacitance in picofarads except for decimal values.**
- **Capacitance Tolerance**
- **Termination Code**

The above part number refers to a 200 A Series (case size A) 5600 pF capacitor, M tolerance (±20%), 50 WVDC, with W termination (Tin/Lead, Solder Plated over Nickel Barrier), Laser Marking and ATC Cap-Pac® packaging.

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ATC accepts orders for our parts using designations **with** or **without** the “ATC” prefix. Both methods of defining the part number are equivalent, i.e., part numbers referenced with the “ATC” prefix are interchangeable to parts referenced without the “ATC” prefix. Customers are free to use either in specifying or procuring parts from American Technical Ceramics.

For additional information and catalogs contact your ATC representative or call direct at (+1-631) 622-4700.

Consult factory for additional performance data.
## ATC 200 A Capacitors: Mechanical Configurations

<table>
<thead>
<tr>
<th>ATC SERIES &amp; CASE SIZE</th>
<th>ATC TERM. CODE</th>
<th>CASE SIZE &amp; TYPE</th>
<th>OUTLINES</th>
<th>BODY DIMENSIONS INCHES (mm)</th>
<th>LEAD AND TERMINATION DIMENSIONS AND MATERIALS</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W/T IS A TERMINATION SURFACE</td>
<td>LENGTH (L)</td>
<td>WIDTH (W)</td>
</tr>
<tr>
<td>200A</td>
<td>W</td>
<td>A Solder Plate</td>
<td><img src="image" alt="Diagram" /></td>
<td>.055 ±.015 (1.40 ±.38)</td>
<td>.057 (1.45) max.</td>
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<tr>
<td>200A</td>
<td>P</td>
<td>A Pellet</td>
<td><img src="image" alt="Diagram" /></td>
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<td>A Solderable Nickel Barrier</td>
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<td>200A</td>
<td>CA</td>
<td>A Gold Chip</td>
<td><img src="image" alt="Diagram" /></td>
<td>.055 ±.015 (1.40 ±.38)</td>
<td>.057 (1.45) max.</td>
</tr>
</tbody>
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**Contact Information**

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ATC 200 A Capacitors: Non-Magnetic Mechanical Configurations

<table>
<thead>
<tr>
<th>ATC SERIES &amp; CASE SIZE</th>
<th>ATC TERM. CODE</th>
<th>CASE SIZE &amp; TYPE</th>
<th>OUTLINES</th>
<th>BODY DIMENSIONS INCHES (mm)</th>
<th>LEAD AND TERMINATION DIMENSIONS AND MATERIALS</th>
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<tr>
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<td>W/T IS A TERMINATION SURFACE</td>
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<td>WIDTH (W)</td>
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<td>A</td>
<td>Non-Mag Solder Plate</td>
<td>.055 +.025 - .010 (1.40 +0.64 -0.25)</td>
<td>.055 ±.015 (1.40 ±0.38)</td>
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<td>PN</td>
<td>A</td>
<td>Non-Mag Pellet</td>
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<tr>
<td>200A</td>
<td>TN</td>
<td>A</td>
<td>Non-Mag Solderable Barrier</td>
<td>.055 +.025 - .010 (1.40 +0.64 -0.25)</td>
<td>.055 ±.015 (1.40 ±0.38)</td>
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Suggested Mounting Pad Dimensions

Case A

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<tr>
<td>High Density</td>
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<tr>
<td>Normal</td>
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<tr>
<td>High Density</td>
<td>.060</td>
<td>.030</td>
<td>.030</td>
<td>.090</td>
</tr>
</tbody>
</table>

Dimensions are in inches.
The current rating is based on a 65°C mounting surface and a device thermal resistance (θja) of 20°C/W. A power dissipation of 3W will result in a case temperature of 125°C.
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