

ATC 200 A Series BX Ceramic Multilayer Capacitors

- Case A Size
(.055" x .055")
- Low ESR/ESL
- Rugged
Construction
- Capacitance Range
510 pF to 0.01 μ F
- Mid-K
- High Reliability

ATC, the industry leader, is announcing new improved ESR/ESL performance for the 200 A Series Capacitors. This Series exhibits high volumetric efficiency with superior IR characteristics.

Self-encapsulating ceramic construction provides a rugged, hermetic package without the need or liability of external encapsulants.

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:

MIL-STD-202, Method 106.

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:

MIL-STD-202, Method 108, for 2000 hours, at 125°C. 200% WVDC applied.



ELECTRICAL AND MECHANICAL SPECIFICATIONS

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

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

INSULATION RESISTANCE (IR):

510 pF to 0.01 MFd:

10^4 Megohms min. @ +25°C at rated WVDC.

10^3 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

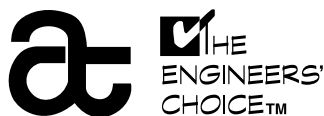
OPERATING TEMPERATURE RANGE:

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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ATC 200 A Capacitance Values

CAP. CODE	CAP. (pF)	TOL.	RATED WVDC	CAP. CODE	CAP. (pF)	TOL.	RATED WVDC
511	510	K, M, N	50	202	2000	K, M, N	50
561	560			222	2200		
621	620			272	2700		
681	680			332	3300		
751	750			392	3900		
821	820			472	4700		
911	910			502	5000		
102	1000			562	5600		
122	1200			682	6800		
152	1500			822	8200		
182	1800			103	10,000		

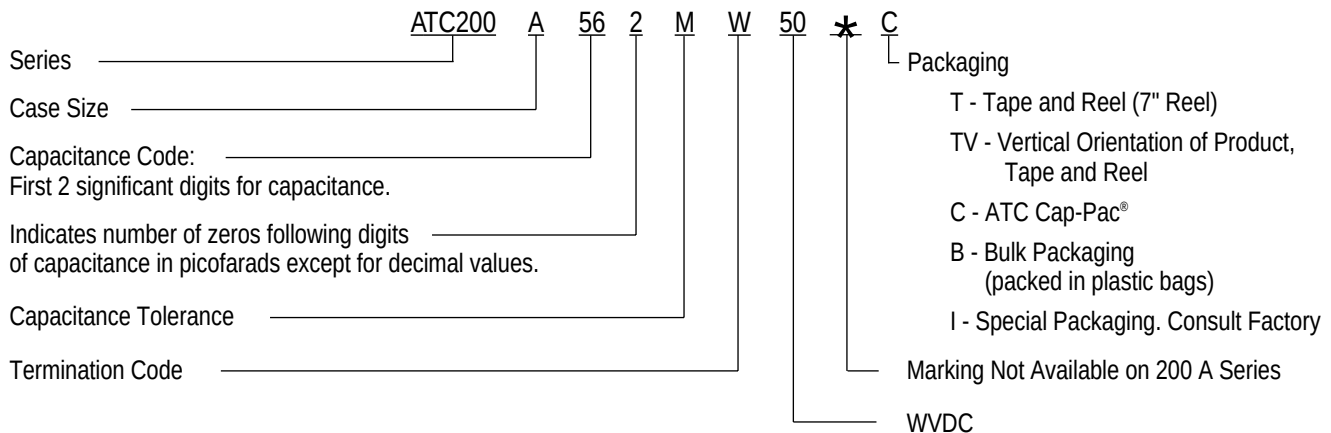
$$VRMS = 0.707 \times WVDC$$

SPECIAL VALUES, TOLERANCES, HIGHER WVDC AND MATCHING AVAILABLE. PLEASE CONSULT FACTORY.

CAPACITANCE TOLERANCE

Code	K	M	N
Tol.	±10%	±20%	±30%

ATC PART NUMBER 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 (solder plate) and ATC Cap-Pac® packaging.

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 (631) 622-4700.

Consult factory for additional performance data.

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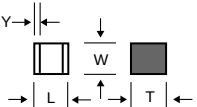
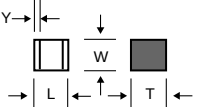
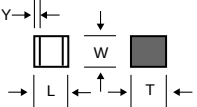
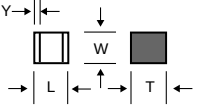
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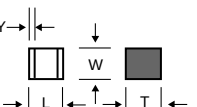
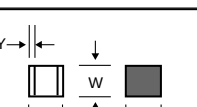
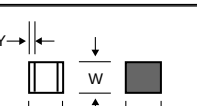
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ATC 200 A Capacitors: Mechanical Configurations

ATC SERIES & CASE SIZE	ATC TERM. CODE	CASE SIZE & TYPE	OUTLINES W/T IS A TERMINATION SURFACE	BODY DIMENSIONS Inches (mm)			LEAD AND TERMINATION DIMENSIONS AND MATERIALS	
				LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)	MATERIALS
200A	*W	A  Solder Plate		.055 +.015 -.010 (1.4 +0.38 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	SOLDER PLATE Nickel barrier, solder plated. Rugged, high performance termination for lower cost, high volume, tape & reel applications.
200A	P	A  Pellet		.055 +.025 -.010 (1.4 +0.64 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	BARRIER/CAP® Nickel barrier, solder plated with the addition of hot solder dip process. Solder melting temperature is 355°F, 179°C.
200A	CA	A  Gold Chip		.055 +.015 -.010 (1.4 +0.38 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	UNI-TERM® NICKEL BARRIER, GOLD PLATED TERMINATIONS
200A	C	A  Chip		.055 +.015 -.010 (1.4 +0.38 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	CHIP PALLADIUM SILVER TERMINATIONS

* Replaces C Termination

ATC 200 A Capacitors: Non-Magnetic Mechanical Configurations

ATC SERIES & CASE SIZE	ATC TERM. CODE	CASE SIZE & TYPE	OUTLINES W/T IS A TERMINATION SURFACE	BODY DIMENSIONS Inches (mm)			LEAD AND TERMINATION DIMENSIONS AND MATERIALS	
				LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)	MATERIALS
200A	*WN	A  Non-Mag Solder Plate		.055 +.035 -.010 (1.4 +0.89 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max. .057 (1.45) max.	.010 +.010 -.005 (0.25 +0.25 -.13)	NON-MAGNETIC Copper barrier, solder plated. Rugged, high performance termination for lower cost, high volume, tape & reel applications.
200A	PN	A  Non-Mag Pellet		.055 +.035 -.010 (1.4 +0.89 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	NON-MAGNETIC Copper barrier, solder plated with the addition of hot solder dip process. Solder melting temperature is 355°F, 179°C.
200A	CN	A  Non-Mag Chip		.055 +.025 -.010 (1.4 +0.64 -.25)	.055 ±.015 (1.4 ±0.38)	.057 (1.45) max.	0.010 +.010 -.005 (0.25 +0.25 -.13)	NON-MAGNETIC PALLADIUM SILVER TERMINATIONS

Tape and Reel packaging is available.

* Replaces CN Termination

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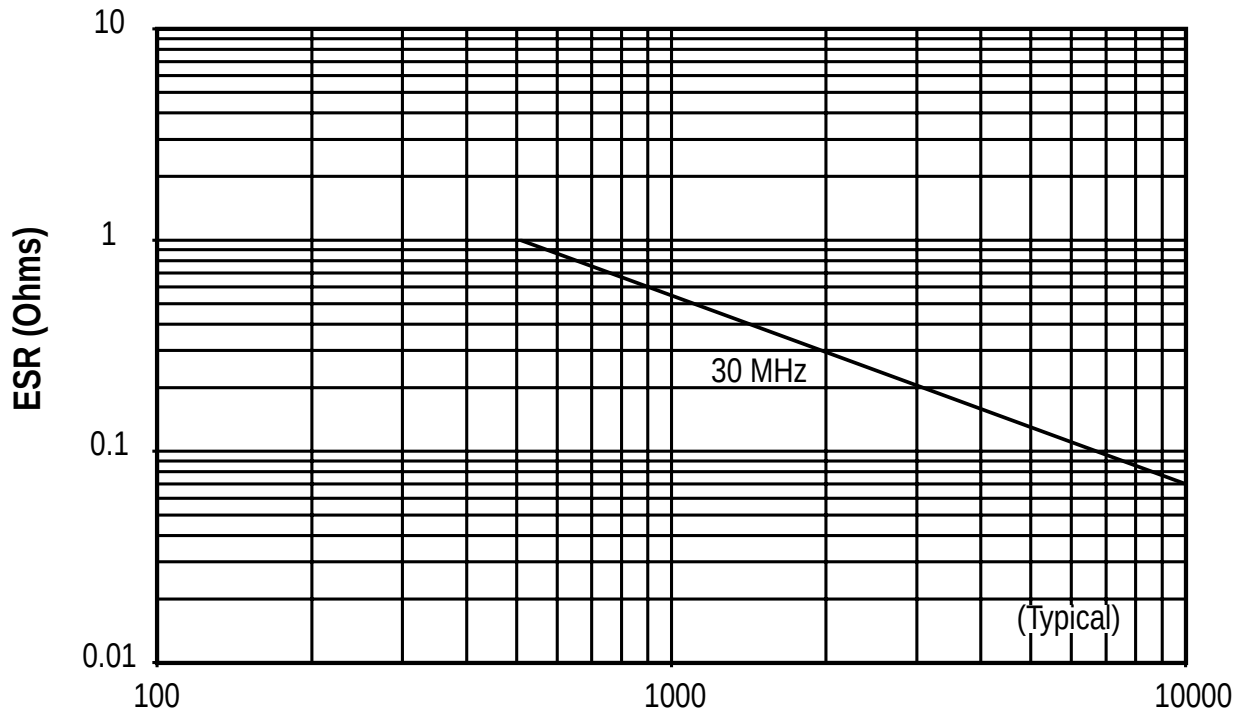
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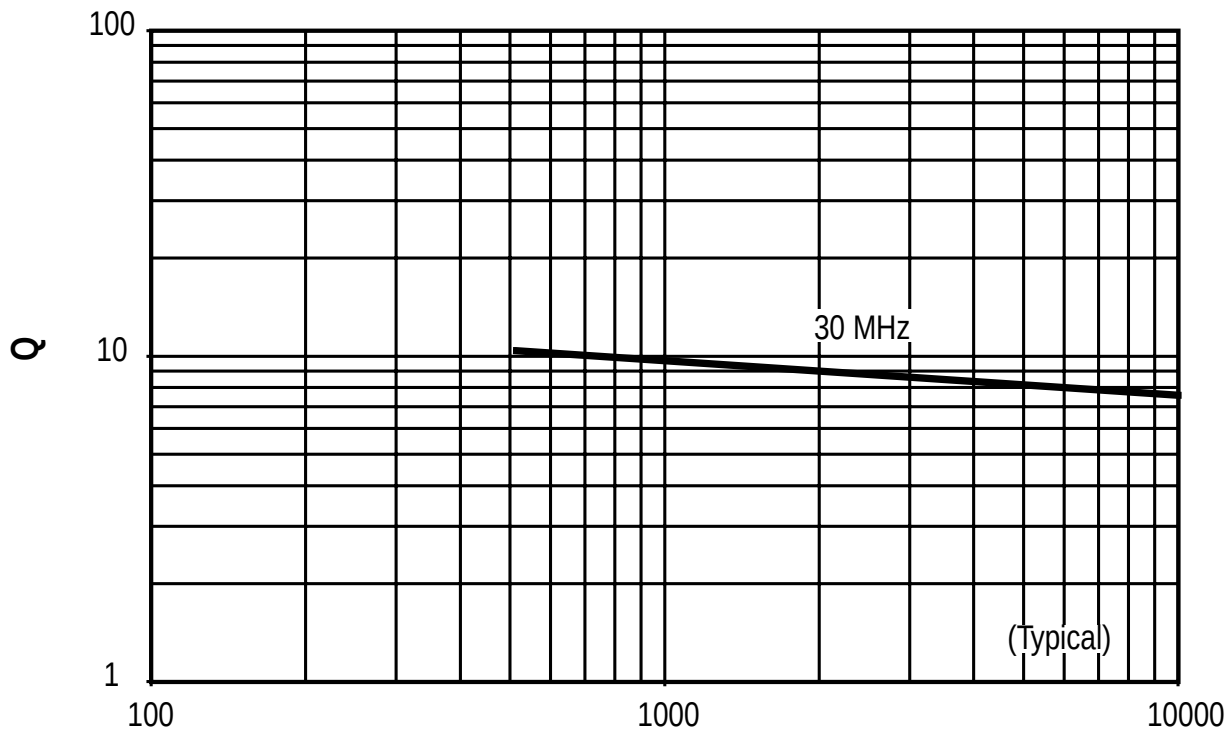
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ATC 200 A Performance Data

ESR VS CAPACITANCE ATC SERIES 200, CASE A



Q VS CAPACITANCE ATC SERIES 200, CASE A



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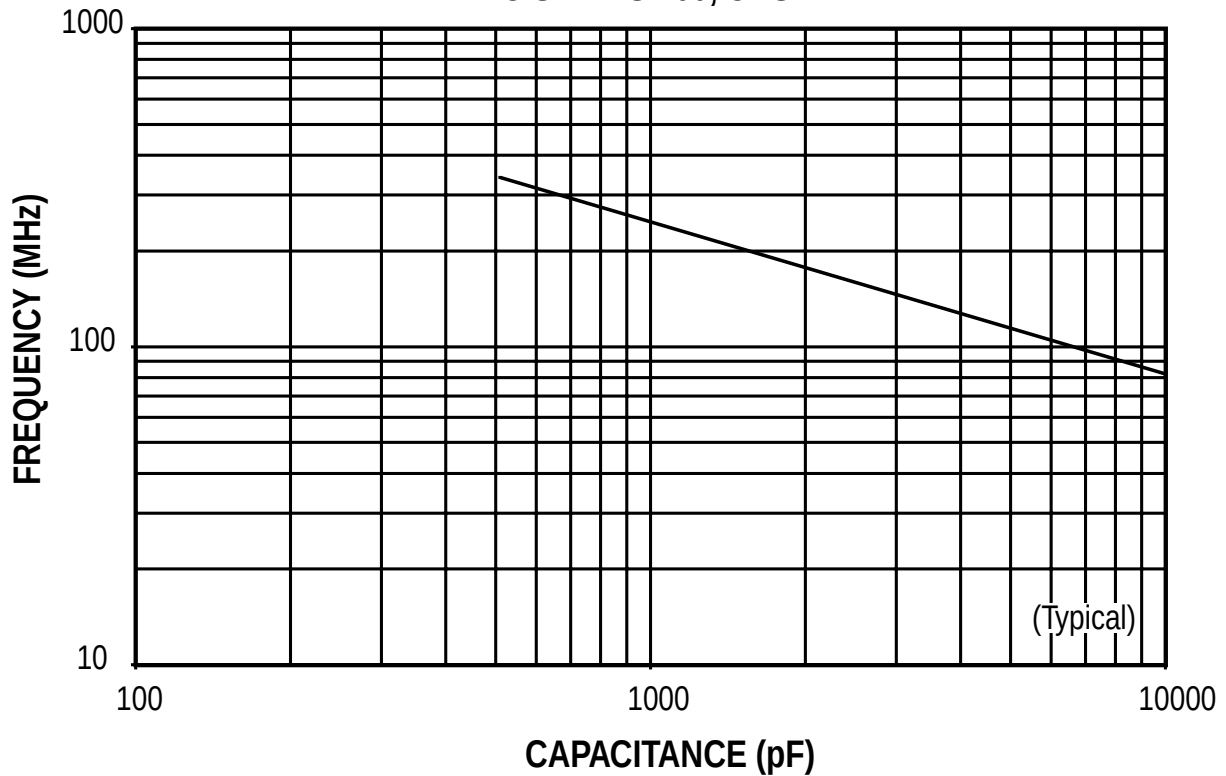
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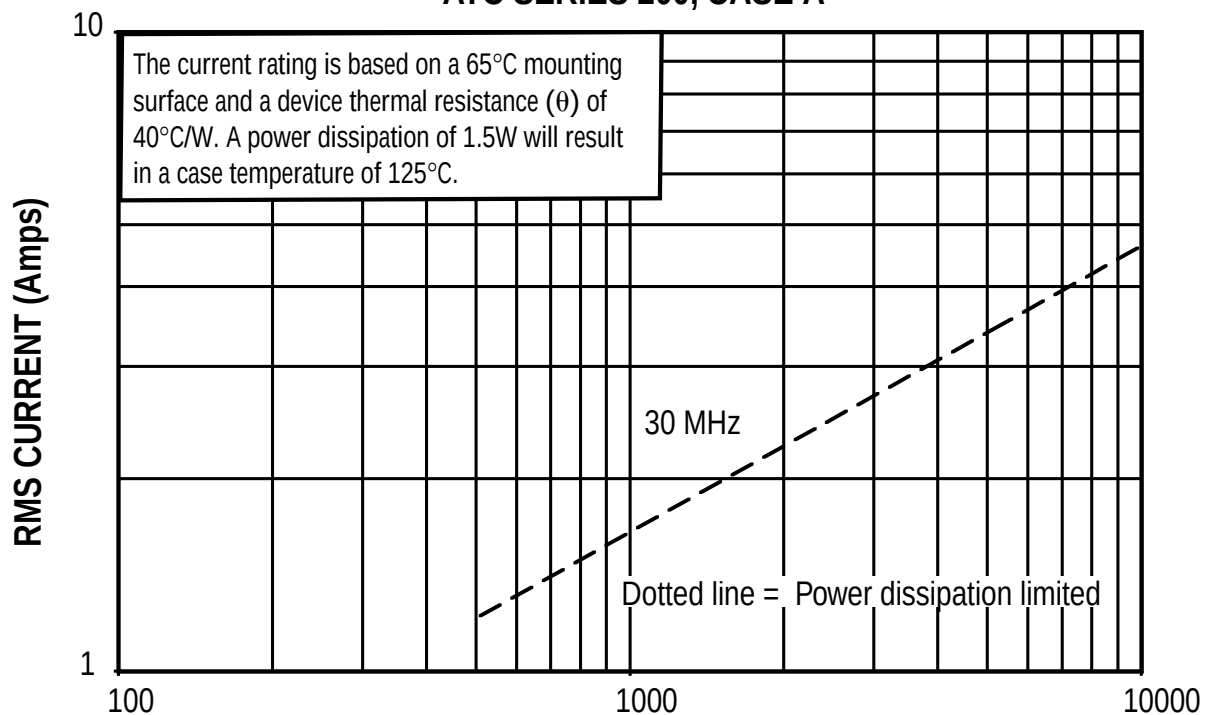
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ATC 200 A Performance Data

SERIES RESONANCE VS CAPACITANCE ATC SERIES 200, CASE A



CURRENT RATING VS CAPACITANCE ATC SERIES 200, CASE A



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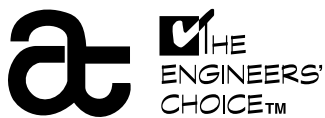
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