

ATC 200 A Series BX Ceramic Multilayer Capacitors

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

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:

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 # 001-811 Rev. N, 11/15

ATC 200 A Capacitance Values

CAP. CODE	CAP. (pF)	TOL.	RATED WVDC		CAP. CODE	CAP. (pF)	TOL.	RATED WVDC	
			STD.	EXT.*				STD.	EXT.*
511	510	K, M, N	50	100	202	2000	K, M, N	50	100
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			

$VRMS = 0.707 \times WVDC$

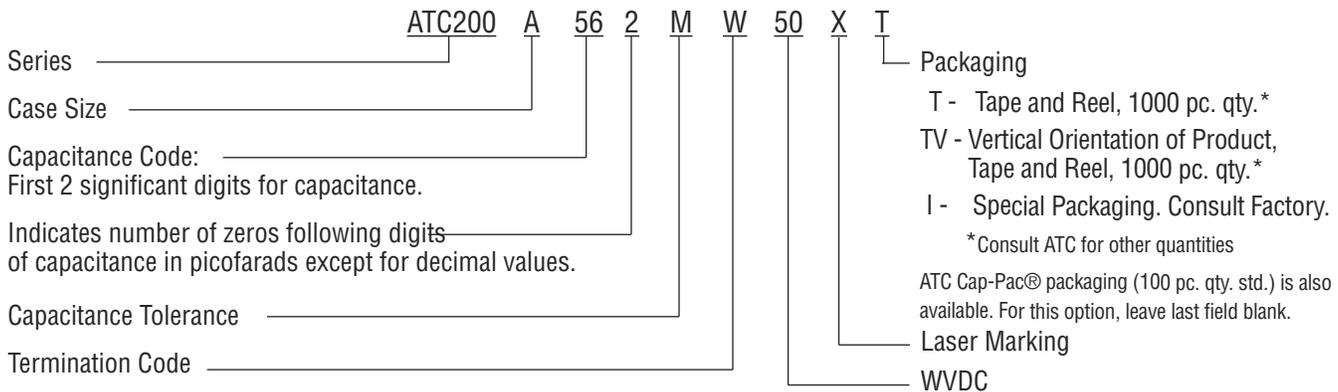
Special values, tolerances and matching are available. Consult factory.

*Extended WVDC offering meets X7R characteristics

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 (Tin/Lead, Solder Plated over Nickel Barrier), Laser Marking 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 (+1-631) 622-4700.

Consult factory for additional performance data.

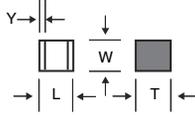
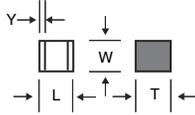
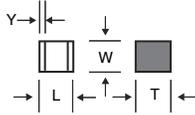
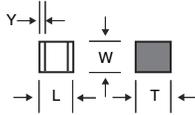
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ATC 200 A Capacitors: Mechanical Configurations

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 (1.40 +0.38 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	Tin/Lead, Solder Plated over Nickel Barrier Termination
200A	P	A  Pellet		.055 +.025 -.010 (1.40 +0.64 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	Heavy Tin/Lead Coated, over Nickel Barrier Termination
200A	T	A  Solderable Nickel Barrier		.055 +.015 -.010 (1.40 +0.38 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	RoHS Compliant Tin Plated over Nickel Barrier Termination
200A	CA	A  Gold Chip		.055 +.015 -.010 (1.40 +0.38 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	RoHS Compliant Gold Plated over Nickel Barrier Termination

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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 +.025 -.010 (1.40 +0.64 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	.010 +.010 - .005 (0.25 +0.25 - 0.13)	Tin/Lead, Solder Plated over Non-Magnetic Barrier Termination
200A	PN	A Non-Mag Pellet		.055 +.035 -.010 (1.40 +0.89 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	Heavy Tin/Lead Coated, over Non-Magnetic Barrier Termination
200A	TN	A Non-Mag Solderable Barrier		.055 +.025 -.010 (1.40 +0.64 -0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	0.010 +.010 - .005 (0.25 +0.25 - 0.13)	RoHS Compliant Tin Plated over Non-Magnetic Barrier Termination

Suggested Mounting Pad Dimensions

Horizontal Electrode Orientation

Vertical Electrode Orientation

Case A

	Pad Size	A Min.	B Min.	C Min.	D Min.
Vertical Mount	Normal	.070	.050	.030	.130
	High Density	.050	.030	.030	.090
Horizontal Mount	Normal	.080	.050	.030	.130
	High Density	.060	.030	.030	.090

Dimensions are in inches.

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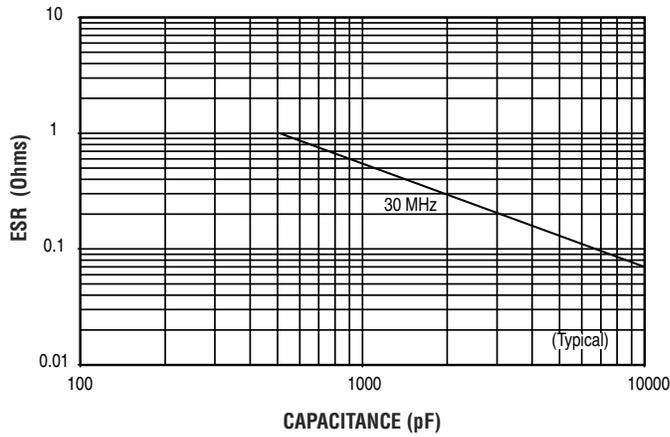
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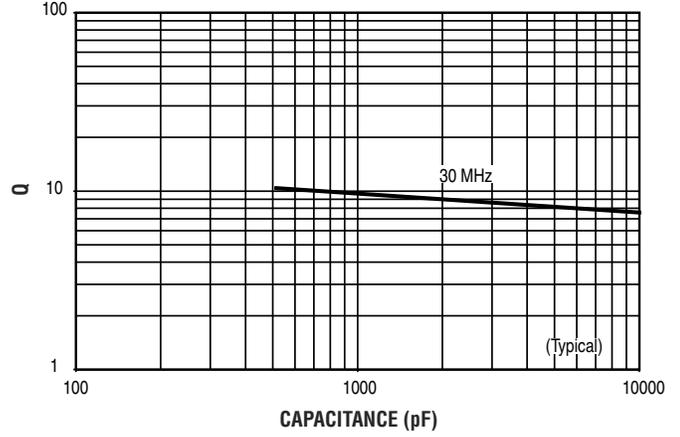
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ATC 200 A Performance Data

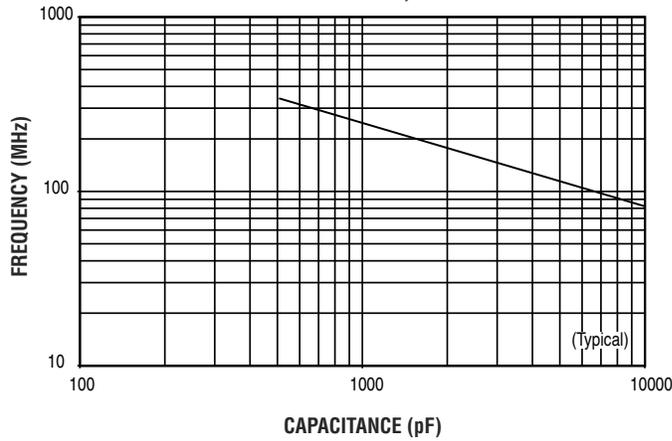
**ESR VS. CAPACITANCE
ATC SERIES 200, CASE A**



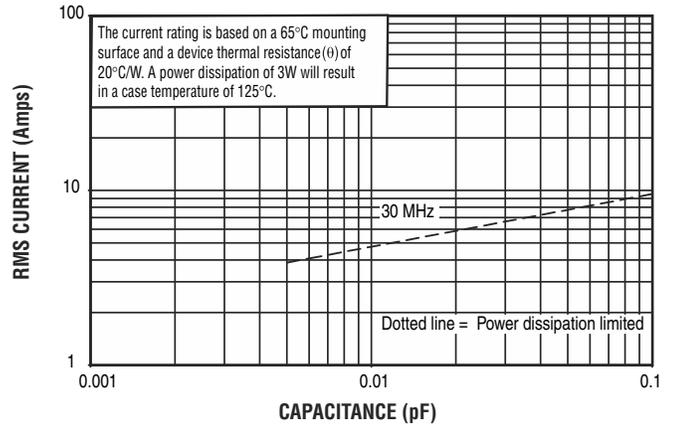
**Q VS. CAPACITANCE
ATC SERIES 200, CASE A**



**SERIES RESONANCE VS. CAPACITANCE
ATC SERIES 200, CASE A**



**CURRENT RATING VS. CAPACITANCE
ATC SERIES 200, CASE A**



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