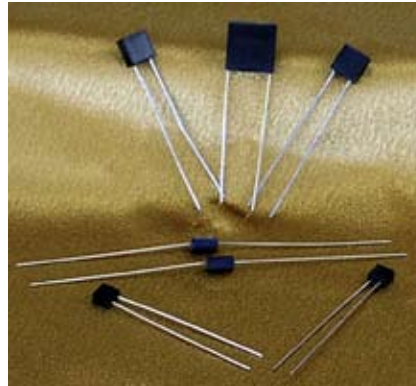


## Features

- Capacitance Range: 1000pF to 2.2μF
- Operating Temperature: -55°C to +200°C
- Rated Voltage: 100V and 200V
- Conformal Coated
- Unique High Temperature 300°C Polymer Case



The HXT Series is designed using a high insulation resistance, high dielectric constant barium titanate for high capacitance per unit volume. These high temperature capacitors are capable of continuous operating at 200°C. The dissipation factor of these capacitors improve five-fold at elevated temperature when compared to the dielectric loss at 25°C. The HXT comes standard with a 100Vdc and 200Vdc voltage rating. Higher voltage ratings are available upon request. See AFM's VXT line of 200°C rated 1kV to 4kV capacitors.

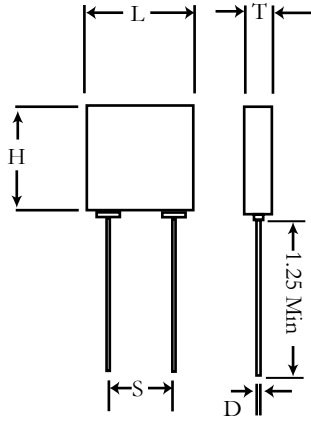
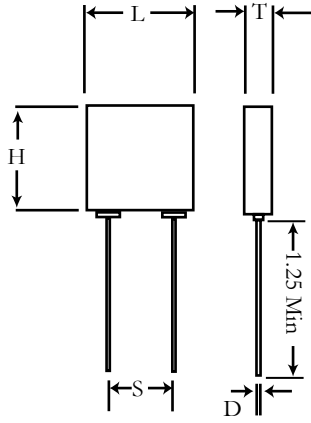
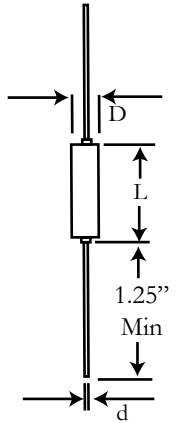
## Applications

Typical Functional Applications: Bypass, Coupling, Tuning, Feedback, Impedance Matching and DC Blocking. Devices such as RF oscillators and precision timing circuits requiring a predictable temperature coefficient are examples of devices utilizing these capacitors.

## AFM Part Number Code

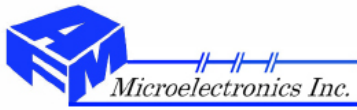
<b>H</b>	<b>X</b>	<b>T</b>	<b>22</b>	<b>D</b>	<b>101</b>	<b>J</b>	<b>D</b>	<b>C</b>	<b>M</b>	<b>B</b>
Product Series: H: High Temp	Product Type: T: 200°C	Termination Code: D: Cu/Ni/Tin Plate K: Nickel Wire S: CCS - Sn/Pb Plate F: CCS - High Temp Solder Dip H: S Lead - High Temp Solder Dip	Style: (See Tables)	Capacitance Code: 1st two digits are significant: Third digit denotes number of zero(s); R=Decimal point 2R0=2.0pF 101=100pF	Tolerance: J: ±5% K: ±10% M: ±20%	Voltage: D: 100V F: 200V	Test Code: C: Commercial Test S: Special (Customer Defined) M: Hi-Rel	Marking: M: Marked (Cap code and tolerance) S: Special Marking	Packaging: B: Bulk W: Waffle Pack	

## X7R Dielectric Capacitance Ranges and Size Information

	Style	Capacitance Ranges				Sizes (Max) Inches (mm)				Lead Spacing ±0.30 (S)	
		100 Vdc		200 Vdc		Width (W)	Height (H)	Thickness (T)	Diameter (D)		
		Min	Max	Min	Max						
Radial Leaded X7R Capacitors	12	1000pF	.027µF	1000pF	.018µF	.200 (5.08)	.200 (5.08)	.100 (2.54)	.025 (.635) ±.002 (.051)	.200 (5.08)	
	22	1000pF	.033µF	1000pF	.120µF	.300 (7.62)	.300 (7.62)	.100 (2.54)	.025 (.635) ±.002 (.051)	.200 (5.08)	
	25	.010µF	.047µF	.010µF	.150µF	.300 (7.62)	.300 (7.62)	.150 (3.81)	.025 (.635) ±.002 (.051)	.200 (5.08)	
	38	.010µF	1.5µF	.010µF	.500µF	.500 (12.70)	.500 (12.70)	.250 (6.35)	.025 (.635) ±.002 (.051)	.400 (10.16)	
	45	.100µF	2.2µF	.100µF	1.0µF	.675 (17.15)	.500 (12.70)	.250 (6.35)	.025 (.635) ±.002 (.051)	.400 (10.16)	
Axial Leaded X7R Capacitors					Diameter (D)	Length (L)		Lead Diameter (d)			
	10	1000pF	.022µF	1000pF	.018µF	.100 (2.54)	.170 (4.32)		.025 (.635) ±.002 (.051)		
	17	1000pF	.100µF	1000pF	.027µF	.135 (3.43)	.260 (6.60)		.025 (.635) ±.002 (.051)		
	30	.010µF	.180µF	.015µF	.056µF	.155 (3.94)	.400 (10.16)		.025 (.635) ±.002 (.051)		
	40	.010µF	.560µF	.027µF	.390µF	.200 (5.08)	.500 (12.70)		.025 (.635) ±.002 (.051)		
	49	.100µF	1.0µF	.100µF	.680µF	.375 (9.52)	.750 (19.05)		.025 (.635) ±.002 (.051)		

## Testing and Burn In

100% of AFM's high temperature capacitors undergo standard commercial testing. High reliability testing, customer SCD test protocols, and optional extended tests are also available. For more information see testing pages at the end of the catalog. AFM has the test facilities to perform electrical characterization measurements and burn in up to 300°C.



# HXT

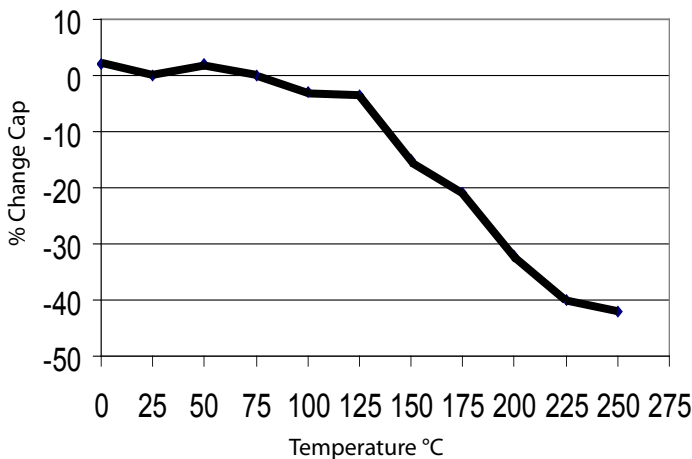
High Temperature 200°C "T" Series  
Axial and Radial Leaded X7R Capacitors

## Specification and Performance

Dielectric Absorption:	<2.0% -55°C to 120°C None Exhibited Above 125°C (Paraelectric)
Temperature Range:	-55°C to +200°C
Temperature Coefficient of Capacitance:	+15% , -40%
Dissipation Factor:	1.2% at 25°C < 2.0% at 200°C
Insulation Resistance (IR, at Rated Voltage):	> 10 <sup>4</sup> MΩ at 25°C > 10 <sup>3</sup> MΩ at 200°C
Dielectric Withstand Voltage (DWV):	150% of Rated Voltage
Environmental and Mechanical:	Capable of Meeting MIL-PRF-39014 Requirements

## Performance Curve

Temperature Coefficient of Capacitance



Dissipation Factor vs. Temperature

