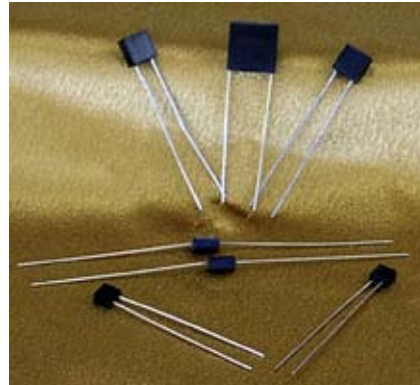


# HNT

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

## Features

- Capacitance Range: 1.0pF to .15μF
- Operating Temperature: -55°C to +200°C
- Rated Voltage: 100V and 200V
- Ultra-Stable Performance
- Unique Polymer (300°C) Case
- Conformal Coated Option

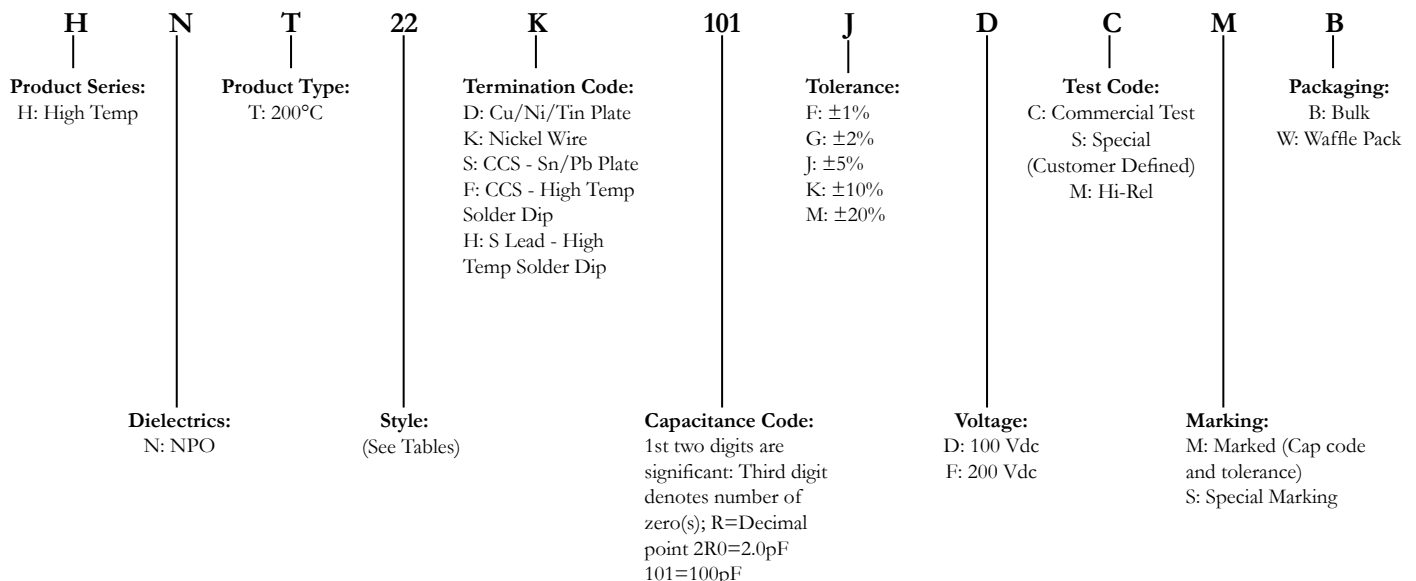


The HNT Series is designed using an ultra-stable, high insulation resistance, and low loss NPO (COG) dielectric system which exhibits little change in capacitance over the operating temperature range. These high temperature capacitors are capable of continuous operating at 200°C. Available in both axial and radial lead configurations, the HNT comes standard in 100Vdc and 200Vdc voltage ratings. Higher operating voltages, higher capacitance values and extended sizes are available upon request.

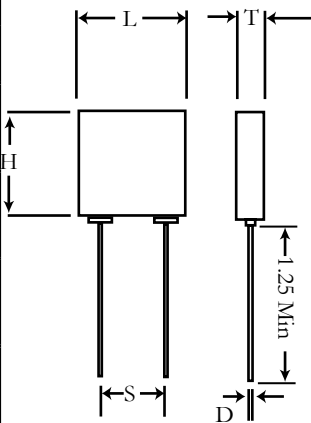
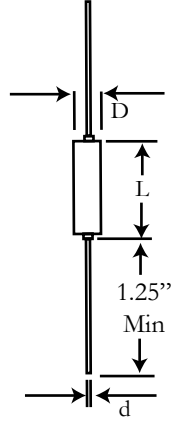
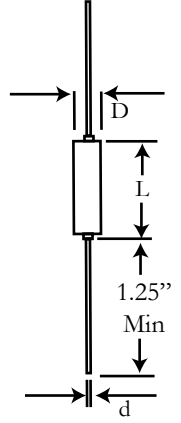
## Applications

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

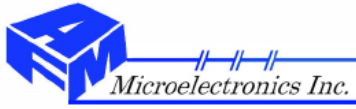


## NPO Dielectric Capacitance Ranges and Size Information

	Style	Capacitance Ranges				Sizes (Max) Inches (mm)				Lead Spacing $\pm 0.30$ (S)	
		100 Vdc		200 Vdc		Width (W)	Height (H)	Thickness (T)	Diameter (D)		
		Min	Max	Min	Max						
Radial Leaded NPO Capacitors	12	1.0pF	.010 $\mu$ F	1.0pF	8200pF	.200 (5.08)	.200 (5.08)	.100 (2.54)	.025 (.635) $\pm 0.002$ (.051)	.200 (5.08)	
	22	100pF	.033 $\mu$ F	470pF	.027 $\mu$ F	.300 (7.62)	.300 (7.62)	.100 (2.54)	.025 (.635) $\pm 0.002$ (.051)	.200 (5.08)	
	25	270pF	.047 $\mu$ F	560pF	.039 $\mu$ F	.300 (7.62)	.300 (7.62)	.150 (3.81)	.025 (.635) $\pm 0.002$ (.051)	.200 (5.08)	
	38	.010 $\mu$ F	.100 $\mu$ F	.010 $\mu$ F	.100 $\mu$ F	.500 (12.70)	.500 (12.70)	.250 (6.35)	.025 (.635) $\pm 0.002$ (.051)	.400 (10.16)	
	45	.010 $\mu$ F	.150 $\mu$ F	.010 $\mu$ F	.120 $\mu$ F	.675 (17.15)	.500 (12.70)	.250 (6.35)	.025 (.635) $\pm 0.002$ (.051)	.400 (10.16)	
Axial Leaded NPO Capacitors						Diameter (D)	Length (L)		Lead Diameter (d)		
	10	12pF	1000pF	10pF	820pF	.100 (2.54)	.170 (4.32)		.025 (.635) $\pm 0.002$ (.051)		
	17	16pF	.010 $\mu$ F	16pF	8200pF	.135 (3.43)	.260 (6.60)		.025 (.635) $\pm 0.002$ (.051)		
	30	1000pF	.033 $\mu$ F	1000pF	.027 $\mu$ F	.155 (3.94)	.400 (10.16)		.025 (.635) $\pm 0.002$ (.051)		
	40	.010 $\mu$ F	.047 $\mu$ F	.010 $\mu$ F	.039 $\mu$ F	.200 (5.08)	.500 (12.70)		.025 (.635) $\pm 0.002$ (.051)		
49	.010 $\mu$ F	.100 $\mu$ F	.010 $\mu$ F	.082 $\mu$ F	.375 (9.52)	.750 (19.05)		.025 (.635) $\pm 0.002$ (.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.



# HNT

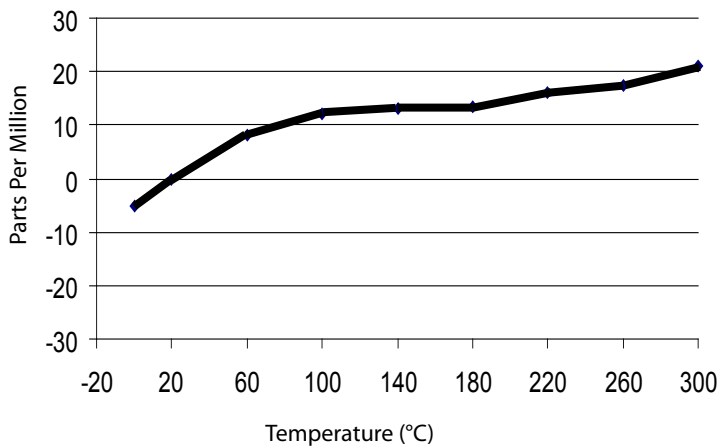
High Temperature 200°C "T" Series  
Axial and Radial Leaded NPO Capacitors

## Specification and Performance

Piezoelectric and Aging Effect:	None
Temperature Range:	-55°C to +200°C
Temperature Coefficient of Capacitance:	0±30ppm/°C
Dissipation Factor:	0.15% max at 200°C
Insulation Resistance (IR, at Rated Voltage):	>10 <sup>4</sup> MΩ at 200°C or 100MΩμF Whichever is Less
Dielectric Withstand Voltage (DWV):	150% of Rated Voltage
Capacitance Drift:	±0.02% or ±0.02pF

## Performance Curve

Capacitance vs. Temperature



Dissipation Factor

