

# 253P Series Wrap-and-Fill High Temperature PTFE Film capacitors



**Film Capacitor with PTFE Dielectric**  
**Industry-Leading Performance at Temperatures up to 200°C**

## FEATURES

- High temperature to +200°C
- Ultra-Stable Performance through Temperature/Voltage Range
- Rugged/Lightweight Construction
- Manufactured in U.S.

## APPLICATIONS

- Oil & Gas
- Aerospace & Defense
- High Temperature Modules

## PHYSICAL CHARACTERISTICS

**Construction:** Non-Inductive wound PTFE metallized Polymer film

**Case:** Flame retardant tape wrap and high temperature resin end fill

**Lead Material:** < 600 V  
 PTFE insulated silver stranded copper wire  
 > 600 V  
 MIL-W-16878/4 (Type E) wire

**Lead Strength:** Capable of withstanding a five pound pull force on lead axis

## ELECTRICAL SPECIFICATIONS

Electrical specifications	
Parameter	Value
Operating Temperature	-55°C to +200°C Without derating for DC operation
Capacitance Range	0.022 μF to 1.0 μF
Capacitance Tolerance	± 10%, ± 5%
Dissipation Factor	0.05% max When measured at 1 kHz @ 25°C
Insulation Resistance	
at +25°C	1,000,000 MΩ-μF, need not exceed 2,000,000 MΩ
at +85°C	200,000 MΩ-μF, need not exceed 400,000 MΩ
at +125°C	25,000 MΩ-μF, need not exceed 50,000 MΩ
at +200°C	2,000 MΩ-μF, need not exceed 4,000 MΩ

Custom configurations and extended/intermediary values available upon request.

## HOW TO ORDER

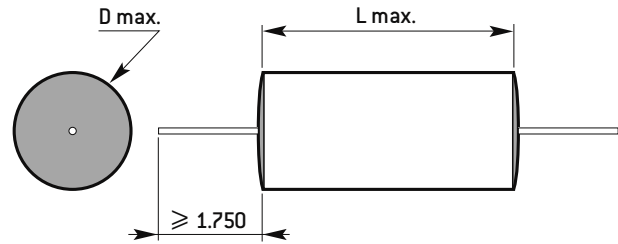
253P	105	X9	050
Series	Capacitance code	Tolerance code	Voltage rating
253P	105 = 1 μF	X9 = ± 10% X5 = ± 5%	050 = 50 V <sub>DC</sub>

Wrap-and-Fill High Temperature PTFE Film capacitors

# 253P Series

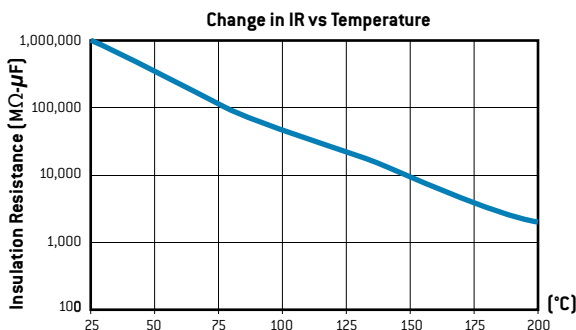
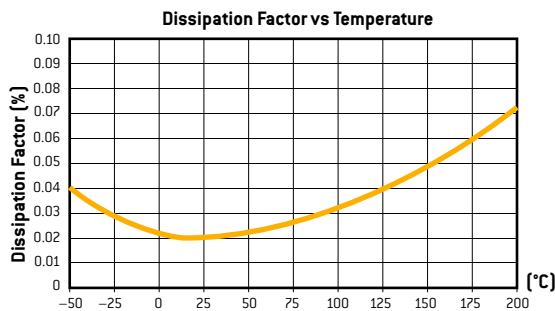
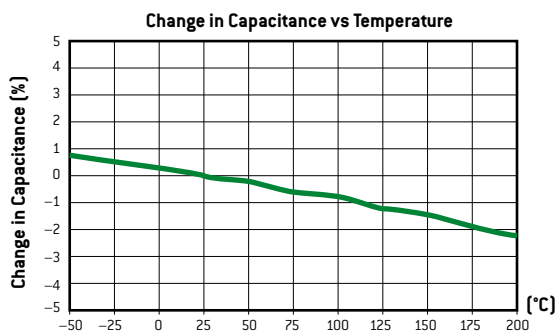
## OUTLINE DIMENSIONS in inches

Lead Wire Sizes	
Case Diameter	Lead AWG
0.301 to 0.500	No. 22
> 0.500	No. 20



\* Leads to be within ±0.062" at center line at egress, but not less than 0.031" from edge

## DIELECTRIC CHARACTERISTICS



## CONFIGURATION OUTLINE

Capacitance (μF)	Part Number	Dimensions in inches	
		D max.	L max.
<b>250 V<sub>DC</sub></b>			
0.1	253P104X*250	0.32	0.65
0.22	253P224X*250	0.36	0.75
0.33	253P334X*250	0.42	0.75
0.47	253P474X*250	0.38	1.10
0.68	253P684X*250	0.44	1.10
0.82	253P824X*250	0.48	1.10
1	253P105X*250	0.52	1.10
<b>400 V<sub>DC</sub></b>			
0.068	253P683X*400	0.35	0.65
0.082	253P823X*400	0.37	0.65
0.1	253P104X*400	0.34	0.75
0.22	253P224X*400	0.37	1.10
0.33	253P334X*400	0.43	1.10
0.47	253P474X*400	0.49	1.10
0.68	253P684X*400	0.57	1.10
0.82	253P824X*400	0.57	1.25
1	253P105X*400	0.63	1.25
<b>600 V<sub>DC</sub></b>			
0.033	253P333X*600	0.36	0.65
0.047	253P473X*600	0.35	0.75
0.068	253P683X*600	0.40	0.75
0.082	253P823X*600	0.43	0.75
0.1	253P104X*600	0.36	1.10
0.22	253P224X*600	0.49	1.10
0.33	253P334X*600	0.58	1.10
0.47	253P474X*600	0.63	1.25
0.68	253P684X*600	0.73	1.25
0.82	253P824X*600	0.65	1.75
1	253P105X*600	0.71	1.75
<b>800 V<sub>DC</sub></b>			
0.022	253P223X*800	0.34	0.75
0.033	253P333X*800	0.39	0.75
0.047	253P473X*800	0.34	1.10
0.068	253P683X*800	0.39	1.10
0.082	253P823X*800	0.42	1.10
0.1	253P104X*800	0.45	1.10
0.22	253P224X*800	0.58	1.25
0.33	253P334X*800	0.69	1.25
0.47	253P473X*800	0.66	1.75
0.68	253P683X*800	0.77	1.75
0.82	253P823X*800	0.83	1.75
1	253P105X*800	0.91	1.75

\* Input tolerance number to complete part number: **9** = ±10%, **5** = ±5%  
 Custom configurations and extended/intermediary values available upon request.