

CAPACITORS

There is wide variety among the capacitor types available. This is a quickie guide to point out their major advantages and disadvantages. Our judgments should be considered somewhat subjective:

Type	Capacitance range	Maximum voltage	Accuracy	Temperature stability	Leakage	Comments
Mica	1pF-0.01 μ F	100-600	Good		Good	Excellent; good at RF
Tubular ceramic	0.5pF-100pF	100-600		Selectable		Several tempcos (including zero)
Ceramic	10pF-1 μ F	50-30,000	Poor	Poor	Moderate	Small, inexpensive, very popular
Polyester (Mylar)	0.001 μ F-50 μ F	50-600	Good	Poor	Good	Inexpensive, good, popular
Polystyrene	10pF-2.7 μ F	100-600	Excellent	Good	Excellent	High quality, large; signal filters
Polycarbonate	100pF-30 μ F	50-800	Excellent	Excellent	Good	High quality, small
Polypropylene	100pF-50 μ F	100-800	Excellent	Good	Excellent	High quality, low dielectric absorption
Teflon	1000pF-2 μ F	50-200	Excellent	Best	Best	High quality, lowest dielectric absorption
Glass	10pF-1000pF	100-600	Good		Excellent	Long-term stability
Porcelain	100pF-0.1 μ F	50-400	Good	Good	Good	Good long-term stability
Tantalum	0.1 μ F-500 μ F	6-100	Poor	Poor		High capacitance; polarized, small; low inductance
Electrolytic	0.1 μ F-1.6F	3-600	Terrible	Ghastly	Awful	Power-supply filters; polarized; short life
Double layer	0.1F-10F	1.5-6	Poor	Poor	Good	Memory backup; high series resistance
Oil	0.1 μ F-20 μ F	200-10,000			Good	High-voltage filters; large, long life
Vacuum	1pF-5000pF	2000-36,000			Excellent	Transmitters