

AMERICAN CAPACITOR CORPORATION

DIELECTRIC SELECTION GUIDE

AMERICAN DIELECTRIC CODE	A	C	D	F/G	H	K	M	N	P	S	T	U	V	Z
Typical Characteristics of Capacitors	High Voltage Paper & Mylar	Combination Metallized Mylar & Polypropylene	Metallized Mylar	KF Polymer F = Foil G = Metallized	Metallized Polycarbonate	Kapton & Foil	Mylar & Foil	Metallized Polypropylene	Polypropylene & Foil	Polystyrene & Foil	Teflon & Foil	Metallized Teflon	Super Metallized Polypropylene	Super Metallized Polypropylene
Capacitance Range in MFD	.001-1.0	.001-50.0	.001-100.0	.10-100.0	.001-100.0	.001-10.0	.001-10.0	.001-100.0	.001-5.0	.001-10.0	.001-5.0	.001-10.0	.001-100.0	.10-50.0
Standard Tolerance Ranges	5% - 20%	1% - 20%	1% - 20%	10% - 20%	1% - 20%	5% - 20%	1% - 20%	1% - 20%	1% - 20%	1% - 20%	1% - 20%	1% - 20%	1% - 20%	1% - 20%
DC Voltages	1000V - 40,000V	100V - 600V	25V - 40,000V	200V - 1000V	25V - 4000V	100V - 600V	10V - 600V	100V - 4000V	50V - 1000V	50V - 1000V	25V - 1000V	25V - 1000V	200V - 2000V	50V - 1000V
AC Voltages	400VAC - 1200VAC	50VAC - 250VAC	10VAC - 2000VAC	N/A	10VAC - 2000VAC	50VAC - 1200VAC	10VAC - 600VAC	25VAC - 2000VAC	10VAC - 600VAC	50VAC - 350VAC	10VAC - 350VAC	10VAC - 350VAC	25VAC - 2000VAC	25VAC - 2000VAC
Dissipation Factor % at 60 HZ	.10	.10	.10	5.0	.05	.25	.15	.03	.03	.03	.03	.03	.03	.03
Dissipation Factor % at 1000 HZ	.40	.40	.40	1.8	.15	.40	.25	.10	.03	.03	.03	.03	.10	.10
Insulation Resistance, megohm-MFD at 25°C	30K	50K	30K	1K	300K	50K	50K	500K	500K	1,000K	10,000K	10,000K	200K	200K
Dielectric Absorption at 25°C	.20	.20	.20	N/A	.08	N/A	.20	.03	.03	.02	.02	.02	.03	.08
Operating Range °C	-55° +125°	-55° +125°	-55° +125°	-35° +180°	-55° +125°	-55° +250°	-55° +125°	-55° +105°	-55° +105°	-55° +85°	-55° +250°	-55° +250°	-55° +105°	-55° +125°
Capacitance Change with Temperature <i>Cold</i> <i>Hot</i>	-8% +12%	-3% +6%	-6% +15%	-50% +40%	-2% +2%	N/A	-6% +15%	+2% -4%	+2% -4%	+1% -1%	+1% -1%	+1% -1%	+2% -4%	-2% +2%
Best Characteristics	High Voltage	Low T/C	Low Cost	Small Size	Good Electrical Properties	High Temperature	Low Cost	Low DF	Low DF	High Stability	Excellent Electrical Properties	Excellent Electrical Properties	Very High Current	Very High Current
Relative Cost	Higher	Moderate	Lowest	Highest	Moderate	Higher	Low	Moderate	Moderate	Higher	Highest	Highest	Moderate	Higher

This Dielectric selection guide is intended to give the engineer a quick reference of the electrical characteristics for many different dielectrics. Values shown are typical for each dielectric. If you're not sure which dielectric is best for your specific application, please contact the American Capacitor sales staff, we have knowledgeable sales

engineers that will be glad to help find exactly the right capacitor for your application. For specific Acceptance Criteria, Parametric Trend Curves, Environmental Data and Size information for all Case Styles refer to the Engineering Data Sheets available on the Dielectric you need.