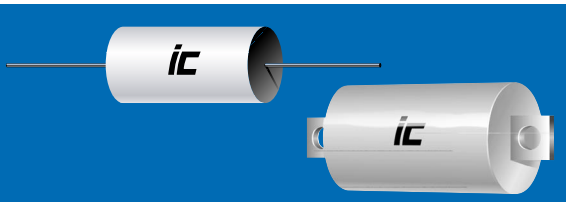
MPH/ MPL

+105°C Metallized Polypropylene Capacitors



Energized by ICEL *High frequency, high current applications*

FEATURES

- *High ripple current ratings*
- *Low ESR*
- *Stable capacitance versus frequency and temperature*

SPECIFICATIONS

Capacitance Tolerance	**±10% (K) at 1kHz, 20°C**	
Operating Temperature Range	**-55°C to 105°C**	
Voltage Range	**100 WVDC to 400 WVDC**	
Dissipation Factor	**<0.1% @1kHz**	
Insulation Resistance	≥200,000 MΩ x µF not to exceed 400,000MΩ	
Load Life	**1,000 hours, +85°C with 125% Rated WVDC**	
	Capacitance Change	≤±3%of initial readings @+25°C, 1kHz
	Dissipation Factor	≤.1% of initial reading at 1kHz @ +25°C
	Insulation Resistance	≥50% of minimum initial limit @ +25°C
Self-inductance	≤ 1nH/mm along the capacitor body and leads	
Capacitance Drift Factor	±1.0% (after 2 years)	
Maximum Pulse Rise Time	10 v/µ sec.	

PERFORMANCE RATING/TEST

RATED DC WORKING VOLTAGE (WVDC)

IC Type MPH and MPL capacitors are designed to operate at the specified rated maximum DC Working Voltage over a temperature range of -55°C to +105°C. Operation at temperatures up to and including +105°C are permissible without derating.

Operating Temperature	DC Voltage Rating
+25°C	100%
+85°C	100%
+105°C	100%

DIELECTRIC STRENGTH

160% rated DC voltage is applied for 2 seconds at +25°C

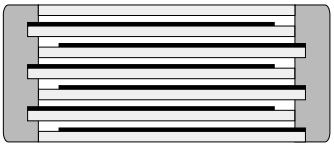
INSULATION STRENGTH

Terminal to Terminal: 100 VDC for 1 minute at 25°C (±). Units will meet Insulation Resistance requirements

Humidity/Shelf Life Test, 21 days, 95%RH, +40°C and no applied voltage	
Capacitance Change	≤2% of initial readings @ 25°C, 1kHz
Dissipation Factor Change	≤.1% of initial readings @+25°C, 1kHz
Insulation Resistance	≥50% of minimum initial

CONSTRUCTION

Type	Extended metallized film
Dielectric	Polypropylene film
Electrodes	Vacuum deposited aluminum layers
Leads	Tinned copper wire(MPH or tinned copper lugs (MPL)
Coating	Flame retardant polyester tape wrap (UL510) with epoxy end seals UL94V-0



Extended metallized film design

ILLINOIS CAPACITOR, INC. *3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • www.illcap.com*

MPH

+ 105°C Metallized Polypropylene Capacitors

STANDARD PART LISTING

MPH

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum E.S.R. (mΩ)	Maximum Ripple Current Amperes RMS (20kHz-100kHz)							D Max.	L Max.	d
				+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C			
1.0	100	**105MPH100K**	15	9.2	8.5	7.8	7.0	6.0	4.9	4.5	13.5	20.5	0.8
1.0	200	**105MPH200K**	20	7.3	7.3	7.3	7.3	7.2	5.9	5.4	13.0	33.5	0.8
1.0	400	**105MPH400K**	19	9.5	9.5	9.5	9.5	9.5	7.8	7.1	18.1	39.5	1.0
2.0	100	**205MPH100K**	12	10.8	10.0	9.1	8.2	7.0	5.8	5.3	15.2	25.5	0.8
2.0	200	**205MPH200K**	15	12.0	12.0	11.3	10.1	8.7	7.1	6.5	17.7	33.5	0.8
2.0	400	**205MPH400K**	15	15.0	15.0	15.0	13.4	11.6	9.5	8.7	22.7	44.5	1.0
3.0	100	**305MPH100K**	11	12.1	11.2	10.3	9.2	8.0	6.5	5.9	18.2	25.5	1.0
3.0	200	**305MPH200K**	13	15.0	13.8	12.6	11.3	9.8	8.0	7.3	19.0	39.5	1.0
3.0	400	**305MPH400K**	12	15.0	15.0	15.0	15.0	13.1	10.7	9.8	27.6	44.5	1.0
5.0	100	**505MPH100K**	10	13.8	12.7	11.6	10.4	9.0	7.4	6.7	18.6	33.5	1.0
5.0	200	**505MPH200K**	11	15.0	15.0	14.7	13.1	11.4	9.3	8.5	21.9	44.5	1.0
5.0	400	**505MPH400K**	10	15.0	15.0	15.0	15.0	15.0	12.5	11.4	30.3	58.5	1.0
10.0	100	**106MPH100K**	9	15.0	15.0	14.2	12.7	11.0	9.0	8.2	22.8	39.5	1.0
10.0	200	**106MPH200K**	9	15.0	15.0	15.0	15.0	13.8	11.1	10.0	26.2	58.5	1.0
10.0	400	**106MPH400K**	6	15.0	15.0	15.0	15.0	15.0	15.0	14.1	42.4	58.5	1.0
20.0	100	**206MPH100K**	8	15.0	15.0	15.0	15.0	13.6	11.1	10.0	25.4	58.5	1.0
20.0	200	**206MPH200K**	6	15.0	15.0	15.0	15.0	15.0	14.1	12.8	36.6	58.5	1.0
30.0	100	**306MPH100K**	6	15.0	15.0	15.0	15.0	15.0	12.4	11.4	30.5	58.5	1.0

NOTE: ESR MAXIMUM EQUIVALENT SERIES RESISTANCE FOR FREQUENCIES ≥ 100 kHz. (mm) Convert to inches divide by 25.4