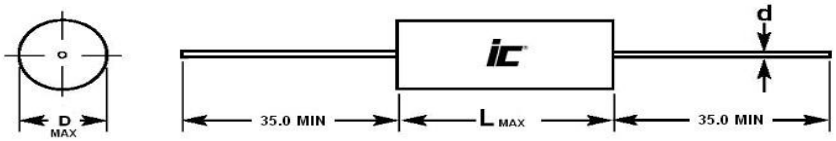
PHC

Metallized Polypropylene Film Capacitors

Axial Leaded for Switching Circuits

FEATURES	Metallized Polypropylene - High Capacitance – Low ESR
APPLICATIONS	Switching Power Supplies – UPS – DC Link – Motor Speed Controls – Solar Heaters – Power Converters

Operating Temperature Range		**-40°C to +100°C** Above +85°C applied voltage must be de-rated by 1.5%/°C					
Capacitance Tolerance		±10% at 1 kHz, 25°C ±5% optional					
Surge Voltage	**VDC**	**250**	**330**	**400**	**600**	**700**	**850**
	Non-repetitive SVDC	400	400	600	800	1000	1200
AC voltage	**VDC**	**250**	**330**	**400**	**600**	**700**	**850**
	VAC	160	220	250	330	400	500
Dissipation Factor (MAX) Tan δ at 1 kHz and 25°C		**C≤ 5uF**		**5uF<C≤25uF**		**C>75uF**	
		.06%		.1%		.15%	
Insulation Resistance After 1 minute of 100VDC applied between the terminals at 25°C		30000 MΩxuF "Not to exceed 3GΩ"					
Self Inductance		<1 nano-Henry per mm of lead spacing					
Long term stability		Capacitance variation <1% MAX after 2 years					
Dielectric Strength		**Terminal to Terminal**				**Terminal to case**	
		160% of VDC VDC applied for 10 Seconds and 25°C or 200% of VDC applied for 2 Seconds and 25°C				3KVAC at 50/60 Hz applied between the terminals and case for 60 Seconds and 25°C	
Life Expectancy		≥100000 with VDC ≥30000 with VAC					
Failure quota		300/billion component hours					
Damp Heat Test		**Test Condition**			**Performance requirements**		
		Temperature= +40°C ±2°C			**Max Capacitance change**	≤ 2% of initially measured valued	
		Relative Humidity=93 ±2%			**DF Change**	≤ 200% of initially specified valued	
		Test length= 56 days			**Insulation resistance**	≥ 50% of minimum specified value	
Resistance to soldering Heat **Solder bath temperature: +260°C +/- 5°C** **Exposure time: 10 seconds +/- 1 second**		**Max Capacitance change**			≤1% of initially measured value		
		DF Change			≤ .1% at 1kHz		
		Insulation resistance			≥50% of minimum specified value		
Construction		Metallized Polypropylene film					
Electrodes		Vacuum deposited Metal layers					
Coating		Flame retardant tape wrap (UL510) with epoxy end fill (UL94V-0)					
Lead terminations		Lead free tinned copper leads					



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High Frequency Metallized Polypropylene Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
250	1	105PHC250K	50	4.5	7.6	11x29
250	1.5	155PHC250K	50	5.5	6.1	13x29
250	2	205PHC250K	50	6	4.9	14.5x29
250	2	205PHC250KG	40	6	5.1	12.5x34
250	2.2	225PHC250KG	50	6.5	5	15x29
250	2.2	225PHC250K	40	6	5.7	13x34
250	2.5	255PHC250KG	50	7	4.8	15.5x29
250	2.5	255PHC250K	40	7	5.4	14x55
250	3	305PHC250KG	50	7.5	4.4	17x29
250	3	305PHC250K	40	7	4.8	15x34
250	3.3	335PHC250K	40	8	4.4	15.5x34
250	4	405PHC250K	40	9	3.8	17x34
250	4.7	475PHC250KJ	40	10	3.5	18x34
250	5	505PHC250K	40	10	3.4	18.5x34
250	6.8	685PHC250K	40	10.5	3.1	21x34
250	10	106PHC250K	40	10.5	2.5	24x34
250	10	106PHC250KN	25	10.5	3.3	21.5x46
250	15	156PHC250K	25	14	2.7	25.5x46
250	20	206PHC250K	25	14	5	29x46
250	22	226PHC250KN	25	14	4.7	30.5x46
250	25	256PHC250K	25	14	4.4	32x46
250	30	306PHC250K	20	14	4.5	31x55
250	30	306PHC250KS	15	14	5.3	29.5x59
250	33	336PHC250KR	20	14	4.3	32.5x55
250	33	336PHC250KS	15	14	5	31x59
250	40	406PHC250K	20	14	3.9	36x55
250	40	406PHC250KS	15	14	4.5	33.5x59
250	50	506PHC250K	20	14	3.5	40x55
250	50	506PHC250KS	15	14	3.9	37x59
250	60	606PHC250KS	15	14	3.5	40x59
330	0.68	684PHC330KG	60	4.5	9.1	11x29
330	1	105PHC330KG	60	5.5	6.9	12.5x29
330	1.5	155PHC330KG	60	6.5	5.5	15x29
330	1.5	155PHC330KJ	45	6	6.3	13.5x34
330	2	205PHC330KG	60	7.5	4.7	16.5x29
330	2	205PHC330KJ	45	7	5.7	15x34
330	2.2	225PHC330KG	60	8	4.3	17.5x29
330	2.2	225PHC330KJ	45	7.5	5.3	15.5x34
330	2.5	255PHC330KJ	45	8	5	16.5x34
330	3	305PHC330KJ	45	9	4.4	18.5x34
330	3.3	335PHC330KJ	45	9	4.3	19x34
330	4	405PHC330KJ	45	10.5	3.8	20.5x34
330	4.7	475PHC330KJ	45	10.5	3.3	22x34
330	4.7	475PHC330KN	30	10.5	4.2	19x46
330	5	505PHC330KJ	45	10.5	3.2	22.5x34
330	5	505PHC330KN	30	10.5	4.1	19.5x46
330	6.8	685PHC330KN	30	10.5	3.6	22x46
330	10	106PHC330KN	30	11	6.7	26x46
330	15	156PHC330KN	30	13	5.4	31x46
330	15	156PHC330KR	25	12.5	6	28x55
330	15	156PHC330KS	20	12	6.8	26.5x59
330	20	206PHC330KR	25	14	5.1	31.5x55
330	20	206PHC330KS	20	13.5	5.8	30x59
330	22	226PHC330KR	25	14	4.8	33x55
330	22	226PHC330KS	20	14	5.4	31x59
330	25	256PHC330KR	25	14	4.5	35x55
330	25	256PHC330KS	20	14	5	33x59
330	30	306PHC330KR	25	14	4.1	38x55

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
330	30	306PHC330KS	20	14	4.5	36x59
330	33	336PHC330KR	25	14	3.9	39.5x55
330	33	336PHC330KS	20	14	4.3	37.5x59
330	35	356PHC330KR	25	14	3.8	41x55
330	35	356PHC330KS	20	14	4.2	38.5x59
330	40	406PHC330KS	20	14	3.9	41x59
400	0.47	474PHC400K	75	4	8.6	11x29
400	0.68	684PHC400KG	75	5.5	7.1	13x29
400	0.68	684PHC400K	55	5	8.9	12x34
400	1	105PHC400KG	75	6.5	5.8	15x29
400	1	105PHC400K	55	6	6.7	13x34
400	1.5	155PHC400KG	75	7.5	4.7	17.5x29
400	1.5	155PHC400K	55	7	5.6	15.5x34
400	2	205PHC400K	55	9	4.6	17.5x34
400	2.2	225PHC400K	55	9	4.4	18.5x34
400	2.5	255PHC400K	55	9.5	4.2	19x34
400	3	305PHC400K	55	10.5	3.8	21x34
400	3.3	335PHC400K	55	10.5	3.7	22x34
400	3.3	335PHC400KN	40	10.5	4.3	19x46
400	4	405PHC400KJ	55	10.5	3.3	24x34
400	4	405PHC400K	40	10.5	3.8	20.5x46
400	4.7	475PHC400K	40	9.5	7.6	22x46
400	5	505PHC400K	40	10	7.4	22.5x46
400	6.8	685PHC400K	40	11	6.4	26x46
400	10	106PHC400KN	40	13	5.4	31x46
400	10	106PHC400K	30	12	6.3	27x55
400	10	106PHC400KS	25	11	7.1	26x59
400	15	156PHC400K	30	14	5	33x55
400	15	156PHC400KS	25	14	5.6	31x59
400	20	206PHC400K	30	14	4.3	37x55
400	20	206PHC400KS	25	14	4.7	35x59
400	22	226PHC400KR	30	14	4.1	39x55
400	22	226PHC400KS	25	14	4.5	37x59
400	25	256PHC400K	30	14	3.8	41.5x55
400	25	256PHC400KS	25	14	4.2	39x59
600	0.33	334PHC600KG	95	4	9.5	12x29
600	0.47	474PHC600KG	95	5	8.3	13.5x29
600	0.47	474PHC600K	75	5	9.4	12.5x34
600	0.68	684PHC600KG	95	6	6.8	16x29
600	0.68	684PHC600K	75	6	7.8	14x34
600	1	105PHC600K	75	8	6.1	17.5x34
600	1.5	155PHC600K	75	9	4.9	20x34
600	2	205PHC600KJ	75	10.5	4.1	23x34
600	2	205PHC600K	55	10	5.3	20x46
600	2.2	225PHC600KJ	75	10.5	3.8	24x34
600	2.2	225PHC600K	55	10	4.8	21x46
600	2.5	255PHC600K	55	10.5	4.4	22x46
600	3	305PHC600K	55	10.5	4.2	24x46
600	3.3	335PHC600K	55	10.5	3.8	25x46
600	4	405PHC600K	55	13.5	3.6	27x46
600	4.7	475PHC600K	55	12	6.4	29x46
600	4.7	475PHC600KR	50	11.5	7.7	26.5x55
600	4.7	475PHC600KS	40	11	8.6	24.5x59
600	5	505PHC600KN	55	12.5	6.3	29.5x46
600	5	505PHC600K	50	12	7.4	27x55
600	5	505PHC600KS	40	11.5	8.3	25x59
600	6.8	685PHC600K	50	12.5	6.5	30x55
600	6.8	685PHC600KS	40	12	7.3	28.5x59

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WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
600	10	106PHC600K	50	14	5.4	35x55
600	10	106PHC600KS	40	14	6.1	33.5x59
600	12.5	126PHC600K	50	14	4.9	40.5x55
600	12.5	126PHC600KS	40	14	5.5	37.5x59
600	15	156PHC600KS	40	14	5.1	41x59
700	0.22	224PHC700KG	135	4	10.7	12.5x29
700	0.22	224PHC700KJ	105	3.5	11.6	11.5x34
700	0.33	334PHC700KG	135	5	8.5	15x29
700	0.33	334PHC700KJ	105	5	9.4	13.5x34
700	0.47	474PHC700KG	135	6.5	6.9	17x29
700	0.47	474PHC700K	105	6.5	7.7	15.5x34
700	0.68	684PHC700K	105	8	6	17.5x34
700	1	105PHC700K	105	10	4.5	21.5x34
700	1	105PHC700KN	70	9	6.6	18x46
700	1.2	125PHC700K	105	10.5	3.9	24x34
700	1.2	125PHC700KN	70	9	6.3	20x46
700	1.5	155PHC700K	70	10.5	5.6	21.5x46
700	2	205PHC700K	70	12	4.8	24.5x46
700	2.2	225PHC700K	70	12.5	4.5	25.5x46
700	2.5	255PHC700K	70	13.5	4	27x46
700	3	305PHC700K	70	12	6.1	29x46
700	3.3	335PHC700K	70	12	5.9	30.5x46
700	4	405PHC700K	70	13.5	5.4	33.5x46
700	4	405PHC700KR	60	12.5	6.7	29x55
700	4	405PHC700KS	45	12	7.7	27.5x59
700	4.7	475PHC700K	60	13	6.1	31x55
700	4.7	475PHC700KS	45	12	7	29.5x59
700	5	505PHC700K	60	13.5	5.8	32x55
700	5	505PHC700KS	45	12.5	6.6	30.5x59
700	6.8	685PHC700K	60	14	5.1	37x55
700	6.8	685PHC700KS	45	14	5.8	35x59
700	8.2	825PHC700K	60	14	4.6	41x55
700	8.2	825PHC700KS	45	14	5.3	38x59

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
700	10	106PHC700KS	45	14	4.9	41.5x59
850	0.1	104PHC850KG	375	3.5	12.9	11.5x29
850	0.15	154PHC850KG	375	4.5	9.8	13x29
850	0.15	154PHC850K	300	4.5	10.8	12x34
850	0.22	224PHC850KG	375	5.5	7.7	15x29
850	0.22	224PHC850K	300	5.5	8.4	13.5x34
850	0.33	334PHC850KG	375	7	5.9	17.5x29
850	0.33	334PHC850K	300	7	6.6	16x34
850	0.47	474PHC850K	300	9	5.4	18.5x34
850	0.68	684PHC850K	300	10	4.3	21.5x34
850	0.68	684PHC850KN	200	9	5.4	18x46
850	1	105PHC850KJ	300	13	3.2	26x34
850	1	105PHC850K	200	10.5	4.3	21.5x46
850	1.5	155PHC850K	200	14	3.5	25.5x46
850	2	205PHC850K	200	14	2.9	29x46
850	2.2	225PHC850K	200	14	2.9	30x46
850	2.2	225PHC850KR	125	14	3.8	26.5x55
850	2.2	225PHC850KS	110	14	4.3	25x59
850	2.5	255PHC850K	200	14	2.7	32x46
850	2.5	255PHC850KR	125	14	3.6	28x55
850	2.5	255PHC850KS	110	14	4.1	26.5x59
850	3	305PHC850K	200	14	2.4	34.5x46
850	3	305PHC850KR	125	14	3.2	30.5x55
850	3	305PHC850KS	110	14	3.6	29x59
850	3.3	335PHC850K	125	14	3.1	32x55
850	3.3	335PHC850KS	110	14	3.5	30x59
850	4	405PHC850K	125	14	2.8	35x55
850	4	405PHC850KS	110	14	3.1	33x59
850	4.7	475PHC850K	125	14	2.5	37x55
850	4.7	475PHC850KS	110	14	2.8	35.5x59
850	5	505PHC850K	125	14	2.4	38x55
850	5	505PHC850KS	110	14	2.7	36.5x59
850	6.8	685PHC850KS	110	14	2.3	41.5x59

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