MAR

Axial Leaded Metallized Polypropylene Film

APPLICATIONS

- *Motor Run*
- *Switching Power Supplies*
- *Motor Speed Control*

FEATURES

- *Small Size*
- *Good DVDT*
- *Medium Current*
- *General Purpose*

Operating Temperature Range		-40˚C to +85˚C					
Capacitance Tolerance		+/- 10% at 1kHz, 25˚C, ±5% optional					
Peak, AC voltage (50/60 Hz)	WVDC	370	500	600	700	800	
	SVDC	470	625	750	875	1050	
	VAC	160	275/320	320/400	400/440	400/450	
Dissipation Factor (max) (tanδ)at 1 kHz and 25°C	Freq (kHz)	C≤2.5µF		2.5µF<C≤20µF		C>20µF	
	1	.0007		.0012		.0016	
Insulation Resistance @20˚C(<70% RH) for 1 minute at 100VDC		**15000 MΩxµF for C≤1µF 3000MΩxµF for C>1µF**					
Self inductance		<1nH/mm of body length and lead wire length.					
Dielectric Strength		Terminal to terminal		Terminal to case			
		200% of VAC applied between terminals for 10 Seconds and 25°C		3kVAC applied for 10 seconds between terminals and case			
Damp Heat		56 Days with no voltage applied at +40C and 93%(+2%) relative humididty					
		Capacitance Change			<+2% of initially measured value		
		Dissipation Factor			<.001 at 1kHz		
		Insulation Resistance			≥50% of minimum specified value		
Reliability	WVDC	370	500	600	700	800	
	VAC	160 200	275 320	320 400	400 440	440 500	
	Hours	10000 1000	10000 1000	10000 3000	10000 1000	1000 1000	
Failure Quota		500/10^9 component hours					
Construction		Metallized Film					
Coating		Flame Retardant Polyester Tape Wrap (UL510) with Epoxy End Fill (UL-94V0)					
Lead Terminations		Lead Free Tinned Copper Leads					

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PHYSICAL DIMENSIONS

µF \ WVDC (VAC)	370 (160)	500 (275/320)	600 (320/400)	700 (400/440)	800 (400/500)
0.22					11x29
0.33				11.5x29	12.5x29
0.47			11x29	13x29	12.5x34 14.5x29
0.68		11x29	12x34 13x29	13.5x34 15x29	14x34 16.5x29
1	11x29	11.5x34 12.5x29	13x34 15x29	15.5x34	17.5x34
1.2					19x34
1.5	13x29	13.5x34 15x29	15.5x34 17.5x29	18.5x34	20x34
2	12.5x34 15x29	15x34 16.5x29	17.5x34	18x46 21x34	20x46 23.5x34
2.2	13x34 15x29	15.5x34 17.5x29	18.5x34	19x46 22x34	21x46 24.5x34
2.5	14x34 16x29	17x34	19x34	20x46 23x34	22x46
3	15x34 17x29	18.5x34	21x34	21.5x46	24x46
3.3	15.5x34	19x34	19x46 22x34	22.5x46	25x46
4	17x34	21x34 17.5x46	20.5x46 24x34	24.5x46	22.5x59 24x55 27x46
4.7	18x34	19x46 22.5x34	22x46	26.5x46	24.5x59 26.5x55 29x46
5	18.5x34	19.5x46 23x34	22.5x46	22.5x59 23.5x55 27x46	25x59 27x55 29.5x46
6.8	21x34	22x46	26x46	25.5x59 27x55 30.5x46	28.5x59 30x55
10	21.5x46 24x32	23.5x55 26x46	26x59 27x55 31x46	30x59 32x55	33.5x59 35x55
12		25x55 28x46	29.5x55 28x59	30x59 35x55	
12.5					37.5x59 40.5x55
15	25.5x46	26.5x59 28x55 31x46	31x59 33x55	36.5x59 38.5x55	41x59
18				39.5x59 41.5x55	
20	29x46	30x59 31.5x55	35x59 37x55	41.5x59	
22	30.5x46	31x59 33x55	37x59 39x55		
25	32x46	35x55 33x59	39x59 41.5x55		
30	29.5x59 31x55	36x59 38x55			
33	31x59 32.5x55	37.5x59 39.5x55			
35		41x55 38.5x59			
40	33.5x59 36x55	41x59			
50	40x55 37x59				
60	40x59				

Convert to inches, divide by 25.4

DxL(mm)

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STANDARD PARTS LISTING

Capacitance (µF)	WVDC	IC® PART NUMBER	dv/dt (v/µs)	Maximum RMS Current @100 kHz, +70°C in Amps	Typical ESR in (Ω) 100kHz, 25°C	Dimensions DxL (mm)
0.22	800	224MARA01KG	120	2	29	11x29
0.33	700	334MARA06KG	105	2.5	25	11.5x29
0.33	800	334MARA01KG	120	2.5	23.5	12.5x29
0.47	600	474MARA02KG	90	2.5	24	11x29
0.47	700	474MARA06KG	105	3	20.5	13x29
0.47	800	474MARA01KG	120	3.5	19	14.5x29
0.47	800	474MARA01KJ	100	3	22.5	12.5x34
0.68	500	684MARA03KG	60	2.5	25	11x29
0.68	600	684MARA02KG	90	3	19.5	13x29
0.68	600	684MARA02KJ	70	3	21.5	12x34
0.68	700	684MARA06KG	105	4	16.8	15x29
0.68	700	684MARA06KJ	85	3.5	18.8	13.5x34
0.68	800	684MARA01KG	120	4	15.8	16.5x29
0.68	800	684MARA01KJ	100	4	18	14x34
1	370	105MARA04KG	50	2.5	23	11x29
1	500	105MARA03KG	60	3	20	12.5x29
1	500	105MARA03KJ	45	2.5	22.5	11.5x34
1	600	105MARA02KG	90	4	15.5	15x29
1	600	105MARA02KJ	70	3.5	17.5	13x34
1	700	105MARA06KJ	85	4.5	15.4	15.5x34
1	800	105MARA01KJ	100	5	14.8	17.5x34
1.2	800	125MARA01KJ	100	5.5	13.4	19x34
1.5	370	155MARA04KG	50	3	18.5	13x29
1.5	500	155MARA03KG	60	4	16	15x29
1.5	500	155MARA03KJ	50	3.5	18.2	13.5x34
1.5	600	155MARA02KG	90	5	12.3	17.5x29
1.5	600	155MARA02KJ	70	4.5	14	15.5x34
1.5	700	155MARA06KJ	85	5.5	12.5	18.5x34
1.5	800	155MARA01KJ	100	6	11.5	20x34
2	370	205MARA04KG	50	4	15.5	15x29
2	370	205MARA04KJ	40	3.5	17.5	12.5x34
2	500	205MARA03KG	60	4.5	13.7	16.5x29
2	500	205MARA03KJ	50	4	15.1	15x34
2	600	205MARA02KJ	70	5.5	11.9	17.5x34
2	700	205MARA06KJ	85	6.5	10.6	21x34
2	700	205MARA06KN	60	6	12.5	18x46
2	800	205MARA01KJ	100	7.5	9.8	23.5x34
2	800	205MARA01KN	65	7	11.5	20x46
2.2	370	225MARA04KG	50	4	14.5	15x29
2.2	370	225MARA04KJ	40	3.5	16.5	13x34
2.2	500	225MARA03KG	60	5	13	17.5x29
2.2	500	225MARA03KJ	50	4.5	14.2	15.5x34
2.2	600	225MARA02KJ	70	6	11.3	18.5x34
2.2	700	225MARA06KJ	85	7	10.1	22x34
2.2	700	225MARA06KN	60	6.5	11.9	19x46
2.2	800	225MARA01KJ	100	7.5	9.3	24.5x34
2.2	800	225MARA01KN	65	7.5	10.7	21x46

Capacitance (µF)	WVDC	IC® PART NUMBER	dv/dt (v/µs)	Maximum RMS Current @100 kHz, +70°C in Amps	Typical ESR in (Ω) 100kHz, 25°C	Dimensions DxL (mm)
2.5	370	255MARA04KG	50	4.5	13.4	16x29
2.5	370	255MARA04KJ	40	4	15.2	14x34
2.5	500	255MARA03KJ	50	5	13.2	17x34
2.5	600	255MARA02KJ	70	6	10.5	19x34
2.5	700	255MARA06KJ	85	7.5	9.4	23x34
2.5	700	255MARA06KN	60	7	11.1	20x46
2.5	800	255MARA01KN	65	8	10	22x46
3	370	305MARA04KG	50	5	12.2	17x29
3	370	305MARA04KJ	40	4.5	13.7	15x34
3	500	305MARA03KJ	50	5.5	11.9	18.5x34
3	600	305MARA02KJ	70	7	9.4	21x34
3	700	305MARA06KN	60	7.5	10.1	21.5x46
3	800	305MARA01KN	65	9	9	24x46
3.3	370	335MARA04KJ	40	4.5	13	15.5x34
3.3	500	335MARA03KJ	50	6	11.3	19x34
3.3	600	335MARA02KJ	70	7.5	8.9	22x34
3.3	600	335MARA02KN	50	7	10.1	19x46
3.3	700	335MARA06KN	60	8	9.6	22.5x46
3.3	800	335MARA01KN	65	9.5	8.5	25x46
4	370	405MARA04KJ	40	5.5	11.7	17x34
4	500	405MARA03KJ	50	7	10.2	21x34
4	500	405MARA03KN	35	6	12.3	17.5x46
4	600	405MARA02KJ	70	8.5	7.9	24x34
4	600	405MARA02KN	50	8	9.1	20.5x46
4	700	405MARA06KN	60	9	8.7	24.5x46
4	800	405MARA01KN	65	10.5	7.5	27x46
4	800	405MARA01KR	50	10	8.8	24x55
4	800	405MARA01KS	40	9.5	9.7	22.5x59
4.7	370	475MARA04KJ	40	6	10.7	18x34
4.7	500	475MARA03KJ	50	7.5	9.4	22.5x34
4.7	500	475MARA03KN	35	7	11.1	19x46
4.7	600	475MARA02KN	50	9	7.7	22x46
4.7	700	475MARA06KN	60	10.5	7.8	26.5x46
4.7	800	475MARA01KN	65	12	6.6	29x46
4.7	800	475MARA01KR	50	11	7.7	26.5x55
4.7	800	475MARA01KS	40	10.5	8.6	24.5x59
5	370	505MARA04KJ	40	6	10.2	18.5x34
5	500	505MARA03KJ	50	7.5	9.1	23x34
5	500	505MARA03KN	35	7	10.5	19.5x46
5	600	505MARA02KN	50	9	7.5	22.5x46
5	700	505MARA06KN	60	10.5	7.3	27x46
5	700	505MARA06KR	45	9.5	8.6	23.5x55
5	700	505MARA06KS	35	9.5	9.5	22.5x59
5	800	505MARA01KN	65	12.5	6.3	29.5x46
5	800	505MARA01KR	50	11.5	7.4	27x55
5	800	505MARA01KS	40	11	8.3	25x59
6.8	370	685MARA04KJ	40	7.5	8.5	21x34

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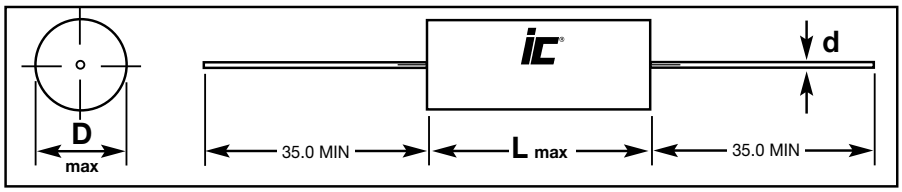
Capacitance (µF)	WVDC	IC PART NUMBER	dv/dt (v/µs)	Maximum RMS Current @100 kHz, +70°C in Amps	Typical ESR in (Ω) 100kHz, 25°C	Dimensions DxL (mm)
6.8	500	685MARA03KN	35	8.5	8.7	22x46
6.8	600	685MARA02KN	50	11	6.4	26x46
6.8	700	685MARA06KN	60	12.5	6.3	30.5x46
6.8	700	685MARA06KR	45	11.5	7.4	27x55
6.8	700	685MARA06KS	35	11	8.2	25.5x59
6.8	800	685MARA01KR	50	13	6.5	30x55
6.8	800	685MARA01KS	40	12.5	7.3	28.5x59
10	370	106MARA04KJ	40	10	6	24x32
10	370	106MARA04KN	25	9.5	7	21.5x46
10	500	106MARA03KN	35	11	6.7	26x46
10	500	106MARA03KR	25	10.5	7.4	23.5x55
10	600	106MARA02KN	50	13.5	5.4	31x46
10	600	106MARA02KR	35	13.5	6.3	27x55
10	600	106MARA02KS	25	11.5	7.1	26x59
10	700	106MARA06KR	45	14	6.1	32x55
10	700	106MARA06KS	35	13.5	6.8	30x59
10	800	106MARA01KR	50	14	5.4	35x55
10	800	106MARA01KS	40	14	6.1	33.5x59
12	500	126MARA03KN	35	12	6.1	28x46
12	500	126MARA03KR	25	11.5	6.7	25x55
12	600	126MARA02KR	35	14	5.7	29.5x55
12	600	126MARA02KS	25	13	6.5	28x59
12	700	126MARA06KR	45	14	5.5	35x55
12	700	126MARA06KS	35	14	6.1	30x59
12.5	800	126MARA01KR	50	14	4.9	40.5x55
12.5	800	126MARA01KS	40	14	5.5	37.5x59
15	370	156MARA04KN	25	10.5	5.7	25.5x46
15	500	156MARA03KN	35	13.5	5.4	31x46
15	500	156MARA03KR	25	13	6	28x55
15	500	156MARA03KS	20	12.5	6.8	26.5x59
15	600	156MARA02KR	35	14	5	33x55
15	600	156MARA02KS	25	14	5.6	31x59
15	700	156MARA06KR	45	14	4.9	36.5x55
15	700	156MARA06KS	35	14	5.4	38.5x59
15	800	156MARA01KS	40	14	5.1	41x59

Capacitance (µF)	WVDC	IC PART NUMBER	dv/dt (v/µs)	Maximum RMS Current @100 kHz, +70°C in Amps	Typical ESR in (Ω) 100kHz, 25°C	Dimensions DxL (mm)
18	700	186MARA06KR	45	14	4.5	41.5x55
18	700	186MARA06KS	35	14	4.9	39.5x59
20	370	206MARA04KN	25	13.5	5	29x46
20	500	206MARA03KR	25	14	5.1	31.5x55
20	500	206MARA03KS	20	14	5.8	30x59
20	600	206MARA02KR	35	14	4.3	37x55
20	600	206MARA02KS	25	14	4.7	35x59
20	700	206MARA06KS	35	14	4.7	41.5x59
22	370	226MARA04KN	25	14	4.7	30.5x46
22	500	226MARA03KR	25	14	4.8	35x55
22	500	226MARA03KS	20	14	5.4	31x59
22	600	226MARA02KR	35	14	4.1	39x55
22	600	226MARA02KS	25	14	4.5	37x59
25	370	256MARA04KN	25	14	4.4	32x46
25	500	256MARA03KR	25	14	4.5	35x55
25	500	256MARA03KS	20	14	5	33x59
25	600	256MARA02KR	35	14	3.8	41.5x55
25	600	256MARA02KS	25	14	4.2	39x59
30	370	306MARA04KR	20	14	4.5	31x55
30	370	306MARA04KS	15	14	5.3	29.5x59
30	500	306MARA03KR	25	14	4.1	38x55
30	500	306MARA03KS	20	14	4.5	36x59
33	370	336MARA04KR	20	14	4.3	32.5x55
33	370	336MARA04KS	15	14	5	31x59
33	500	336MARA03KR	25	14	3.9	39.5x55
33	500	336MARA03KS	20	14	4.3	37.5x59
35	500	356MARA03KR	25	14	3.8	41x55
35	500	356MARA03KS	20	14	4.2	38.5x59
40	370	406MARA04KR	20	14	3.9	36x55
40	370	406MARA04KS	15	14	4.5	33.5x59
40	500	406MARA03KS	20	14	3.9	41x59
50	370	506MARA04KR	20	14	3.5	40x55
50	370	506MARA04KS	15	14	3.9	37x59
60	370	606MARA04KS	15	14	3.5	40x59



WVDC	370			500			600			700			800		
cap(µF)	C≤5	5<C<10	C>10	C≤3.3	3.3<C<6.8	C>6.8	C<2.5	2.5<C≤5	C>4	C<1.5	1.5<C≤4	C>4	C<1.2	1.2<C≤4	C>4
d	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2

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