

PWS

Axial leaded polypropylene film with aluminum foil electrodes



Applications

- SCR commutating
- Snubber networks
- Deflection circuits
- SMPS

Features

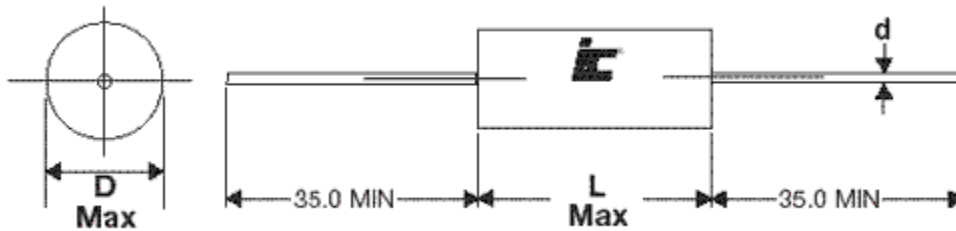
- Polypropylene
- High dv/dt
- High Current
- Low ESR

Specifications

Operating Temperature Range		-55°C to +105°C			
Capacitance Tolerance		$\pm 10\%$ at 1 kHz, 20°C $\pm 5\%$ optional			
AC voltage	WVDC	630	1000	1500	2000
	VAC	300	400	450	500
Dissipation Factor (MAX) Tan at 1 kHz and 20°C	Frequency	C\leq0.001μF		.001<C\leq0.1μF	
	10 kHz	-		.0005	
	100 kHz	.001		-	
Insulation Resistance @20°C (<70C RH)for 1 minute at 100VDC applied		C \leq 0.1 μ F: 100 G Ω C>0.1 μ F: 10000 M Ω x μ F			
Self Inductance		<1 nano-Henry per mm of body length and lead length			
Dielectric Strength		Terminal to Terminal			
		200% of VDC applied for 2 Seconds and 25°C			
Load Life		1000 Hours at 85C with 150% of rated voltage applied			
		Capacitance Change		< $\pm 1\%$ of initially measured value	
		Dissipation Factor		$\leq .0005$ at 10 kHz for C \leq 0.1 μ F $\leq .001$ at 1 kHz for C>0.1 μ F	
		Insulation Resistance		>50% of minimum specified value	
Damp Heat		56 days with no voltage applied at +40C and 93%(+2%) relative humidity			
		Capacitance Change		< $\pm 1\%$ of initially measured value	
		Dissipation Factor		$\leq .0005$ at 10 kHz for C \leq 0.1 μ F $\leq .001$ at 1 kHz for C>0.1 μ F	
		Insulation Resistance		>50% of minimum specified value	
Reliability Applied Voltage=0.5xWVDC Temperature:40°C		1 FIT(1 FIT=1x10 ⁻⁹ Failures per component hours)		Capacitance Change	
				< $\pm 10\%$ of initially measured value	
				Dissipation Factor	
Construction		Extended foil Polypropylene film with internal series connections and metallized film			
Electrodes		Aluminum foil			
Coating		Flame Retardant Polyester tape wrap (UL510)with epoxy end fill(UL94V0)			
Lead terminations		Lead free tinned copper leads			

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	Physical Dimensions

WVDC (VAC) \ uF	630 (300)	1000 (400)	1500 (450)	2000 (500)
0.001	-----	-----	----->	9.5x21
0.0015	-----	-----	----->	10.5x21
0.0022	-----	----->	9.5x21	12.5x21
0.0033	----->	9x21	10.5x21	9.5x29
0.0047	-----	----->	12.5x21 9x29	10.5x29
0.0068	----->	10x21 8.5x29	9.5x29	12x29
0.01	----->	9x29	10.5x29	14x29
0.015	9x21	10.5x29	12.5x29	16.5x29
0.022	10x21	12x29	14.5x29	16.5x34
0.033	12x21 9.5x29	14x29	15x34 18x29	20x34
0.047	10.5x29	14.5x34 17x29	17.5x34	22.5x34
0.068	12x29	17x34	20.5x34	27x34
0.1	14x29	19.5x34	24x34	
0.15	14.5x34 17x29	23.5x34		
0.22	17x34	28x34		
0.33	20x34			
0.47	24x34			



WVDC	630		1000		1500		2000	
	C≤.22	C>.22	C≤0.1	C>0.1	C≤.047	C>.047	C≤.033	C>.033
d	.8	1.0	.8	1.0	.8	1.0	.8	1.0

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Standard Parts List

Capacitance (uF)	WVDC	Part number	dv/dt (V/us)	Dimensions DxL (mm)
0.001	2000	102PWS202KD	27000	9.5x21
0.0015	2000	152PWS202KD	27000	10.5x21
0.0022	1500	222PWS152KD	17000	9.5x21
0.0022	2000	222PWS202KD	27000	12.5x21
0.0033	1000	332PWS102KD	14000	9x21
0.0033	1500	332PWS152KD	17000	10.5x21
0.0033	2000	332PWS202KG	9800	9.5x29
0.0047	1500	472PWS152KD	17000	12.5x21
0.0047	1500	472PWS152KG	6000	9x29
0.0047	2000	472PWS202KG	9800	10.5x29
0.0068	1000	682PWS102KD	14000	10x21
0.0068	1000	682PWS102KG	5000	8.5x29
0.0068	1500	682PWS152KG	6000	9.5x29
0.0068	2000	682PWS202KG	9800	12x29
0.01	1000	103PWS102KG	5000	9x29
0.01	1500	103PWS152KG	6000	10.5x29
0.01	2000	103PWS202KG	9800	14x29
0.015	630	153PWS630KD	4300	9x21
0.015	1000	153PWS102KG	5000	10.5x29
0.015	1500	153PWS152KG	6000	12.5x29
0.015	2000	153PWS202KG	9800	16.5x29
0.022	630	223PWS630KD	4300	10x21
0.022	1000	223PWS102KG	5000	12x29
0.022	1500	223PWS152KG	6000	14.5x29
0.022	2000	223PWS202KJ	7000	16.5x34

Capacitance (uF)	WVDC	Part Number	dv/dt (V/us)	Dimensions DxL (mm)
0.033	630	333PWS630KD	4300	12x21
0.033	630	333PWS630KG	2600	9.5x29
0.033	1000	333PWS102KG	5000	14x29
0.033	1500	333PWS152KG	6000	18x29
0.033	1500	333PWS152KJ	4500	15x34
0.033	2000	333PWS202KJ	7000	20x34
0.047	630	473PWS630KG	2600	10.5x29
0.047	1000	473PWS102KG	5000	17x29
0.047	1000	473PWS102KJ	3700	14.5x34
0.047	1500	473PWS152KJ	4500	17.5x34
0.047	2000	473PWS202KJ	7000	22.5x34
0.068	630	683PWS630KG	2600	12x29
0.068	1000	683PWS102KJ	3700	17x34
0.068	1500	683PWS152KJ	4500	20.5x34
0.068	2000	683PWS202KJ	7000	27x34
0.1	630	104PWS630KG	2600	14x29
0.1	1000	104PWS102KJ	3700	19.5x34
0.1	1500	104PWS152KJ	4500	24x34
0.15	630	154PWS630KG	2600	17x29
0.15	630	154PWS630KJ	1800	14.5x34
0.15	1000	154PWS102KJ	3700	23.5x34
0.22	630	224PWS630KJ	1800	17x34
0.22	1000	224PWS102KJ	3700	28x34
0.33	630	334PWS630KJ	1800	20x34
0.47	630	474PWS630KJ	1800	24x34



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PERMISSIBLE AC VOLTAGE VS.FREQUENCY

Permissible AC voltage versus frequency (sinusoidal waveform) for $\Delta T = +10^\circ C$
Referred to the largest length execution among available ones

