

## Datasheet

# RS 680pF $\pm 2.5\%$ 160 V dc Axial Through Hole Polystyrene Film Capacitor 6mm

RS Stock 113-314



## Specifications

POLYSTYRENE is a superior dielectric material with exceptionally high insulation resistance and low loss.

Aluminium foil electrodes are used and terminal wires are welded to them to ensure satisfactory performance at low voltage and high frequency.

LCR POLYSTYRENE FILM CAPACITORS offer:

- Low temperature coefficient
- Close capacitance tolerance
- Extreme capacitance stability
- Low power factor
- High Q
- High insulation resistance
- Small physical size



## LCR POLYSTYRENE CAPACITORS

are recommended for use in I.F. transformers, tuned circuits, pulse networks, laboratory standards, timing circuits, analogue and digital computing circuits and many other applications where superior qualities are used to advantage.

### MARKING

Wherever possible capacitance tolerance and working voltage are clearly indicated by black digital lettering, but on small components a letter code is used for tolerance.

<b>CHARACTERISTICS</b>		<b>Capacitance Tolerance</b>
<b>TYPE LCR (Standard Polystyrene)</b>		
Capacitance	25pF - 200,000pF	<b>Code</b>
Capacitance Tolerance	+ - 20%, 10%, 5% + - 2.5% or + - 1pF min	<b>1pF - F</b>
Tolerances closer than 2.5% are available		<b>2.5% - H</b>
Voltage (DC working)	30, 63, 160, 400, 630V	<b>5% - J</b>
Temperature Range	-40C to +85C	<b>10% - K</b>
Temperature Coefficient	N 150 +- 50 ppm/C	<b>20% - M</b>
Power Factor	<0.0005	<b>20% - M</b>
Insulation Resistance (dry)	>10,000,000 Mohm	<b>Voltage Letter Code</b>
Insulation Resistance (after humidity cycle)	50,000 Mohm	<b>30V - Z</b>
Test Voltage	All caps tested at 2.5 times working voltage	<b>160V - X</b>
		<b>400V - V</b>
		<b>630V - U</b>
		<b>Terminations</b>
		<b>Tinned copper wire</b>

Capacitance Stability	
Capacitor Length	Long Term stability
10 mm and over	+ - (0.2% + 0.4pF)
8 mm	+ - (0.5% + 0.4pF)

Capacitor Length (mm)	Wire Diameter (mm)
8 mm	0.3
10 mm	0.5
over 10 mm	0.6

Voltage	Capacity	Length	Diameter
30V	25-1,000	8.0	4.0
	1,001-2,000	8.0	4.5
	2,001-3,000	8.0	5.0
	3,001-5,000	10.0	4.5
	5,001-7,500	10.0	6.5
	7,501-30,000	15.0	9.0
	30,001-50,000	20.0	10.0
	50,001-100,000	30.0	11.0
	100,001-200,000	30.0	15.0
63V	25-500	8.0	4.0
	501-750	8.0	5.0
	751-1,000	8.0	5.5
	1,001-2,200	10.0	6.0
	2,201-5,000	10.0	6.0
	5,001-6,800	10.0	7.0
	6,801-10,000	15.0	8.0
	10,001-15,000	15.0	10.0
	15,001-40,000	20.0	15.0
	40,001-100,000	30.0	15.0
160V	25-250	8.0	4.0
	251-500	8.0	5.0
	501-1,000	10.0	6.0
	1,001-4,000	10.0	8.0
	4,001-7,500	15.0	9.5
	7,501-40,000	20.0	15.0
	40,001-100,000	30.0	18.0
400V	25-100	8.0	4.0
	101-470	10.0	6.0
	471-1,000	10.0	8.0
	1,001-2,200	10.0	9.0
	2,201-5,000	15.0	12.0
	5,001-15,000	20.0	15.0
	15,001-50,000	30.0	20.0
50,001-100,000	40.0	30.0	
630V	25-100	10.0	5.0
	101-250	10.0	6.0
	251-1,000	10.0	9.0
	1,001-3,000	15.0	10.0
	3,001-7,500	20.0	14.0
	7,501-40,000	30.0	23.0
	40,001-100,000	44.0	25.0

Typical Capacitance Variation as a function of Temperature

