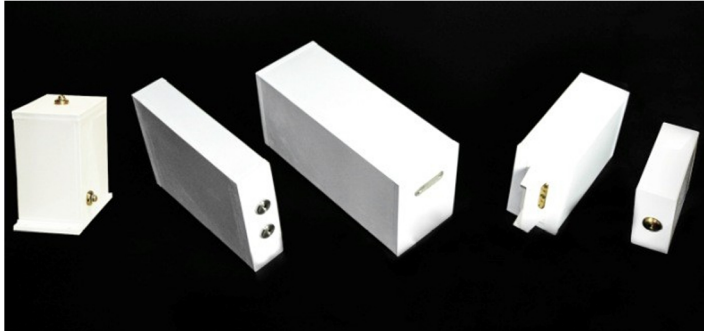


P-Series Capacitors



NWL's P-Series capacitors have a unique insulating plastic case package. This package can be modified to provide insulated mounting structures with no need for metal brackets in assembly. The plastic insulating case also allows for the greatest density of energy per unit volume by eliminating the need for high voltage feed-through bushings. Terminals are low profile and low inductance, and accommodate a wide range of connection options

including insert threaded, threaded post, and rails, while providing adequate mounting surface area. Terminals can be located at one end or opposing ends of the case to minimize circuit inductance or ease assembly. The internal dielectric systems are customized for the application to best meet demanding requirements for energy density, low loss, and capacitor life. The utilization of specific liquid impregnants with the different solid dielectrics further enhances the design of P-Series capacitors to specifically meet the critical requirements of the most demanding applications.

P-Series capacitors are well suited for many pulse power and power conditioning applications including:

- High Voltage DC Filtering
- High Power Pulse Lasers
- Impulse Generators
- High Rep Rate Pulse Modulators
- Fast (< 1 us) Energy Discharge
- Lightning Simulators
- Medical Lithotripsy

Unique features of the P-Series capacitor include:

- **High Voltage Insulating Package** – Plastic cases create a unique assembly option by eliminating the concern of isolating metal containers for high voltage applications.
- **Low Inductance Terminals** – With the plastic package, low profile high peak current terminals can easily be implemented to provide an economic approach for series and paralleling units to meet desired bank capacitance values.
- **High Density at High Voltage** – NWL's high K oil systems, combined with plastic case and low profile features, allow for the highest density high voltage film capacitor option.

P-Series Capacitors Product Information and Specifications

P-Series capacitors utilize a unique plastic case oil-filled product with the latest technological advancements in polypropylene film dielectric systems.

General Specifications

Capacitance Tolerance	+/- 10% standard, +/- 5% optional
Voltages	DC rating continuous steady state condition DC peak pulse duty, 0 – 100% reversal
Current / Temp Ratings	Ripple RMS Current @ 55 °C ambient Peak Current @ 40 °C ambient
Inductance	As low as 5.0 nH, depending on model
Operating Temperature	-40 °C to +75 °C

Electrical Ratings

uF	VDC	Vpk	Current	Current	Inductance	Life	Life (pulses)	Overall Size
+/-10%	continuous	pulse	RMS @ 40Hz	peak	nH	(hours)	20% Voltage Reversal	L x W x H(inches)
SINGLE-ENDED PACKAGE, RAIL TERMINALS								
0.500	24,000	30,000	25	25,000	~25	30,000	100,000	2.3 x 5.9 x 9.8
0.600	24,000	30,000	25	25,000	~35	30,000	100,000	2.3 x 5.9 x 11.8
0.060	30,000	40,000	25	25,000	~20	100,000	1 x 10 ⁷	2.3 x 5.9 x 6.5
0.150	40,000	50,000	25	25,000	~25	3,000	100,000	2.3 x 5.9 x 9.8
0.220	40,000	50,000	25	25,000	~35	30,000	100,000	2.3 x 5.9 x 11.8
0.550	60,000	75,000	25	25,000	~125	200	20,000	4.0 x 8.0 x 24.0
0.500	80,000	100,000	30	35,000	~235	200	20,000	6.0 x 8.0 x 23.5
0.300	80,000	100,000	10	3,000	~340	100,000	1 x 10 ⁶	5.0 x 5.9 x 29.0

P-Series Capacitors Product Information and Specifications

Electrical Ratings

uF	VDC	Vpk	Current	Current	Inductance	Life	Life (pulses)	Overall Size
+/-10%	continuous	pulse	RMS @ 40Hz	peak	nH	(hours)	20% Voltage Reversal	L x W x H(inches)
DOUBLE-ENDED PACKAGE, BUTTON TERMINALS								
0.040	25,000	30,000	20	25,000	~15	150,000	1 x 10 ⁹	2.3 x 5.9 x 4.63
0.030	30,000	35,000	40	10,000	~100	60,000	1 x 10 ⁸	2.3 x 5.9 x 4.75
2.250	25,000	30,000	50	50,000	~140	100,000	1 x 10 ⁸	6.0 x 8.0 x 16.50
0.040	30,000	36,000	25	25,000	~90	100,000	1 x 10 ⁸	4.0 x 6.0 x 5.60
0.060	32,000	40,000	25	25,000	~200	100,000	1 x 10 ⁸	4.0 x 6.0 x 9.50
0.100	35,000	40,000	45	50,000	~300	100,000	1 x 10 ⁹	4.13 x 5.13 x 18.00
0.110	35,000	40,000	25	25,000	~80	5,000	1 x 10 ⁸	4.0 x 6.0 x 10.50
0.200	35,000	40,000	60	50,000	~500	100,000	3 x 10 ⁹	4.0 x 6.0 x 24.50
0.025	35,000	40,000	40	10,000	~175	100,000	1 x 10 ⁹	4.0 x 6.0 x 9.00
0.008	40,000	50,000	40	15,000	~175	5,000	1 x 10 ⁸	4.13 x 5.13 x 16.25
0.080	40,000	50,000	50	15,000	~340	5,000	1 x 10 ⁸	4.13 x 5.13 x 19.25
0.014	70,000	100,000	20	5,000	~130	100	10,000	4.13 x 5.13 x 12.50
0.001	120,000	125,000	35	25,000	~70	200,000	10,000	4.0 x 6.0 x 8.22
0.030	120,000	125,000	25	10,000	~175	20,000	10,000	4.0 x 8.0 x 25.50
0.004	180,000	200,000	15	10,000	~200	50,000	10,000	3.75 x 3.75 x 14.0
0.006	450,000	450,000	50	5,000	~500	100,000	1 x 10 ⁸	6.0 x 8.0 x 26.50
DOUBLE-ENDED PACKAGE, RAIL TERMINALS								
0.100	20,000	25,000	40	10,000	~225	100,000	1 x 10 ⁸	2.3 x 5.9 x 8.40
0.012	65,000	80,000	25	35,000	~30	100	50,000	2.9 x 5.9 x 6.63
0.006	80,000	90,000	50	20,000	~420	200,000	1 x 10 ⁸	6.0 x 8.0 x 22.00
0.040	80,000	100,000	25	60,000	~45	50	2,500	2.8 x 5.9 x 8.63
0.040	85,000	110,000	10	40,000	~45	100	50,000	2.8 x 5.9 x 9.50
0.002	125,000	170,000	10	20,000	~30	1,000	200,000	2.8 x 5.9 x 6.88

* Measured inductance of plastic case capacitors depends on external circuit as well as internal configuration.

P-Series Capacitors Product Information and Specifications

Examples of typical ratings and packages above. Consult factory for specific requirements and additional existing models

