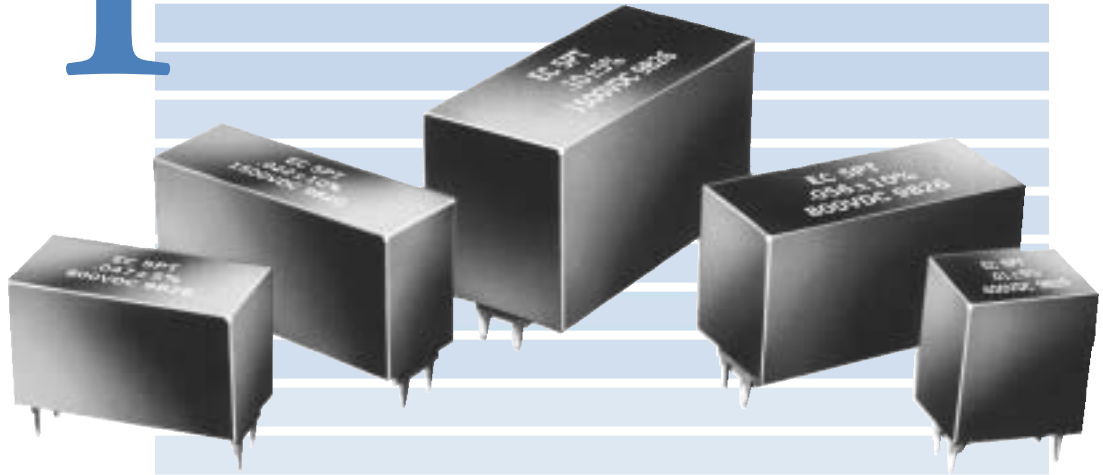


capacitors



5PT SERIES POLYPROPYLENE & FOIL RESONANT POWER SUPPLY CAPACITORS

***specifically designed to meet higher current carrying requirements
of resonant power circuits***

- HIGHER CURRENT CARRYING CAPABILITY ■ MINIMUM INDUCTANCE, LOWER IMPEDANCE AND ESR ■ FIVE CASE SIZES
- COMPACT CONFIGURATION ■ DIRECT PLUG-IN SPADE LUGS

The type **5PT SERIES** can meet the critical requirements of series resonant power supplies for higher current carrying capabilities at lower capacitance values, better than any other capacitor on the market today. Now circuit designers are able to build more performance into their systems *and* realize inherently greater reliability.

To yield these higher current capabilities, Electronic Concepts has developed a new capacitor construction that incorporates heavy metal electrodes in a very densely packed configuration. It is a design exclusive to EC. One that is able to extract significantly more current per MFD at rated voltage than competitive brands.



Its uniquely shaped lugs are mechanically sturdy and able to accommodate higher current with minimum inductance. The termination lugs are also a direct plug-in type which adds to overall performance efficiency.

With the advent of the **5PT**, the designer can maximize frequency characteristics -- and at the same time simplify system design with miniaturization, reduce assembly work -- plus realize significant overall system cost savings.

electronic concepts



specifications

CONSTRUCTION

Extended foil.

LIFETEST

Capacitors can withstand a test potential of rated voltage at 85°C between terminals for a period of 2,000 hours. Failure is defined as a permanent short or open circuit.

HUMIDITY RESISTANCE

Exceeds requirements of MIL-STD-202, Method 103.

HIGH FREQUENCY VIBRATION

Capacitors meet the 2000 cycle vibration test in accordance with Method 204 of MIL-STD-202A, condition B. Vibration is continuous for a four hour period in each of two directions, parallel and perpendicular to the major axis.

Test results show no mechanical damage, and no evidence of intermittent contacts or open short circuiting.

QUALITY CONTROL

Capacitors are 100% tested for:

- CAPACITANCE TOLERANCE
- DISSIPATION FACTOR
- DIELECTRIC WITHSTANDING VOLTAGE
- INSULATION RESISTANCE

Complete process and inspection data is maintained on file and is available on special request.

MARKING

All capacitors are marked with one or more of the following: company initials iECi, corporate logo or EC trademark -- in addition to type 5PT, capacitance, tolerance, rated DC working voltage and date code.

DATE CODE

The first two digits of the date code represent the year, the second two digits the week, i.e., 9952 is the 52nd week of 1999, 0102 is the second week of 2001.

QUALITY ASSURANCE

Major emphasis is placed on quality assurance. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts, Inc. will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

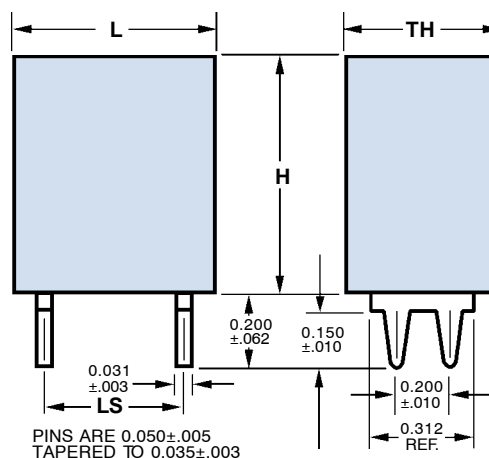
In constructing the components described, the full intent of the specification will be met. Electronic Concepts, Inc. does, however, reserve the right to depart from detail specifications in order to improve the design of its products. Components made under military approvals will be done so in accordance with specification requirements.

This information is believed to be accurate and reliable. However, Electronic Concepts, Inc. assumes no responsibility for its use, nor for any infringement of patents or other rights of third parties which may result.

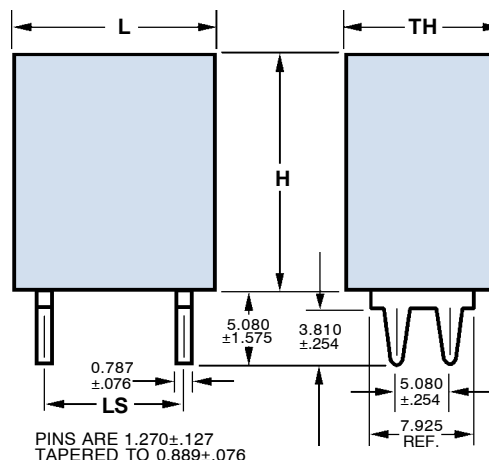
SEE PAGE 4 FOR ELECTRICAL SPECIFICATIONS

dimensional data

inches



metric



Case No.	TH		H		L		LS	
	in ±.010	mm ±.254	in max	mm max	in ±.010	mm ±.254	in ±.031	mm ±.787
1	0.500	12.700	0.730	18.542	0.645	16.383	0.500	12.700
2	0.500	12.700	0.730	18.542	1.250	31.750	1.000	25.400
3	0.530	13.462	0.780	19.812	1.400	35.560	1.200	30.480
4	0.625	15.875	0.980	24.892	1.625	41.275	1.400	35.560
5	0.800	20.320	0.980	24.892	1.750	44.450	1.600	40.640



electrical data

Part Number	Cap (µF)	VDC	VAC	ESR (ohms) 100kHz	25C (Arms) 100kHz	85C (Arms) 100kHz	dv/dt V/µs	Ipk AMPS	ESL (nH)	Fres (MHz)	CASE NO.
5PT46J103	0.010	400	230	0.016	10.0	4.0	27937	279	8.6	17.2	1
5PT46J123	0.012	400	230	0.013	11.0	4.4	27937	335	8.6	15.7	1
5PT46J153	0.015	400	230	0.011	12.3	4.9	23280	349	8.6	14.0	1
5PT46J183	0.018	400	230	0.009	13.4	5.4	23280	419	8.6	12.8	1
5PT46J223	0.022	400	230	0.007	14.8	5.9	18624	410	8.6	11.6	1
5PT46J273	0.027	400	230	0.006	16.4	6.6	18624	503	8.6	10.4	1
5PT46J333	0.033	400	230	0.005	18.2	7.3	16296	538	8.6	9.4	1
5PT46J393	0.039	400	230	0.004	19.8	7.9	13968	545	8.6	8.7	1
5PT46J473	0.047	400	230	0.003	21.7	8.7	11640	608	8.6	7.9	1
5PT46J563	0.056	400	230	0.003	23.7	9.5	11640	652	8.6	7.3	1
5PT46J683	0.068	400	230	0.002	26.1	10.4	10476	712	8.6	6.6	1
5PT46J823	0.082	400	230	0.002	28.7	11.5	10476	859	8.6	6.0	1
5PT46J104	0.100	400	230	0.002	31.7	12.7	9209	921	8.6	5.4	1
5PT46N103	0.010	800	460	0.016	11.3	4.5	37580	376	17.2	12.1	2
5PT46N123	0.012	800	460	0.013	12.4	5.0	34448	413	17.2	11.1	2
5PT46N153	0.015	800	460	0.011	13.9	5.5	31317	470	17.2	9.9	2
5PT46N183	0.018	800	460	0.009	15.2	6.1	28185	507	17.2	9.0	2
5PT46N223	0.022	800	460	0.007	16.8	6.7	25053	551	17.2	8.2	2
5PT46N273	0.027	800	460	0.006	18.6	7.4	20356	550	17.2	7.4	2
5PT46N333	0.033	800	460	0.005	20.6	8.2	18790	620	17.2	6.7	2
5PT46N393	0.039	800	460	0.004	22.4	8.9	17224	672	17.2	6.1	2
5PT46N473	0.047	800	460	0.003	24.6	9.8	15658	736	17.2	5.6	2
5PT46N563	0.056	800	460	0.003	28.1	11.3	13005	728	20.6	4.7	3
5PT46N683	0.068	800	460	0.002	31.0	12.4	10837	737	20.6	4.2	3
5PT46N823	0.082	800	460	0.002	34.0	13.6	9754	800	20.6	3.9	3
5PT46N104	0.100	800	460	0.002	37.6	15.0	9754	975	20.6	3.5	3
5PT46L103	0.010	1200	460	0.016	11.3	4.5	37580	376	17.2	12.1	2
5PT46L123	0.012	1200	460	0.013	12.4	5.0	34448	413	17.2	11.1	2
5PT46L153	0.015	1200	460	0.011	13.9	5.5	31317	470	17.2	9.9	2
5PT46L183	0.018	1200	460	0.009	15.2	6.1	28185	507	17.2	9.0	2
5PT46L223	0.022	1200	460	0.007	16.8	6.7	25053	551	17.2	8.2	2
5PT46L273	0.027	1200	460	0.006	19.5	7.8	17340	468	20.6	6.7	3
5PT46L333	0.033	1200	460	0.005	21.6	8.6	17340	572	20.6	6.1	3
5PT46L393	0.039	1200	460	0.004	23.5	9.4	15172	592	20.6	5.6	3
5PT46L473	0.047	1200	460	0.003	28.9	11.6	14901	700	24.1	4.7	4
5PT46L563	0.056	1200	460	0.003	31.6	12.6	14901	834	24.1	4.3	4
5PT46L683	0.068	1200	460	0.002	34.8	13.9	13246	901	24.1	3.9	4
5PT46L823	0.082	1200	460	0.002	38.2	15.3	11590	950	24.1	3.6	4
5PT46L104	0.100	1200	460	0.002	45.1	18.0	11255	1125	27.5	3.0	5
5PT46M103	0.010	1500	460	0.016	11.3	4.5	37580	376	17.2	12.1	2
5PT46M123	0.012	1500	460	0.013	12.4	5.0	34448	413	17.2	11.1	2
5PT46M153	0.015	1500	460	0.011	13.9	5.5	31317	470	17.2	9.9	2
5PT46M183	0.018	1500	460	0.009	15.2	6.1	28185	507	17.2	9.0	2
5PT46M223	0.022	1500	460	0.007	17.6	7.1	19507	429	20.6	7.5	3
5PT46M273	0.027	1500	460	0.006	19.5	7.8	17340	468	20.6	6.7	3
5PT46M333	0.033	1500	460	0.005	21.6	8.6	17340	572	20.6	6.1	3
5PT46M393	0.039	1500	460	0.004	26.3	10.5	14069	549	24.1	5.2	4
5PT46M473	0.047	1500	460	0.003	28.9	11.6	14901	700	24.1	4.7	4
5PT46M563	0.056	1500	460	0.003	31.6	12.6	14901	834	24.1	4.3	4
5PT46M683	0.068	1500	460	0.002	34.8	13.9	13246	901	24.1	3.9	4
5PT46M823	0.082	1500	460	0.002	40.9	16.3	12662	1038	27.5	3.4	5
5PT46M104	0.100	1500	460	0.002	45.1	18.0	11255	1125	27.5	3.0	5

The tenth character of the part number represents capacitance tolerance: M=±20%, K=±10% and J=±5%

performance CHARACTERISTICS

OPERATING TEMPERATURE RANGE

From -55°C to +105°C.

INSULATION RESISTANCE

When measured at test temperature and rated voltage for a minimum of two (2) minutes, the insulation resistance equals or exceeds the following values:

Temperature	25°C	85°C	+105°C
Megohms x Microfarads	100,000	10,000	1,000

Insulation resistance in megohms need not exceed: 1,000,000 200,000 20,000

DISSIPATION FACTOR

When measured at the frequency specified for capacitance measurement, the dissipation factor will not exceed 0.1%.

CAPACITANCE CHANGE

Capacitance change versus temperature for these capacitors shall not exceed the following:

Temperature Degrees C.	-55	+25	+105
Percent Change	+2.0	0	-4.0
Typical	+1.6	0	-2.2

DIELECTRIC STRENGTH

Capacitors withstand a DC potential of 1.5 x rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a minimum resistance of 100 OHMS per volt.

CAPACITANCE TOLERANCE

Standard tolerance is ±10%. Tolerances of ±5%, ±2% and ±1% are also available.

NOTE: Capacitance is measured at 25°C, and at a frequency of 1KHZ for all values.

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US National Distribution Center

Elcon Sales

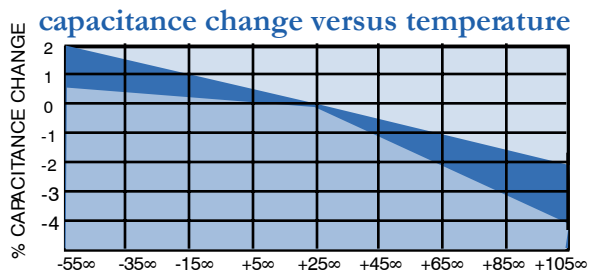
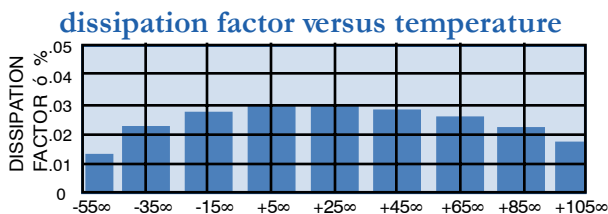
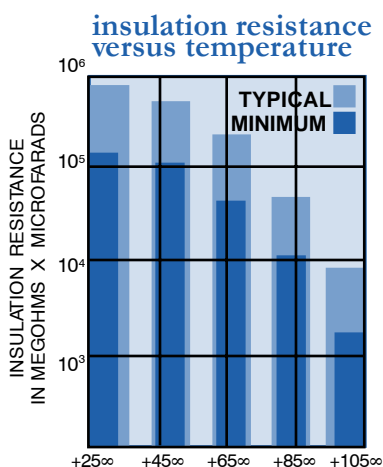
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electrical characteristics vs. temperature (centigrade)



electronic concepts



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