Electronic Concepts

"Film Capacitor Innovation without Limits"

5HT SERIES
High Temperature Film & Foil

High Temperature Film & Foil Resonant Power Supply Capacitors

Specifically designed to meet higher ambient temperature requirements of resonant power circuits.

FEATURES

- Operation to 175°C
- Compact Configuration
- Direct Plug-in Spade Lugs
- Low ESL
- Low ESR
- High dv/dt
- High Peak Current

Specification Summary

Capacitance Range
0.010µF to 0.100µF

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

Operating Temperature Range
-55°C to +175°C

Enclosure/Construction
High temperature film and foil potted in a thermo plastic housing.

Voltage Rating
400 VDC
230 VAC

Quality Control
Capacitors are tested 100% for:
- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance

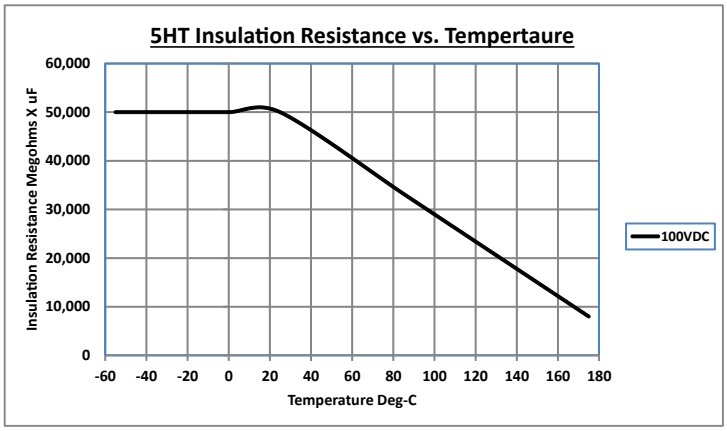
Process and inspection data are maintained on file and available upon special request.

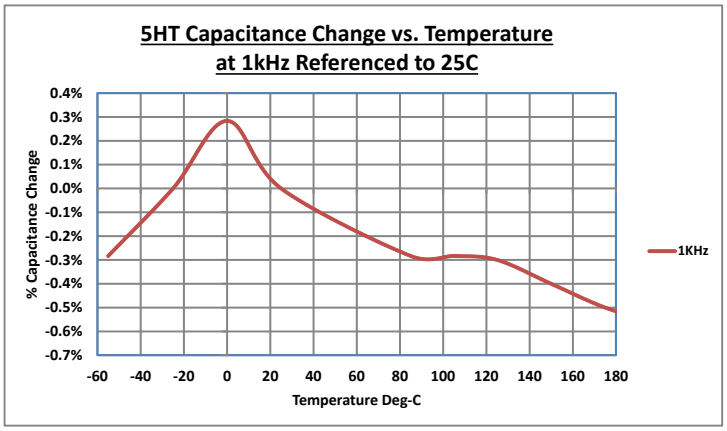
Environmental

Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Thermal Shock	107	F*
Life	108	F**
Reference MIL-STD-202		

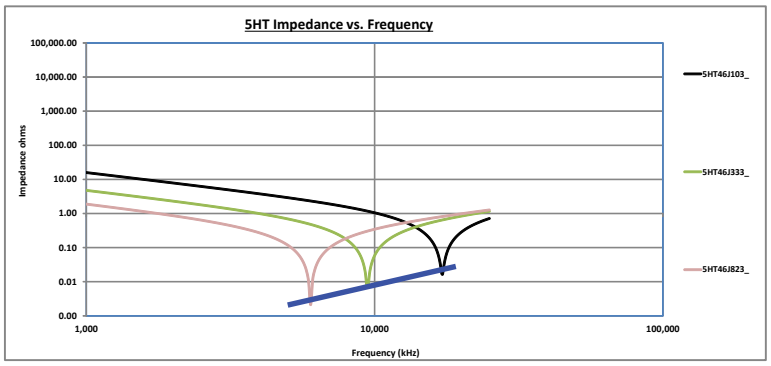
* The temperature at step 3 shall be set at 175°C instead of 150°C
** Life test conditions: 133% of rated voltage at 175°C

Characteristics

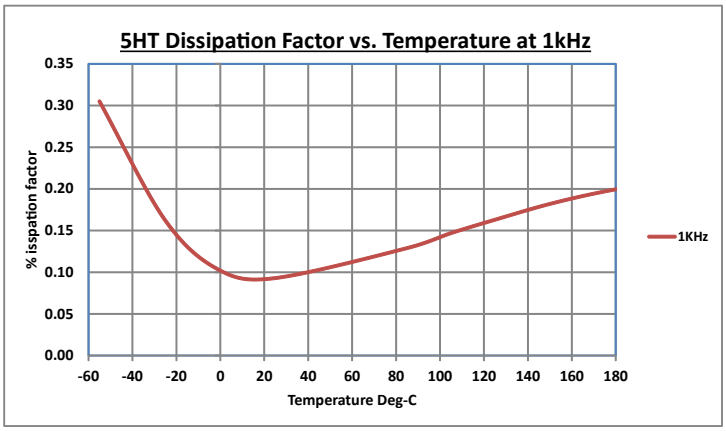




Dielectric Strength
Capacitors withstand a DC potential of 1.5 x rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a minimum resistance of 100 OHMS per volt minimum.



Dissipation Factor
When mearsured at the frequency specified for capacitance measurement, the dissipation factor will not exceed 0.05%.



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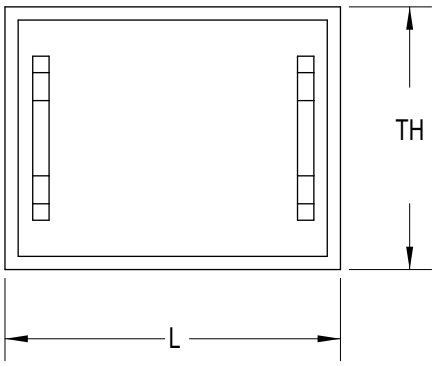
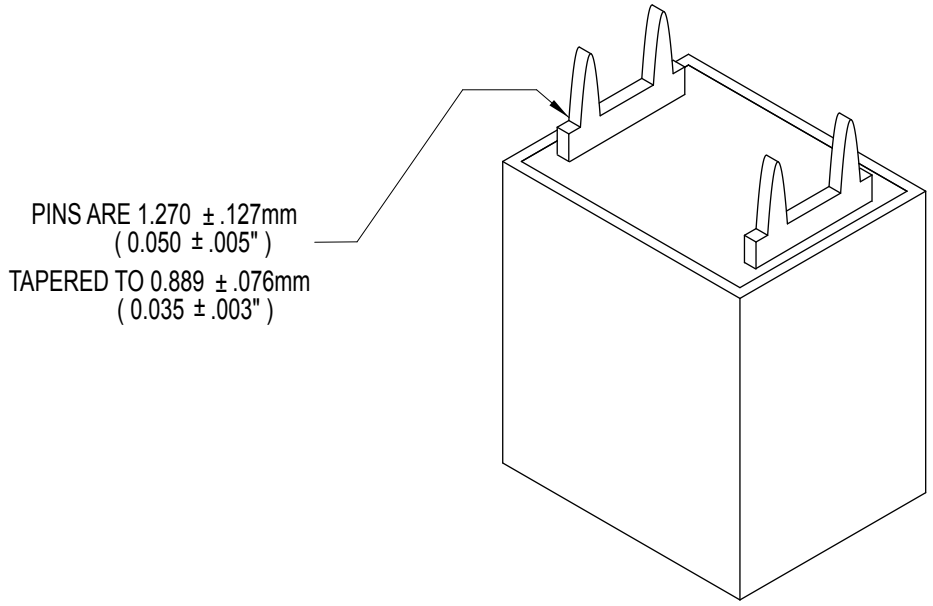
Detail Data

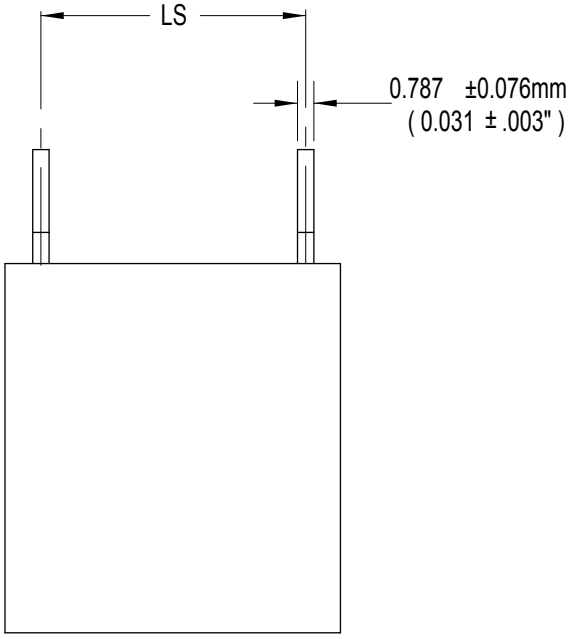
PART NUMBER	CAP	VOLTAGE	VOLTAGE	ESR (ohms)	100kHz (Arms)				dv/dt	I PEAK	ESL	Fres
	µF	VDC	VAC	100 kHz	25°C	75°C	125°C	175°C	V/µs	(AMPS)	(nH)	(MHz)
5HT46J103_	0.010	400	230	0.075	7.1	5.8	4.1	0.21	27,937	279	8.6	17.2
5HT46J123_	0.012	400	230	0.070	8.2	6.7	4.8	0.24	27,937	335	8.6	15.7
5HT46J153_	0.015	400	230	0.056	9.4	7.6	5.4	0.27	23,280	349	8.6	14.0
5HT46J183_	0.018	400	230	0.046	10.2	8.4	5.9	0.30	23,280	419	8.6	12.8
5HT46J223_	0.022	400	230	0.038	11.3	9.3	6.5	0.33	18,624	410	8.6	11.6
5HT46J273_	0.027	400	230	0.031	12.5	10.2	7.2	0.37	18,624	503	8.6	10.4
5HT46J333_	0.033	400	230	0.025	13.7	11.2	7.9	0.40	16,296	538	8.6	9.4
5HT46J393_	0.039	400	230	0.022	15.0	12.2	8.7	0.44	13,968	545	8.6	8.7
5HT46J473_	0.047	400	230	0.018	16.7	13.6	9.6	0.49	11,640	608	8.6	7.9
5HT46J563_	0.056	400	230	0.015	18.3	15.0	10.6	0.54	11,640	652	8.6	7.3
5HT46J683_	0.068	400	230	0.012	20.4	16.7	11.8	0.60	10,476	712	8.6	6.6
5HT46J823_	0.082	400	230	0.010	21.2	17.3	12.2	0.62	10,476	859	8.6	6.0
5HT46J104_	0.10	400	230	0.009	24.8	20.3	14.3	0.73	9,209	921	8.6	5.4

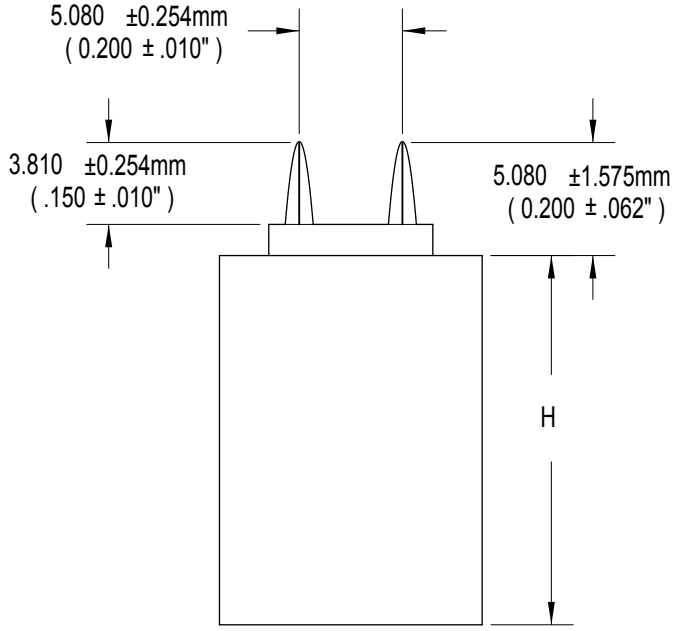
Mechanical Data

TH		H		L		LS	
in. ±0.010	mm ±0.254	in. max	mm max	in. ±0.010	mm ±0.254	in. ±0.010	mm ±0.254
0.500	12.700	0.730	18.542	0.645	16.383	0.500	12.700









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Rev. 1

Additional Information

This series is specifically designed to meet the challenges of high temperature environments in resonant power supplies with operation to 175°C. The 5HT series meets the critical requirements of series resonant power supplies for high current carrying capabilities at lower capacitance values.

How to Order

TYPE Polypropylene & Foil →	**5HT46**
VOLTAGE J = 400VDC →	**J**
CAPACITANCE IN PICOFARADS The first two digits are significant, the third represents the number of zeros →	**103**
TOLERANCE K = ±10%. Tolerances of ±5%, ±2%, and ±1% are also available. →	**K**

Marking And Date Code
All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type 5PT, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 1252 is the 52nd week of 2012, 1202 is the second week of 2012.

Quality Assurance
Major emphasis is placed on quality assurance. EC is an ISO 9001 and AS9100 Certified Company. 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 will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

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