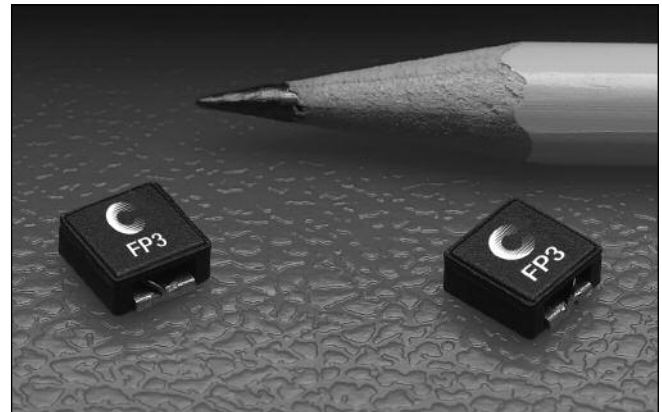


Description

- 155°C maximum total temperature operation
- Low profile high current inductors
- Inductance range 0.1uH to 15uH
- Design utilizes high temperature powder iron material with a non-organic binder to eliminate thermal aging
- Current rating up to 34.7Adc (Higher peak currents may be attained with a greater rolloff, see rolloff curve)
- Frequency range up to 2MHz



Applications

- Computers and portable power devices
- Energy storage applications
- DC-DC converters
- Input - Output filter application

Environmental Data

- Storage temperature range: -40°C to +155°C
- Operating ambient temperature range: -40°C to +155°C (range is application specific).
- Solder reflow temperature: +260°C max. for 10 seconds max.

Packaging

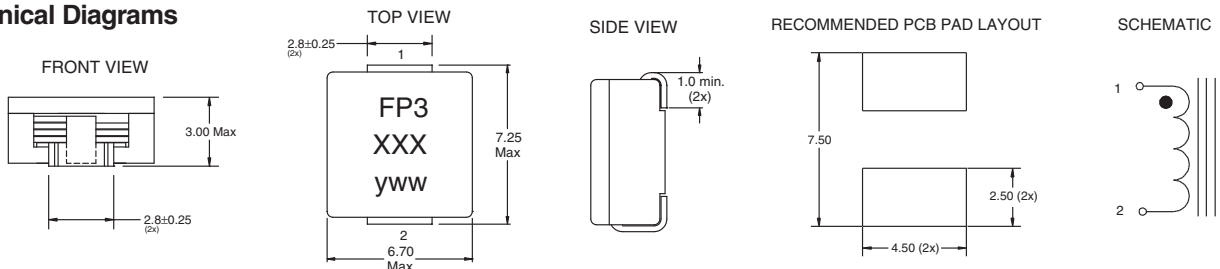
- Units supplied in tape and reel packaging.
- Reel quantity = 1,700 parts per reel.

Part Number	Rated Inductance μH	OCL (1) $\mu\text{H} \pm 15\%$	I _{rms} (2) Amperes	Isat (3) Amperes Approx. 10%	Isat (4) Amperes Approx. 15%	DCR mOhms @ 20°C (Max.)	K-factor (5)
FP3-R10-R	0.10	0.10	19.0	27	34.7	1.21	803
FP3-R20-R	0.20	0.22	15.3	16	20.8	1.88	482
FP3-R47-R	0.47	0.44	10.9	11.6	14.9	3.67	344
FP3-R68-R	0.68	0.72	9.72	9.0	11.6	4.63	268
FP3-1R0-R	1.00	1.10	6.26	7.4	9.5	11.2	219
FP3-1R5-R	1.50	1.50	5.78	6.2	8.0	13.1	185
FP3-2R0-R	2.00	2.00	5.40	5.4	6.9	15.0	161
FP3-3R3-R	3.30	3.20	3.63	4.3	5.5	30.0	127
FP3-4R7-R	4.70	4.70	3.23	3.5	4.2	40.0	105
FP3-8R2-R	8.20	8.5	2.91	2.6	3.4	74.0	78
FP3-100-R	10.0	10.9	2.30	2.3	3.0	101	69
FP3-150-R	15.0	14.9	2.22	2.0	2.5	127	59

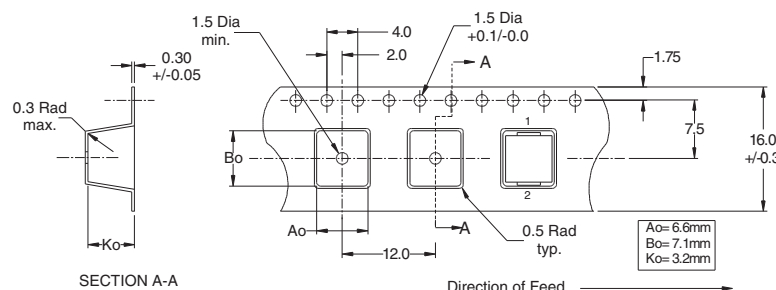
1) OCL (Open Circuit Inductance) Test parameters: 100kHz, 0.1Vrms, 0.0Adc
 2) DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 155°C under worst case operating conditions verified in the end application.

3) Isat Amperes Peak for approximately 10% rolloff @ 20°C
 4) Isat Amperes Peak for approximately 15% rolloff @ 20°C
 5) K-factor: Used to determine B p-p for core loss (see graph). $B \text{ p-p} = K^2 L \Delta I$
 B p-p:(Gauss), K: (K factor from table), L: (Inductance in uH), ΔI (Peak to peak ripple current in Amps).

Mechanical Diagrams



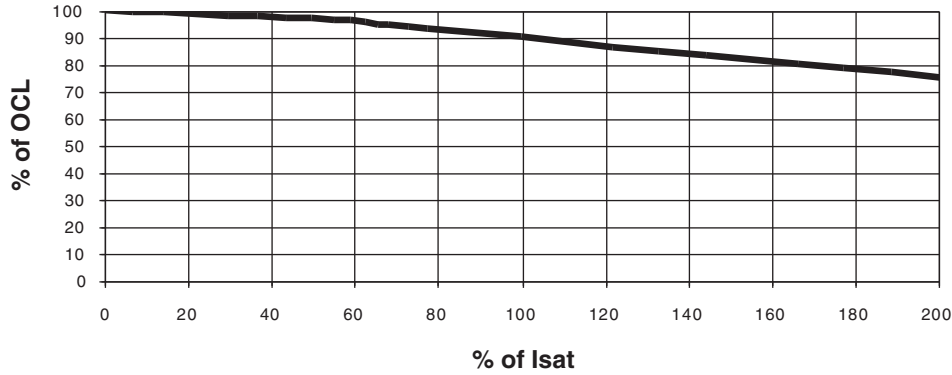
Packaging Information



xxx = Inductance value
 yww = Date code

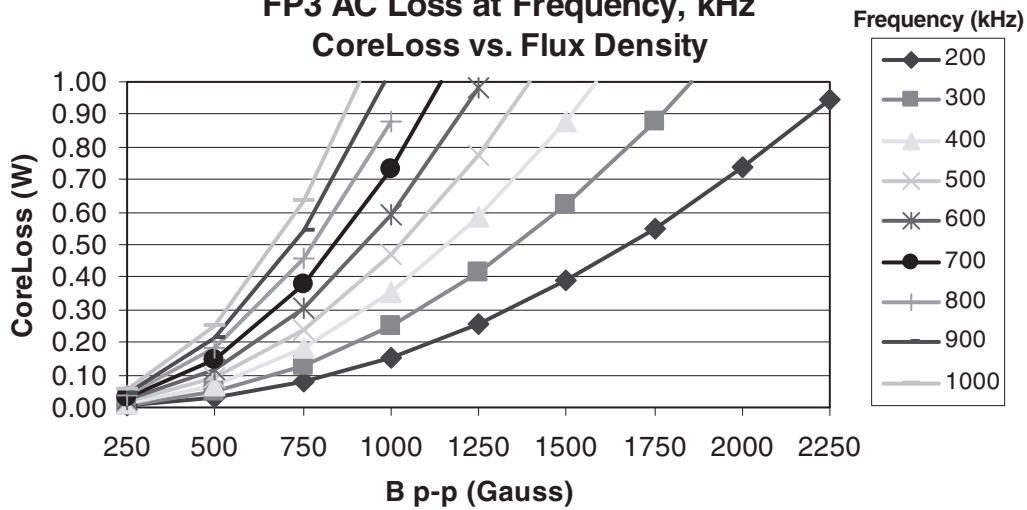
Inductance Characteristics

OCL vs. Isat

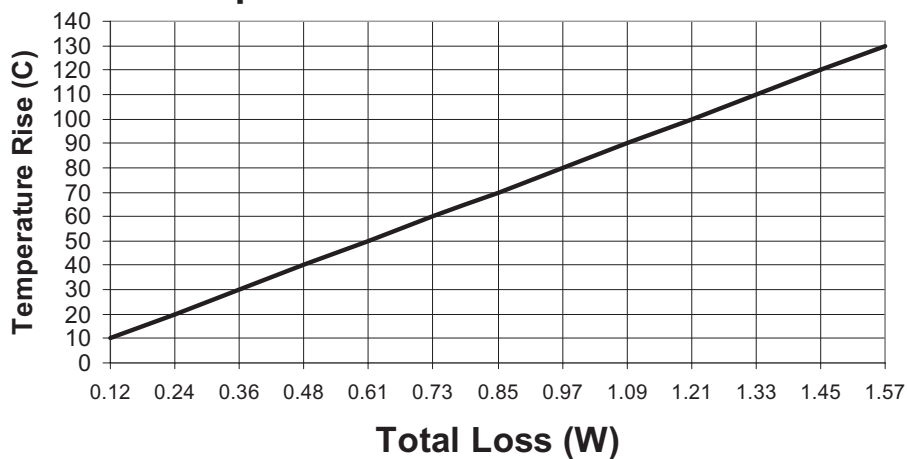


Core Loss

FP3 AC Loss at Frequency, kHz
CoreLoss vs. Flux Density



Temperature Rise vs. Watt Loss



Visit us on the Web at www.cooperbussmann.com**1225 Broken Sound Pkwy. Suite F Boca Raton, FL 33487**
Tel: +1-561-998-4100 Toll Free: +1-888-414-2645 Fax: +1-561-241-6640

This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Electronic Technologies reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Electronic Technologies also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Electronic Technologies does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.