

Description

- 155°C maximum total temperature operation
- Surface mount inductors designed for high speed, high current switch mode applications requiring lower inductance
- Gapped ferrite cores for maximum efficiency
- Inductance values from 0.100 uH to 0.200 uH
- Current range up to 64 Amps
- Meets UL 94V-0 flammability standard
- Ferrite core material



Applications

- Voltage regulator modules (VRMs) for servers, microprocessors
- High frequency, high current switching power supplies

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

- Supplied in tape and reel packaging, 900 parts per reel

Part Number	Rated Inductance μH	OCL (2) $\pm 15\%$ μH	Isat (5) Amperes Peak	Irms (4) Amperes	DCR Ω @ 20°C (Nom.)	DCR Ω @ 20°C (Max.)	Volts- μSec (3) (VuSec) (ref.)
FP4-100-R	0.100	0.100	64	40	0.00048	0.00065	1.33
FP4-120-R	0.120	0.120	54	40	0.00048	0.00065	1.33
FP4-150-R	0.150	0.150	42	40	0.00048	0.00065	1.33
FP4-200-R	0.200	0.200	30	40	0.00048	0.00065	1.33

- 1) Units supplied in Tape & Reel packaging; 900 parts on 13" diameter reel.
- 2) OCL (Open Circuit Inductance) Test parameters: 1MHz, .100Vrms, 0.0Adc & ISAT @20°C
- 3) Applied Volt-Time product (V- μS) across the inductor. This value represents the applied V- μS at 500kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

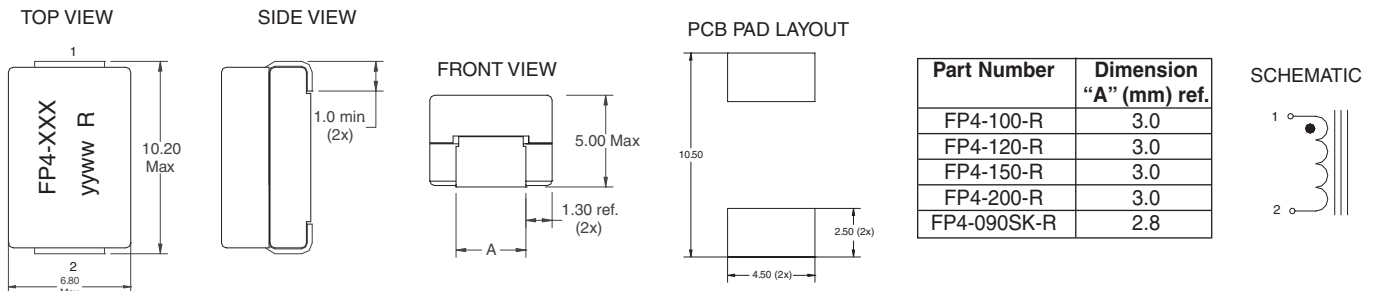
- 4) DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, airflow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 155°C under worst case operating conditions verified in the end application.
- 5) Peak Current for approximately 30% rolloff @ 20°C

Part Number	Rated Inductance μH	OCL (2) $\pm 15\%$ μH	Isat (5) Amperes Peak	Irms (4) Amperes	DCR @ 25°C	Volts- μSec (3) (Vus) (ref.)
FP4-090SK-R	0.090	0.090	72	33	0.423-0.517	1.33

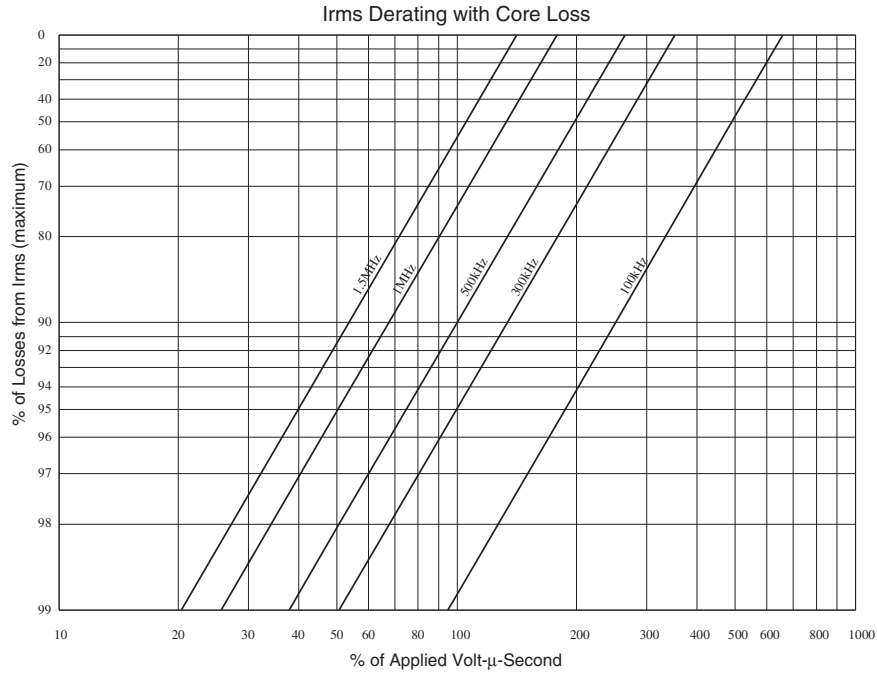
- 1) Units supplied in Tape & Reel packaging; 900 parts on 13" diameter reel.
- 2) OCL (Open Circuit Inductance) Test parameters: 100kHz, 1.0Vrms, 0.0Adc & ISAT @25°C
- 3) Applied Volt-Time product (V- μS) across the inductor. This value represents the applied V- μS at 500kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

- 4) DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, airflow, 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.
- 5) Peak Current for approximately 20% rolloff @ 25°C

Mechanical Diagrams



Core Loss



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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.