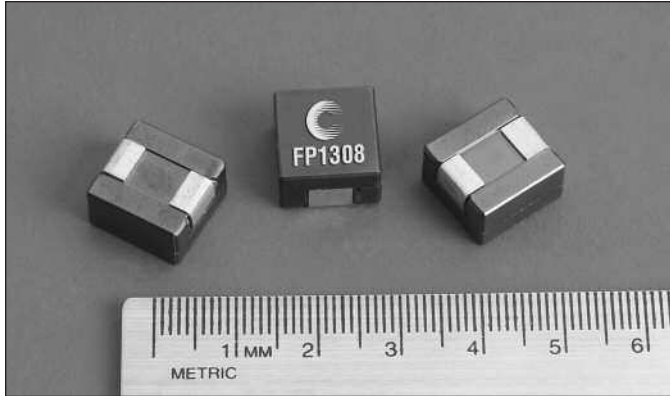


FP1308 Series

FLAT-PAC™ High Current Power Inductors



Description

- 125°C maximum total operating temperature
- 12.9 x 13.7 x 8.0mm surface mount package
- High current handling capability, compact footprint
- Ferrite core material

- Inductance range from 0.110µH to 0.440µH
- Current range from 32 amps to 120 amps
- Frequency range up to 2MHz



Applications

- Voltage regulator modules (VRM) for servers and microprocessors
- Multi-phase buck inductors
- High frequency, high current switching power supplies

Environmental Data

- Storage temperature range: -40°C to +125°C
- Operating temperature range: -40°C to +125°C (range is application specific)
- Solder reflow temperature: +260°C max. for 10 seconds maximum

Packaging

- Supplied in tape and reel packaging, 400 per reel

Part Number	Rated Inductance (µH)	OCL ⁽¹⁾ µH±10%	I _{rms} ⁽²⁾ Amps	I _{sat} ⁽³⁾ Amps	DCR mΩ@25°C (Typical)	DCR mΩ@25°C (Maximum)	K-factor ⁽⁴⁾
FP1308-R11-R	0.110	0.110	68	120	0.20	0.24	21.330
FP1308-R21-R	0.210	0.210	68	72	0.20	0.24	21.333
FP1308-R26-R	0.260	0.260	68	60	0.20	0.24	21.335
FP1308-R32-R	0.320	0.320	68	45	0.20	0.24	21.340
FP1308-R44-R	0.440	0.440	68	32	0.20	0.24	21.366

(1) Open Circuit Inductance Test Parameters: 100kHz, 1.0V, 0.0Adc.

(2) I_{rms}: DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. Pad 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 125°C under worst case operating conditions verified in the end application.

(3) I_{sat} amps peak for 20% maximum rolloff (@25°C)

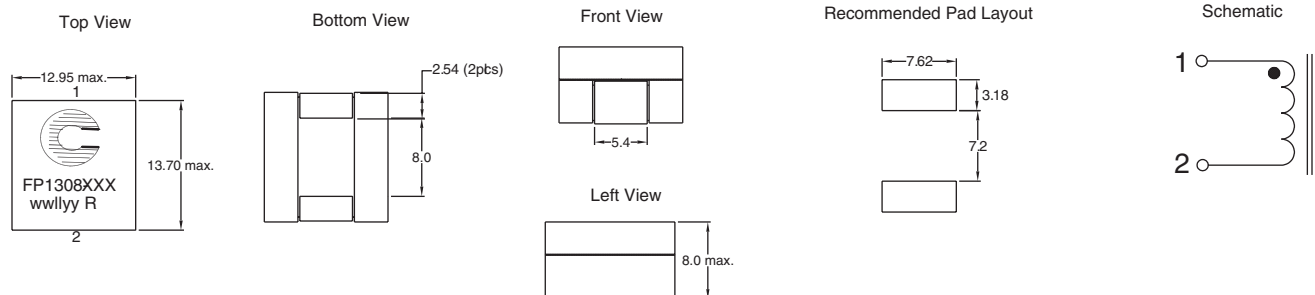
(4) K-factor: Used to determine B p-p for core loss (see graph).

B p-p = K*L*ΔI, B p-p(mT), K: (K factor from table), L: (Inductance in µH), ΔI (Peak to peak ripple current in amps).

(5) Part Number Definition: FP1308-xxx-R

FP1308 = Product code and size; -xxx = Inductance value in µH; R = decimal point; If no R is present, third character = # of zeros. -R suffix = RoHS compliant

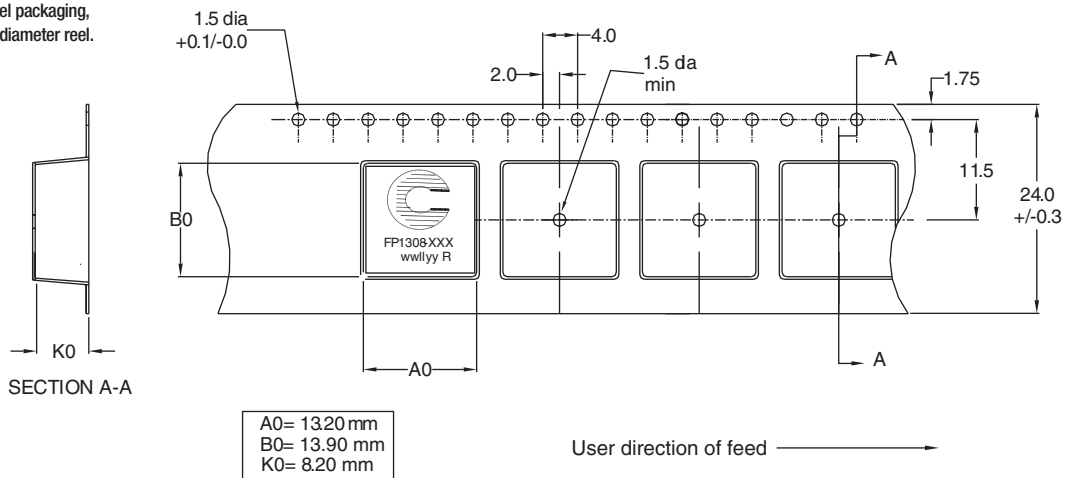
Dimensions - mm



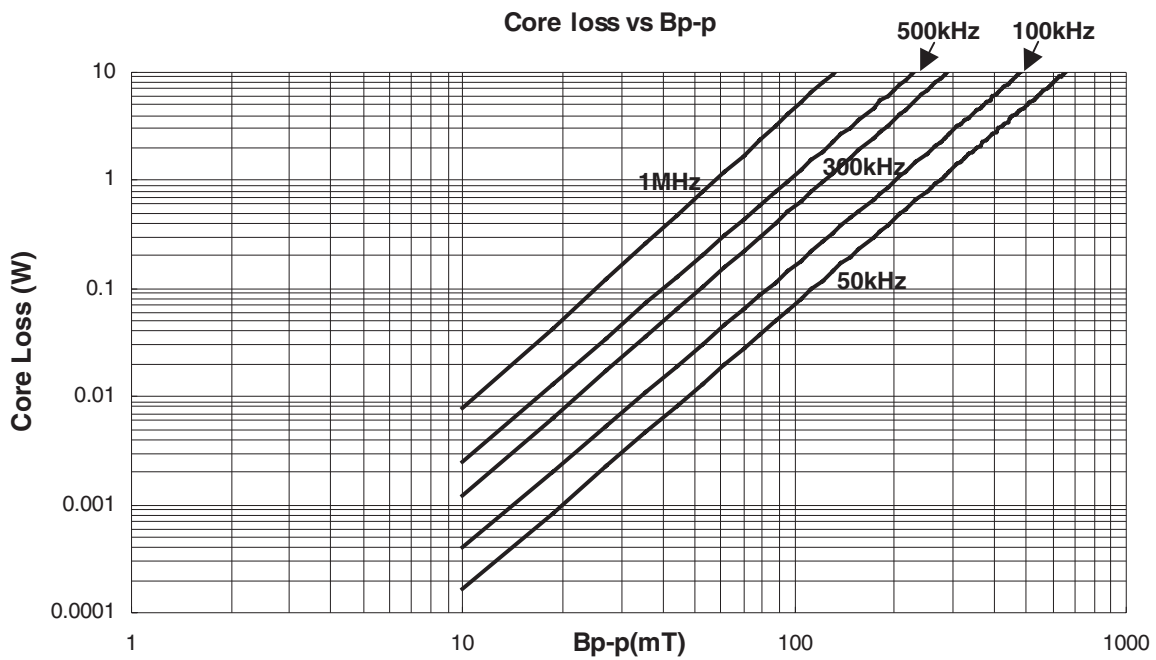
wwlly = Date Code. R = Revision level.

Packaging Information

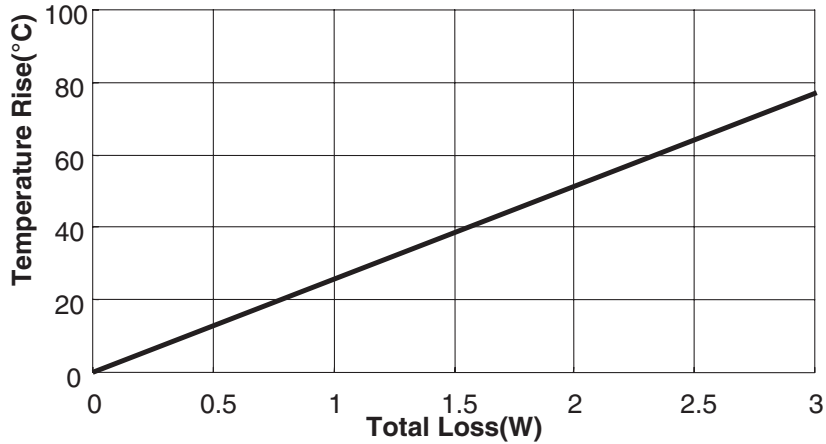
Supplied in tape and reel packaging,
400 parts per reel, 13" diameter reel.



Core Loss

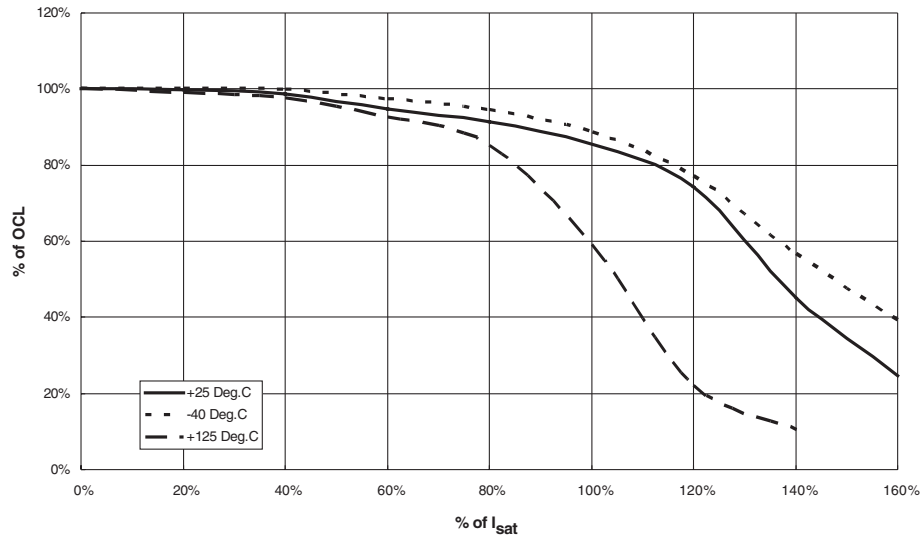


Temperature Rise vs. Loss



Inductance Characteristics

OCL vs I_{sat}



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