COOPER COILTRONICS

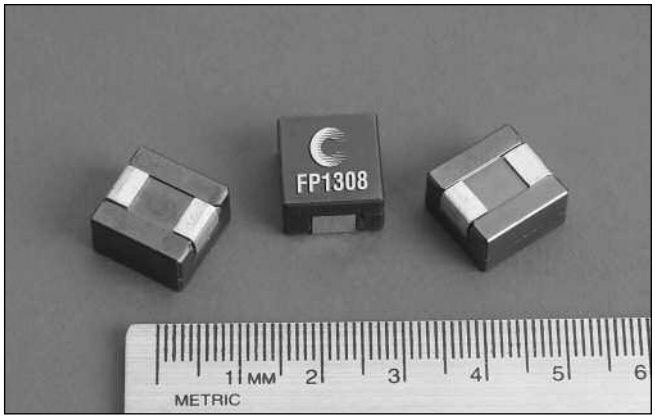
COOPER Bussmann

FP1308 Series
FLAT-PAC™
High Current Power Inductors

Description

RoHS 2002/95/EC

- 125°C maximum total temperature operation
- 12.9mm x 13.7mm x 8.0mm surface mount package
- High current handling capability, compact footprint
- Ferrite core material
- Inductance range from 110nH to 440nH
- Current range from 120 Amps to 32 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

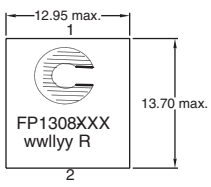
- Supplied in tape and reel packaging, 450 per reel

Part Number	Rated Inductance (nH)	OCL (1) nH±10%	Irms(2) Amperes	Isat (3) Amperes	DCR mΩ @25°C (Typical)	DCR mΩ @25°C (Maximum)	K-factor (4)
FP1308-R11-R	110	110	68	120	0.20	0.24	21.330
FP1308-R21-R	210	210	68	72	0.20	0.24	21.333
FP1308-R26-R	260	260	68	60	0.20	0.24	21.335
FP1308-R32-R	320	320	68	45	0.20	0.24	21.340
FP1308-R44-R	440	440	68	32	0.20	0.24	21.366

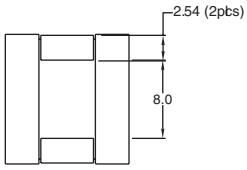
(1) Open Circuit Inductance Test Parameters: 100kHz, 1.0V, 0.0Adc.
(2) Irms: DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.
(3) Isat Amperes 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 uH;
R = decimal point; If no R is present, third character = # of zeros.
-R suffix = RoHS compliant

Mechanical Diagrams

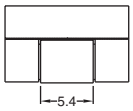
TOP VIEW



BOTTOM VIEW

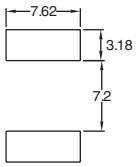


FRONT VIEW

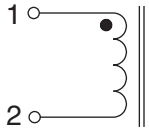


LEFT VIEW

RECOMMENDED PCB LAYOUT



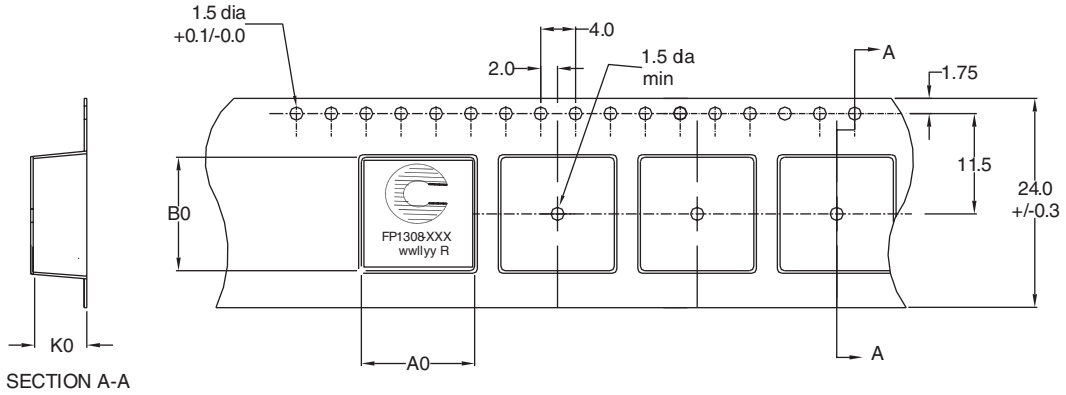
SCHEMATIC



Dimensions are in millimeters.

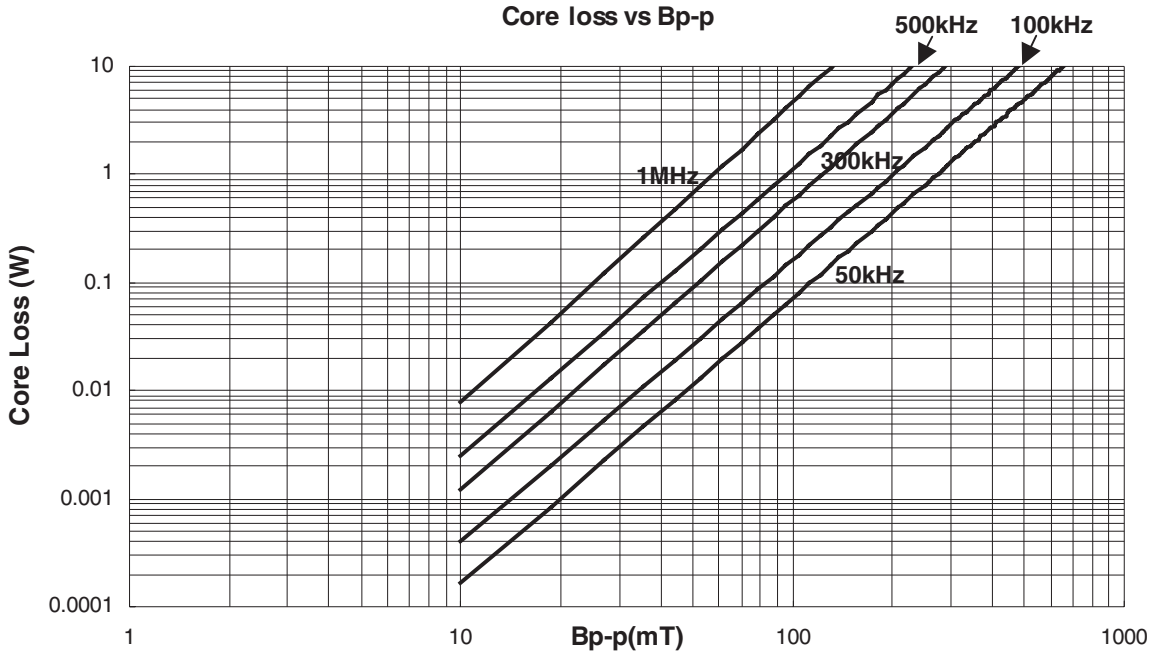
wwlly = Date Code. R = Revision level.

Packaging Information

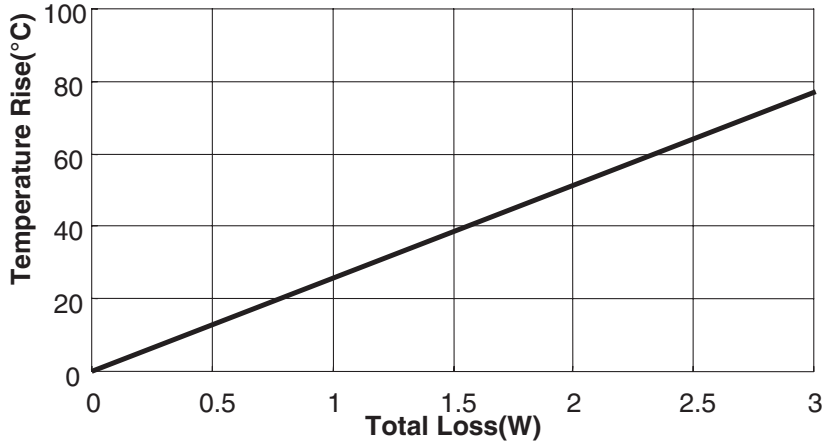


Parts packaged on 13" Diameter reel,
450 parts per reel.

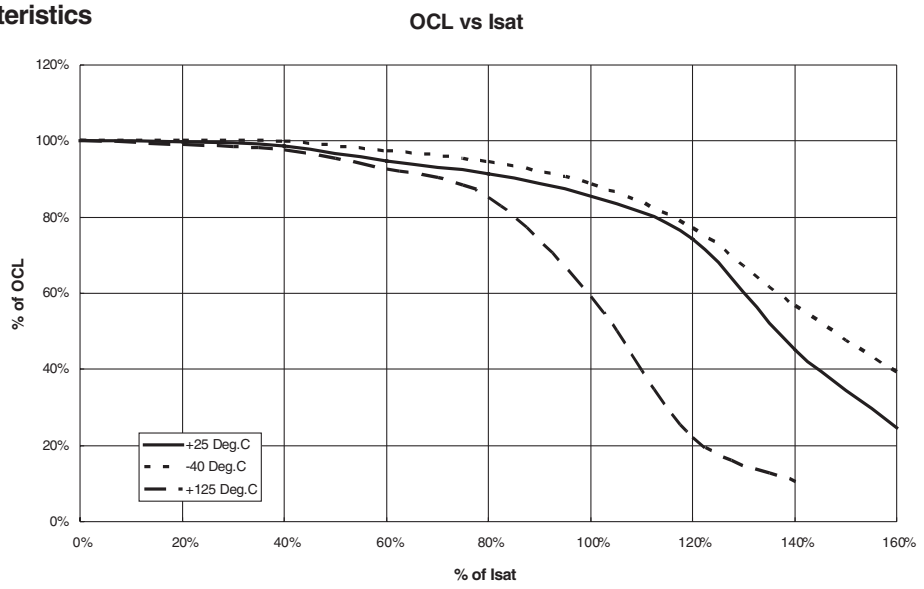
Core Loss



Temperature Rise vs. Loss



Inductance Characteristics



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