

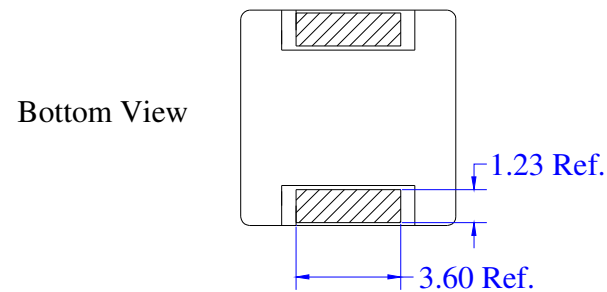
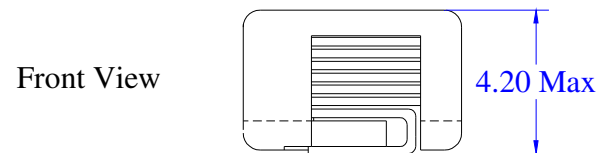
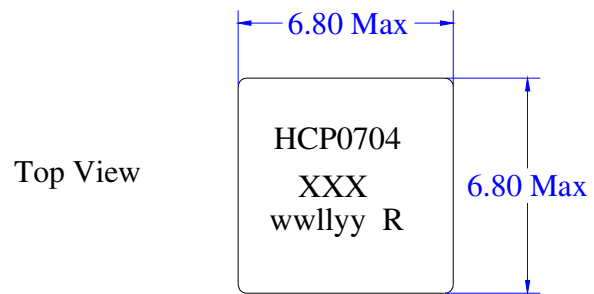
HCP0704 Family

Jun. 10th, 2008

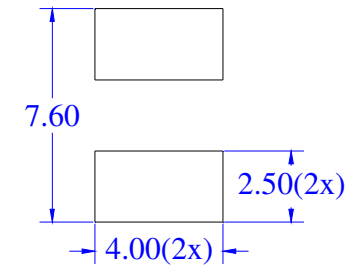

COOPER Bussmann

Mechanical Dimensions

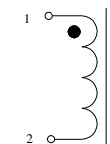
MECHANICAL DIMENSIONS



RECOMMENED PCB LAYOUT



SCHEMATIC



1. All dimensions are in millimeters unless otherwise noted.
2. Stamping:
The first 10 characters is the part number of the part
wwllyy = (Date Code) R= (Revision Level)
3. RoHS Compliance

Cooper Electronic Technologies
1225 Broken Sound Parkway, Boca Raton, FL33487

High Current Power Inductor
2 Pads, SMT

Size	Drawing Number:	HCP0704-R Family
A	Revision Level:	X1 Sheet Number: 3 of 13

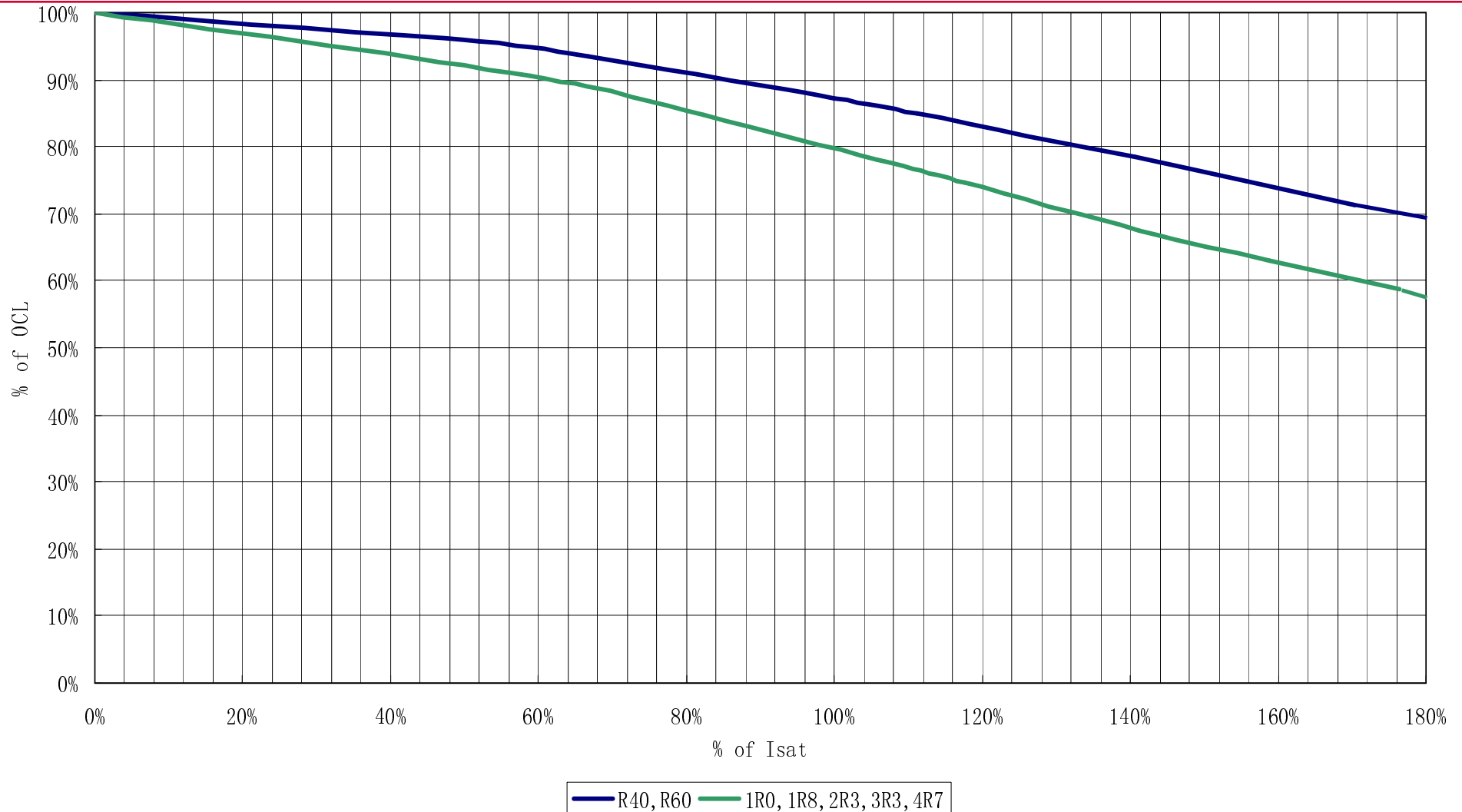
Electrical Characteristic

Part Number	Rated Inductance (μH)	OCL nominal (μH) @20°C	IRMS (a) (Amp) typ	ISAT (b) (Amp) @25°C	DCR (mΩ) TYP. @ 20°C.	K-Factor (e)
HCP0704-R40-R	0.40	0.40± 25%	17.0	27	3.0+/-10%	29.9
HCP0704-R60-R	0.60	0.50± 25%	14	21	4.4+/-10%	24.5
HCP0704-1R0-R	1.00	1.00± 25%	12	17	6.0+/-10%	20.7
HCP0704-1R8-R	1.80	1.80± 25%	8.5	13	11.0+/-10%	15.8
HCP0704-2R3-R	2.30	2.30± 25%	7.5	11.5	15.0+/-10%	12.8
HCP0704-3R3-R	3.30	3.30± 25%	6.0	9.5	22.5+/-10%	11.7
HCP0704-4R7-R	4.70	4.70± 25%	5.0	8.5	32.5+/-10%	9.97
Electrical Requirement Notes: 1) Test Frequency and voltage: 100kHz, 0.1Vrms 2) DCR @ 20°C						

General Specifications:

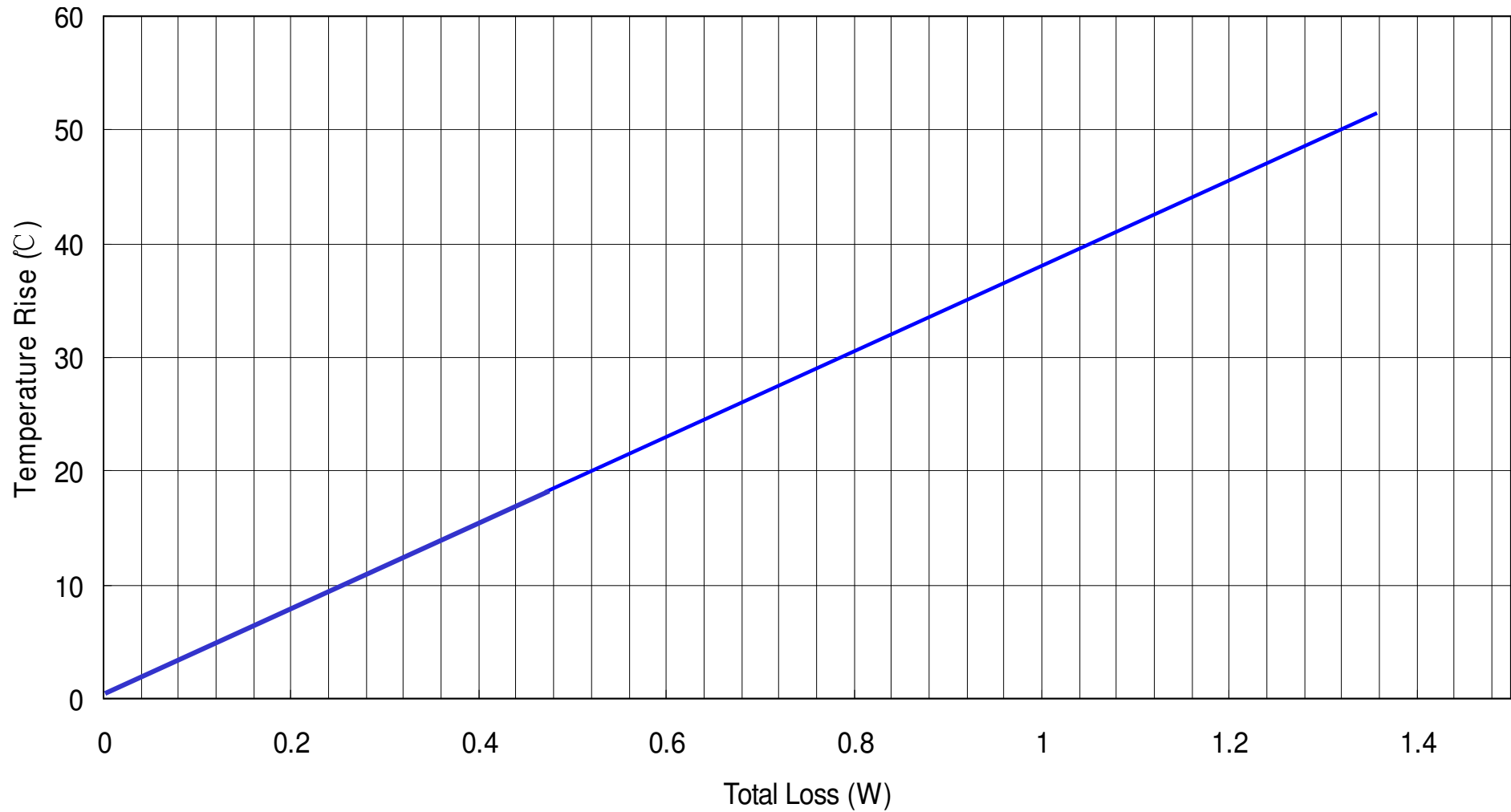
- a. Temp. Rise: 40° C Max @ Irms rating.
- b. L(ISAT1)/L(0A)= 20% typical.
- c. Storage Temp.: -40° C~ +155° C
- d. Operating Temp.: -40° C~ +155° C
- e. K-factor: Used to determine Bp-p for core loss(see graph). $Bp-p=K8L \cdot \Delta I$
 Bp-p:(Gauss), K-facotr:(From table), L: (Inductance in uH), ΔI :(Peak to peak ripple current in Amps).
- f. Resistance to Solder Heat: 260° C for 10 secs.
- g. Insulation Resistance winding to core, 2 second: 100Vdc 10 Mohms min.

% of OCL vs. % of Isat



• Test Conditions: 100kHz, 0.1Vrms @25C Degree
• Test Equipments: WK3260 & 3265

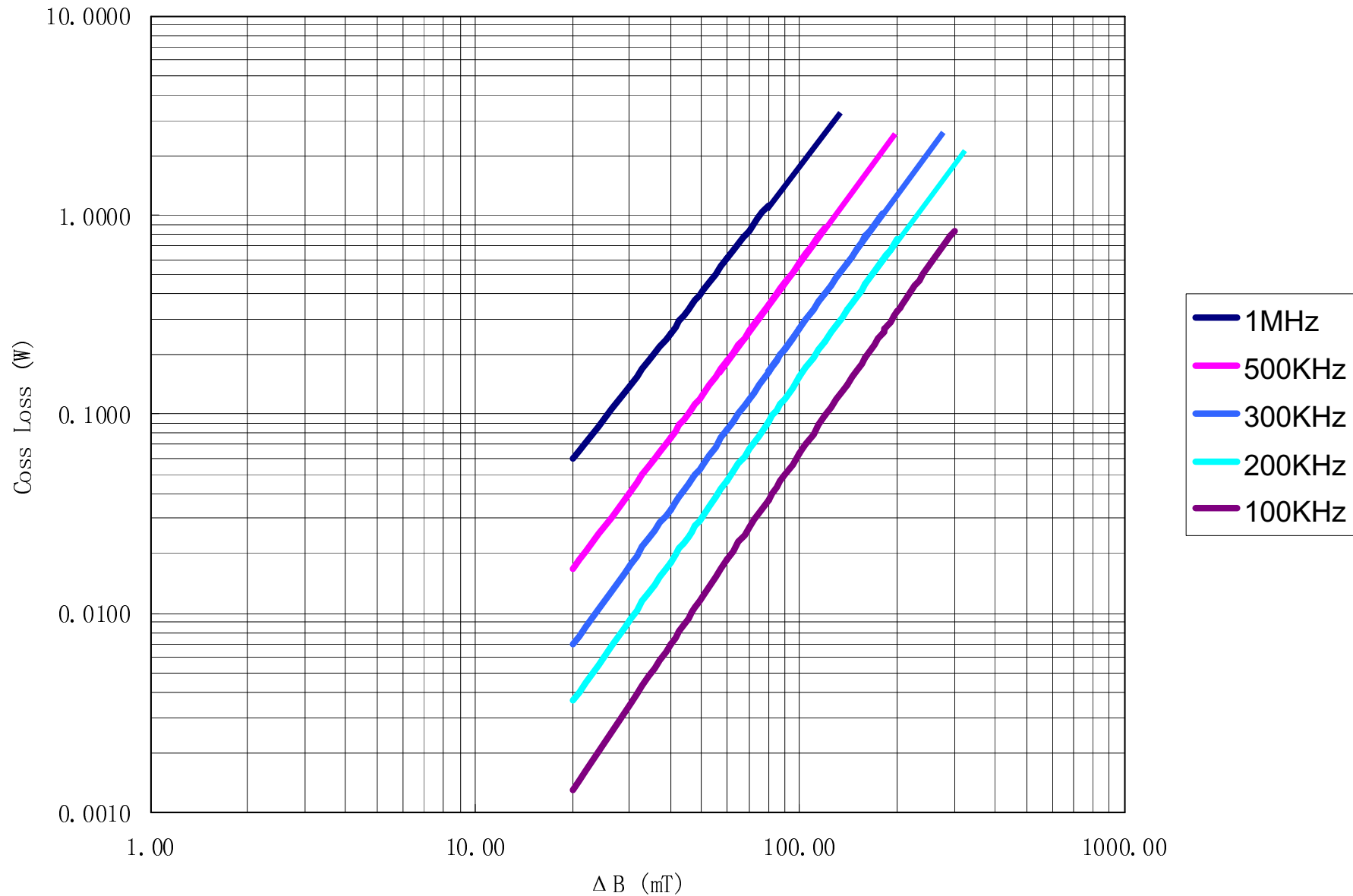
Temperature Rise vs. Total Loss



• Ambient Temperature: 25 °C

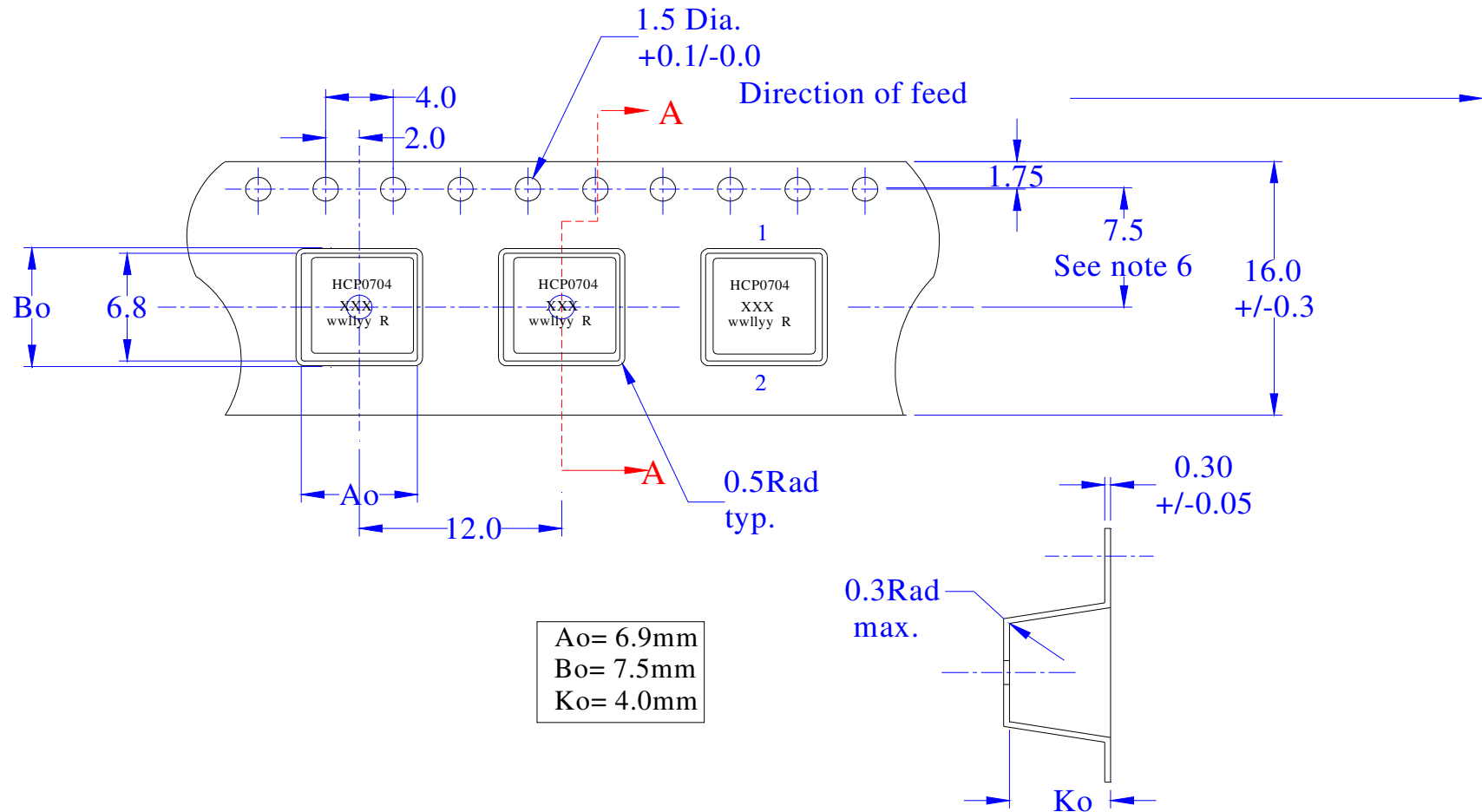
HCP0704-R

Core Loss vs. ΔB



HCP0704-R

Packaging Information



• 1000 parts per reel