

Inductit® C-80

Powder cores ideal for inductor applications



Features

- Distributed air-gap
- High magnetic saturation
- Low eddy current losses

Name	Article number	Length [mm]	Width [mm]	Height [mm]	Mass [g]	Pcs/pallet
B50.30.15C-80	095892	50	30	15	143	1950
B50.30.20C-80	095893	50	30	20	191	1560
B50.30.30C-80	095894	50	30	30	286	975
B60.30.15C-80	095895	60	30	15	171	1650
B60.30.20C-80	095237	60	30	20	226	1320
B60.30.30C-80	095238	60	30	30	343	825
B70.30.15C-80	095896	70	30	15	200	1400
B70.30.20C-80	095239	70	30	20	268	1120
B70.30.30C-80	095240	70	30	30	403	700
B80.30.15C-80	095898	80	30	15	229	1200
B80.30.20C-80	095899	80	30	20	305	960
B80.30.30C-80	095900	80	30	30	457	600
B120.30.15C-80	095901	120	30	15	343	800
B120.30.20C-80	095241	120	30	20	457	640
B120.30.30C-80	095242	120	30	30	684	400

For samples or other requests, please contact the Inductit team.

Inductit C-80 is especially suitable when the ripple frequencies are between 2-50 kHz.

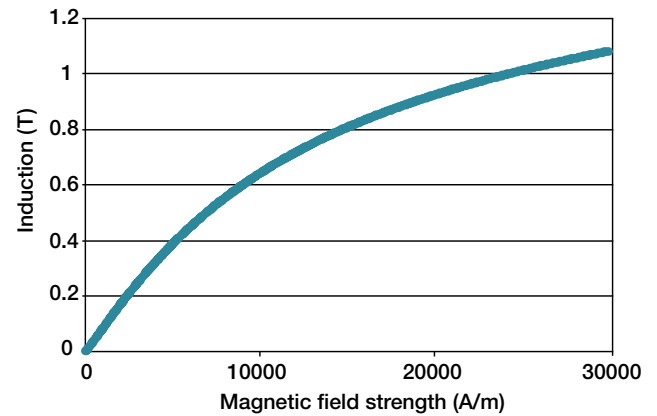
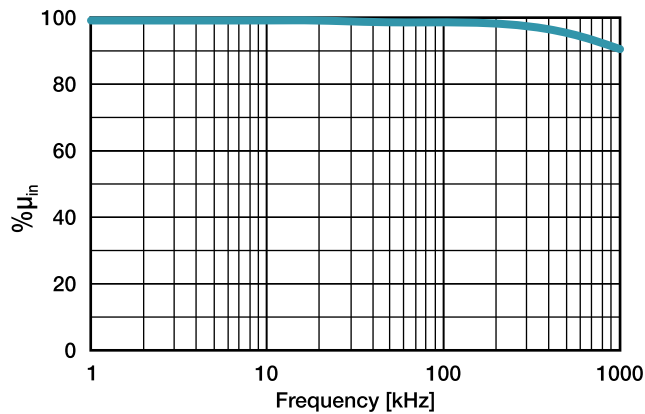
Typical Data C-80



Magnetic properties

Measured on ring geometry OD55ID45H5mm

B_{sat} [T]	H_c [A/m]	μ_{max}	μ_{in}
1.5	160	85	82



Core loss

Core loss [mW/cc]				
B [T]	0.25	0.5	0.75	1.0
f [Hz]				
50	3.1	11	24	41
60	3.8	14	29	50

Low frequency (0-200 Hz) - high induction (0-1 T):

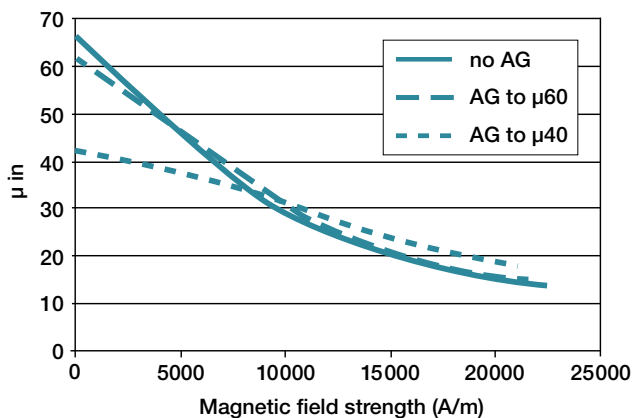
$$P[\text{mW/cc}] = 0.55 \cdot B[\text{T}]^{1.86} \cdot f[\text{Hz}]^{1.1}$$

Core loss [mW/cc]				
B [T]	0.05	0.1	0.15	0.2
f [kHz]				
10	26	110	250	460
20	57	240	560	1020

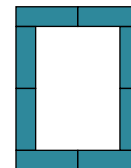
High frequency (2-30 kHz) - low induction (0-0.2 T):

$$P[\text{mW/cc}] = 950 \cdot B[\text{T}]^{2.08} \cdot f[\text{kHz}]^{1.14}$$

Component properties



Measurement set up
8pcs B60.30.20C-80
arranged as shown



$$\mu_{in} = c_0 + c_1 \cdot H + c_2 \cdot H^2 + c_3 \cdot H^3 + c_4 \cdot H^4$$

	c_0	c_1	c_2	c_3	c_4	Gap (mm)*
No gap	67.4	-4.99E-03	9.69E-08	3.06E-12	-9.33E-17	0
μ_{60}	61.6	-3.34E-03	-4.79E-08	8.30E-12	-1.61E-16	4x0.2
μ_{40}	40.9	-3.52E-04	-1.13E-07	4.87E-12	-5.73E-17	4x2.5

* Gapping required for core structure illustrated.