



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Description

- 125°C maximum temperature operation
- 7.8mm x 7.0mm x 5.0mm shielded drum core
- Ferrite core material
- Metalized core mounting utilizes board space
- Inductance range from 0.82μH to 470μH
- Current range from 8.57 Amps to 0.368 Amps
- Frequency range up to 1MHz

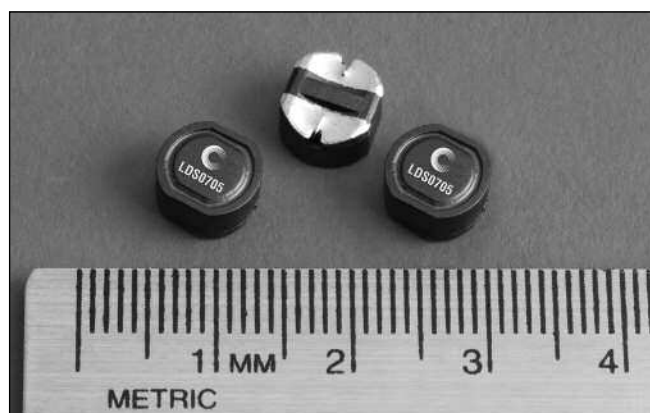


Applications

- Buck or Boost Inductor
- Noise filtering and output filter chokes
- Battery Power, DC-DC converters
- Notebook power, PDA's, Hand held computers
- DVD players
- Cellular phones

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, 1000 per reel

Part Number	Rated Inductance (μH)	OCL (1) μH	Irms(2) Amperes	Isat (3) Amperes	DCR (Ω) @20°C (Typical)	K-factor (4)
LDS0705-R82M-R	0.82	0.861±20%	7.68	8.57	0.0040	24.8
LDS0705-1R5M-R	1.5	1.42±20%	6.17	6.67	0.0061	19.3
LDS0705-2R2M-R	2.2	2.13±20%	5.06	5.45	0.009	15.8
LDS0705-3R3M-R	3.3	2.97±20%	4.19	4.62	0.013	13.4
LDS0705-4R7M-R	4.7	5.08±20%	3.32	3.53	0.021	10.2
LDS0705-6R8M-R	6.8	6.34±20%	3.11	3.16	0.024	9.2
LDS0705-8R2M-R	8.2	7.75±20%	2.67	2.86	0.033	8.3
LDS0705-100M-R	10.0	9.30±20%	2.54	2.61	0.036	7.6
LDS0705-150M-R	15.0	14.78±20%	2.04	2.07	0.056	6.0
LDS0705-220M-R	22.0	21.53±20%	1.66	1.71	0.084	5.0
LDS0705-330M-R	33.0	32.50±20%	1.48	1.40	0.107	4.0
LDS0705-470M-R	47.0	45.71±20%	1.21	1.18	0.158	3.4
LDS0705-680M-R	68.0	69.76±20%	0.985	0.952	0.240	2.8
LDS0705-820M-R	82.0	83.67±20%	0.850	0.870	0.323	2.5
LDS0705-101M-R	100.0	98.9±20%	0.808	0.800	0.357	2.3
LDS0705-151M-R	150.0	152.0±20%	0.649	0.645	0.554	1.9
LDS0705-221M-R	220.0	216.5±20%	0.584	0.541	0.68	1.6
LDS0705-331M-R	330.0	329.9±20%	0.470	0.438	1.06	1.3
LDS0705-471M-R	470.0	467.0±20%	0.387	0.368	1.56	1.1

(1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.

(2) Irms: DC current for an approximate ΔT of 30°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 approximately 15% 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).

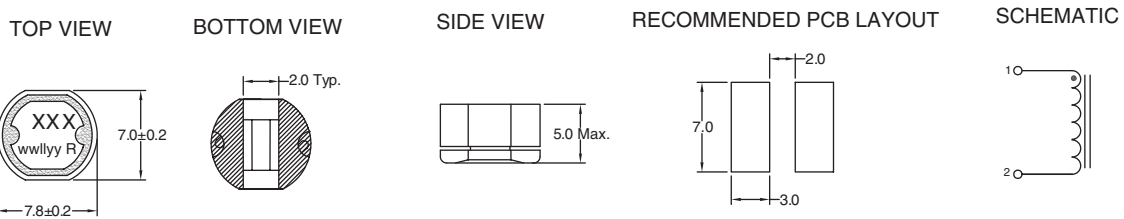
(5) Part Number Definition: LDS0705-xxx-R

LDS0705 = Product code and size; -xxx = Inductance value in uH;

R = decimal point; If no R is present, third character = # of zeros.

M = Inductance tolerance +/- 20% -R suffix = RoHS compliant

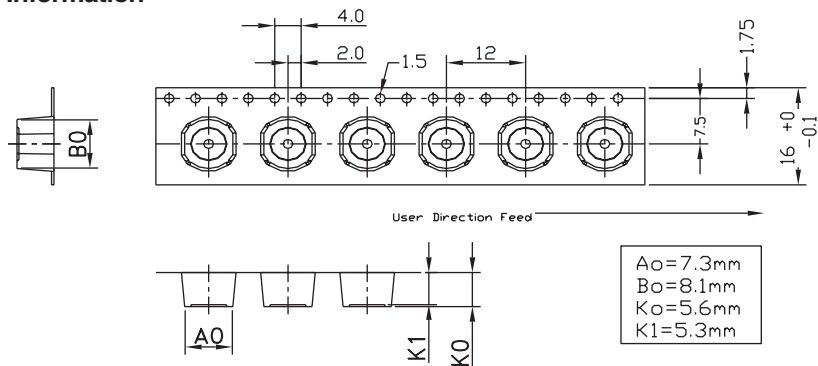
Mechanical Diagrams



Dimensions are in millimeters.

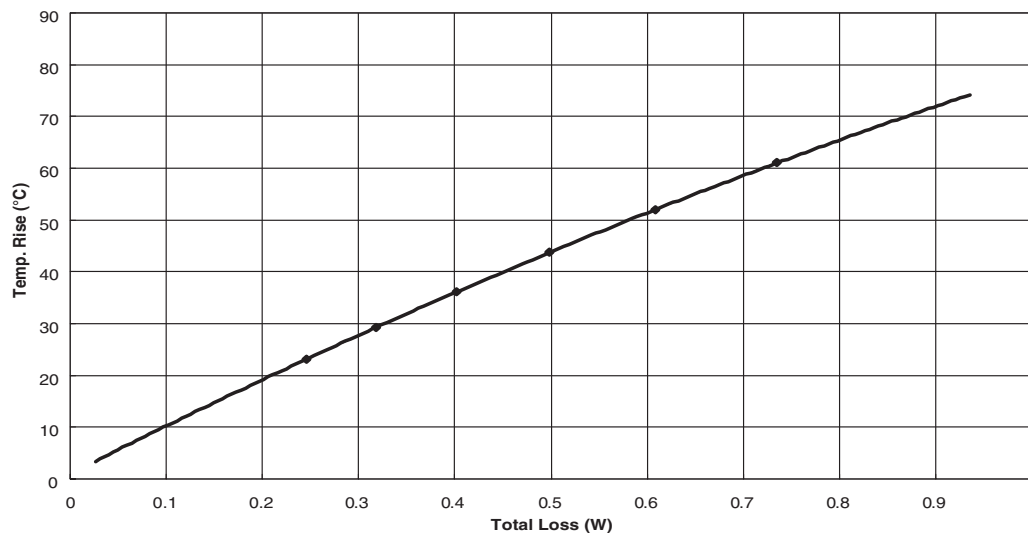
xxx = Inductance in uH. R = decimal point. If no R is present third character = # of zeros.
wwllyy = Date code, R = Revision level.

Packaging Information

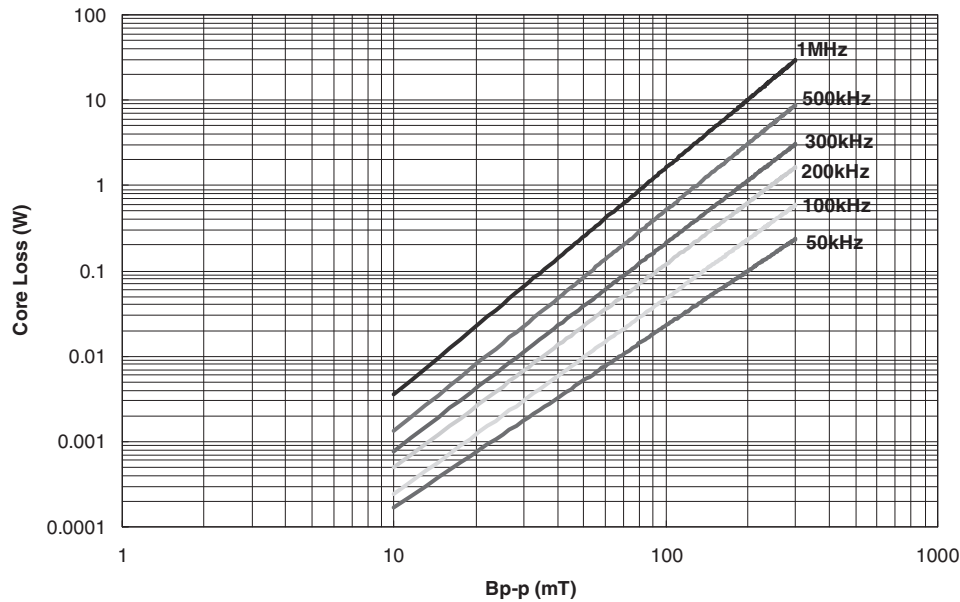


Parts packaged on 13" Diameter reel,
1,000 parts per reel.

Temperature Rise vs. Watt Loss



Core Loss



Inductance Characteristics

OCL vs. Isat

