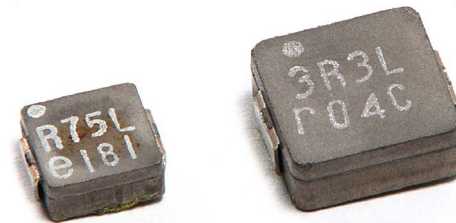


Overview

The KEMET MPLC metal composite inductors offer large inductance values for use in DC to DC switching power supplies. These inductors offer superior permeability when compared to technologies based on ferrite cores. The round wire design allows for higher inductance compared to other wire designs.

Applications

- Switching DC-DC power supplies
- Notebook computers
- Tablets
- Embedded computer systems
- HDTVs
- DVD and BluRay players



Part Number System

MPLC	0730	L	1R0
Series	Size Code	Inductor	Inductance Code μH
MPLC	0730 1040		R = decimal point Example: 1R0 = 1.0 μH

Алматы (7273)495-231
 Ангарск (3955)60-70-56
 Архангельск (8182)63-90-72
 Астрахань (8512)99-46-04
 Барнаул (3852)73-04-60
 Белгород (4722)40-23-64
 Благовещенск (4162)22-76-07
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 Чита (3022)38-34-83
 Якутск (4112)23-90-97
 Ярославль (4852)69-52-93

NOT FOR NEW DESIGN

SMD Inductors
Large-Current Power Inductors MPLC

KEMET
a YAGEO company

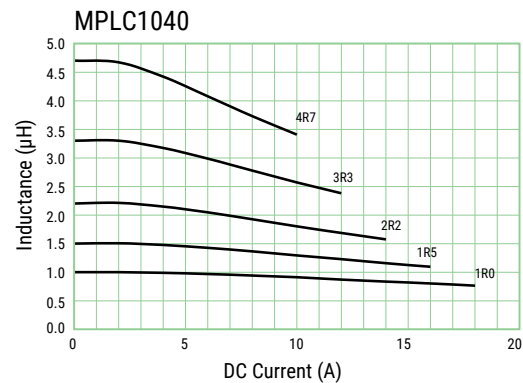
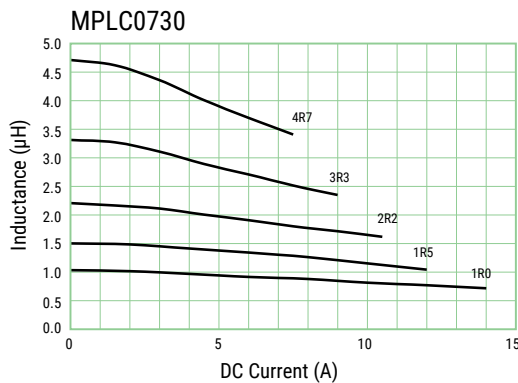
Table 1 – Ratings & Part Number Reference

Part Number	Inductance (μH) at 100 kHz	Inductance Tolerance	DC Resistance (m Ω) Maximum	Rated Current (A)	
				I _{rms} ¹ (Ref.)	I _{sat} ² (Ref.)
MPLC0730L1R0	1.0	±20%	9.0	10.6	11.0
MPLC0730L1R5	1.5	±20%	15.0	8.6	8.8
MPLC0730L2R2	2.2	±20%	19.0	7.3	8.2
MPLC0730L3R3	3.3	±20%	30.0	5.7	6.5
MPLC0730L4R7	4.7	±20%	41.0	5.0	5.6
MPLC1040L1R0	1.0	±20%	5.5	14.3	16.2
MPLC1040L1R5	1.5	±20%	7.0	12.4	12.7
MPLC1040L2R2	2.2	±20%	10.0	10.5	11.0
MPLC1040L3R3	3.3	±20%	14.0	8.8	9.3
MPLC1040L4R7	4.7	±20%	19.0	8.0	8.0

¹ T = 40 K rise at rated current.

² Inductance drop 20% at rated current.

DC-Superposed Characteristics



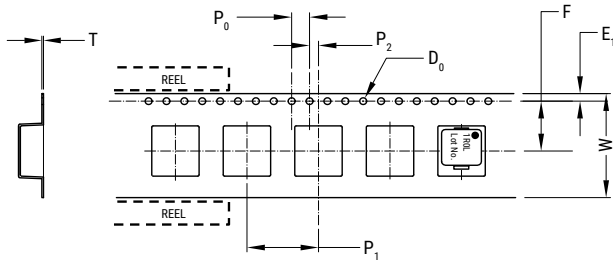
Dimensions

Part Number	Dimensions (mm)	Land Pattern
MPLC0730		
MPLC1040		

Operating temperature range: -20°C to +120°C (Include self temperature rise)

Taping Specification

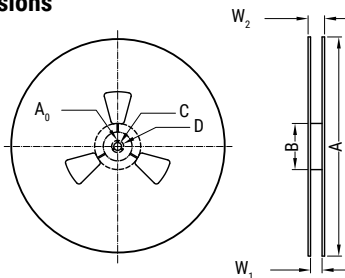
Dimensions of indented square hole plastic tape



Case Size	Reel Quantity		Dimensions (mm)								
			W	F	E ₁	P ₁	P ₂	P ₀	∅D ₀	T	
MPLC0730	1,000	Tolerance	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05
		Nominal	16.0	7.5	1.75	12.0	2.0	4.0	1.55	0.4	
MPLC1040	500	Tolerance	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05
		Nominal	24.0	11.5	1.75	16.0	2.0	4.0	1.55	0.4	

Reel Specifications

Reel dimensions



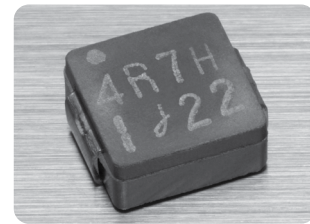
Case Size		Dimensions (mm)							
		A	B	C	D	A ₀	r	W ₁	W ₂
MPLC0730	Tolerance	±5.0	±5.0	±0.5	±0.8	±0.5		±1.0	±1.0
	Nominal	∅330	∅80	∅13.0	∅21.0	2.0	R1.0	17.5	21.5
MPLC1040	Tolerance	±2.0	±1.0	±0.5	±0.8	±0.5		±2.0	±3.0
	Nominal	∅330	∅80	∅13.5	∅21.0	2.0	R1.0	24.4	30.4

Large-Current Power Inductors MPLCH**Overview**

The KEMET MPLCH metal composite inductors are ideal for use in DC to DC switching power supplies. The combination of composite core material and round wire allow these inductors to provide high permeability, low DC resistance, and high inductance.

Applications

- Switching DC-DC power supplies
- Notebook computers
- Tablets
- Embedded computer systems
- HDTVs
- DVD and BluRay players

**Part Number System**

MPLCH	0740	L	1R0
Series	Size Code	Inductor	Inductance Code μ H
MPLCH	0520 0618 0740		R = decimal point Example: 1R0 = 1.0 μ H

NOT FOR NEW DESIGN

SMD Inductors

Large-Current Power Inductors MPLCH

KEMET
a YAGEO company

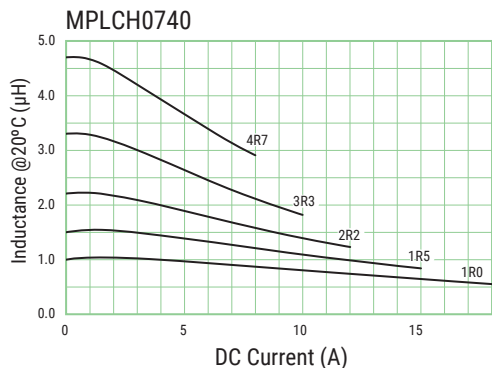
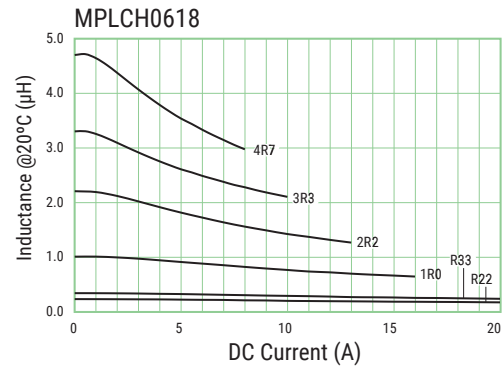
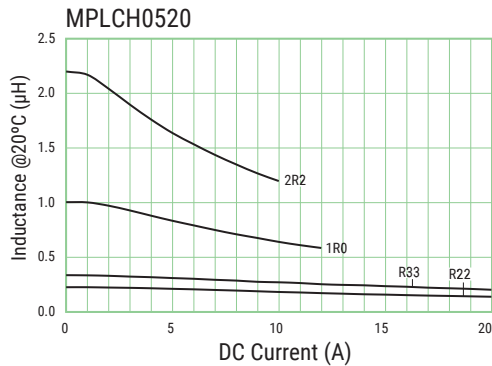
Table 1 – Ratings & Part Number Reference

Part Number	Inductance (μH) at 100 kHz	Inductance Tolerance	DC Resistance (m Ω) Maximum	Rated Current (A)	
				I _{rms} ¹ (Ref.)	I _{sat} ² (Ref.)
MPLCH0520LR22	0.22	±20%	5.7	10.1	14.2
MPLCH0520LR33	0.33	±20%	6.5	9.5	14.0
MPLCH0520L1R0	1.0	±20%	23.3	4.9	8.1
MPLCH0520L2R2	2.2	±20%	45.5	3.5	5.9
MPLCH0618LR22	0.22	±20%	3.9	16.1	22.4
MPLCH0618LR33	0.33	±20%	6.0	13.3	18.9
MPLCH0618L1R0	1.0	±20%	17.8	7.5	12.5
MPLCH0618L2R2	2.2	±20%	37.0	5.3	8.2
MPLCH0618L3R3	3.3	±20%	58.0	4.1	7.6
MPLCH0618L4R7	4.7	±20%	78.0	3.6	6.2
MPLCH0740L1R0	1.0	±20%	6.0	13.6	13.4
MPLCH0740L1R5	1.5	±20%	9.0	11.1	10.8
MPLCH0740L2R2	2.2	±20%	13.0	9.3	9.0
MPLCH0740L3R3	3.3	±20%	19.0	7.8	7.0
MPLCH0740L4R7	4.7	±20%	33.0	5.8	6.5

¹ T = 40 K rise at rated current.

² Inductance drop 30% at rated current.

DC-Superposed Characteristics



NOT FOR NEW DESIGN

SMD Inductors
Large-Current Power Inductors MPLCH

KEMET
a YAGEO company

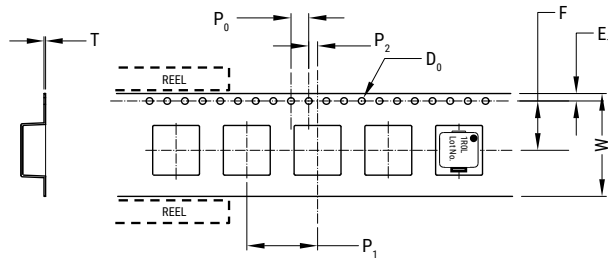
Dimensions

Part Number	Dimensions (mm)	Land Pattern
MPLCH0520		
MPLCH0618		
MPLCH0740		

Operating temperature range: -20°C to $+120^{\circ}\text{C}$ (Include self temperature rise)

Taping Specification

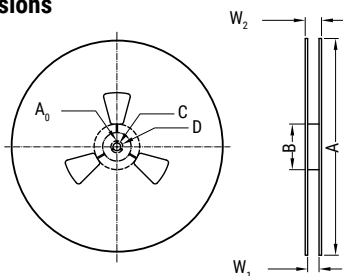
Dimensions of indented square hole plastic tape



Case Size	Reel Quantity		Dimensions (mm)								
			W	F	E_1	P_1	P_2	P_0	ϕD_0	T	
MPLCH0520	5,000	Tolerance	± 0.3	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.05	± 0.05
		Nominal	12.0	5.5	1.75	8.0	2.0	4.0	1.55	0.4	
MPLCH0618	3,500	Tolerance	± 0.3	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.05	± 0.05
		Nominal	16.0	7.5	1.75	12.0	2.0	4.0	1.55	0.4	
MPLCH0740	1,000	Tolerance	± 0.2	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.05	± 0.05
		Nominal	16.0	7.5	1.75	12.0	2.0	4.0	1.55	0.4	

Reel Specifications

Reel dimensions



Case Size		Dimensions (mm)							
		A	B	C	D	A ₀	r	W ₁	W ₂
MPLCH0520	Tolerance	±5.0	±10	±1.0	±0.8	±0.5		±1.5	±2.0
	Nominal	∅380	∅95	∅13.5	∅21.0	2.0	R1.0	14.5	18.5
MPLCH0618	Tolerance	±5.0	±10	±1.0	±0.8	±0.5		±1.0	±1.5
	Nominal	∅380	∅95	∅13.5	∅21.0	2.0	R1.0	18.0	21.6
MPLCH0740	Tolerance	±2.0	±5.0	±0.2	±0.8	±0.5		±1.0	±1.0
	Nominal	∅330	∅80	∅13.0	∅21.0	2.0	R1.0	17.5	21.5

Handling Precautions

Inductors should be stored in normal working environments. While the inductors themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. For optimized solderability, inductors' stock should be used promptly, preferably within six months of receipt.

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Сургут (3462)77-98-35
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Тюмень (3452)66-21-18
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