

Overview

KEMET's MPLCH Series of metal composite inductors is ideal for use in DC to DC switching power supplies. The combination of composite core material and round wire allows 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 L x W (mm)	Inductor	Inductance Code μH
MPLCH	0520 0618 0740		R = decimal point Example: 1R0 = 1.0 μH

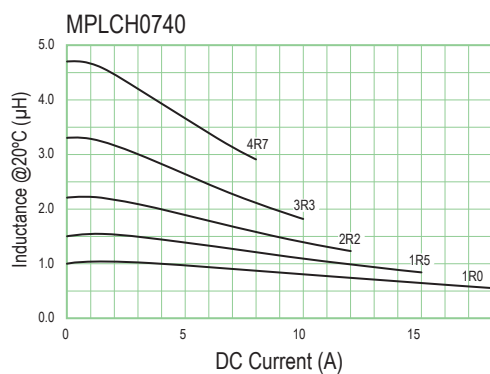
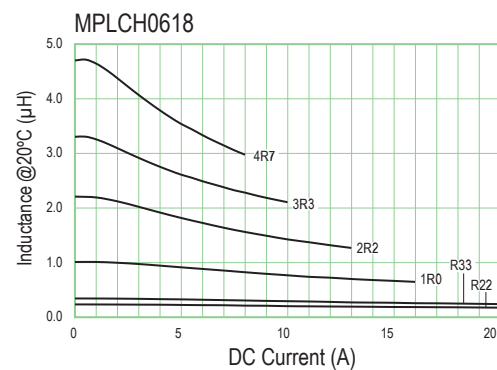
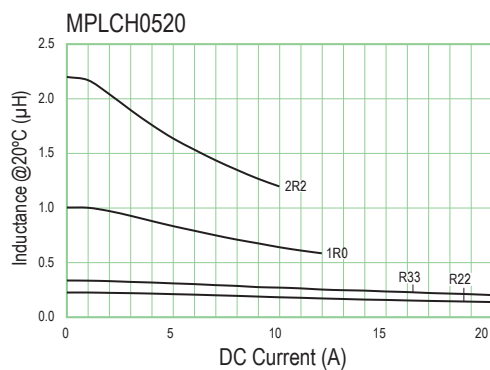
Table 1 – Ratings & Part Number Reference

Part Number	Inductance (μH) @ 100 kHz	DC Resistance ($\text{m}\Omega$) Maximum	Rated Current (A)	
			I_{rms}^1 (Ref.)	I_{sat}^2 (Ref.)
MPLCH0520LR22	$0.22 \pm 20\%$	5.7	10.1	14.2
MPLCH0520LR33	$0.33 \pm 20\%$	6.8	9.1	14.0
MPLCH0520L1R0	$1.0 \pm 20\%$	23.3	4.9	8.1
MPLCH0520L2R2	$2.2 \pm 20\%$	45.5	3.5	5.9
MPLCH0618LR22	$0.22 \pm 20\%$	3.9	16.1	22.4
MPLCH0618LR33	$0.33 \pm 20\%$	6.0	13.3	18.9
MPLCH0618L1R0	$1.0 \pm 20\%$	17.8	7.5	12.5
MPLCH0618L2R2	$2.2 \pm 20\%$	37.0	5.3	8.2
MPLCH0618L3R3	$3.3 \pm 20\%$	58.0	4.1	7.6
MPLCH0618L4R7	$4.7 \pm 20\%$	78.0	3.6	6.2
MPLCH0740L1R0	$1.0 \pm 20\%$	6.0	13.6	13.4
MPLCH0740L1R5	$1.5 \pm 20\%$	9.0	11.1	10.8
MPLCH0740L2R2	$2.2 \pm 20\%$	13.0	9.3	9.0
MPLCH0740L3R3	$3.3 \pm 20\%$	19.0	7.8	7.0
MPLCH0740L4R7	$4.7 \pm 20\%$	33.0	5.8	6.5

¹ $T = 40\text{ K}$ rise at rated current.

² Inductance drop 20% at rated current.

DC-Superposed Characteristics



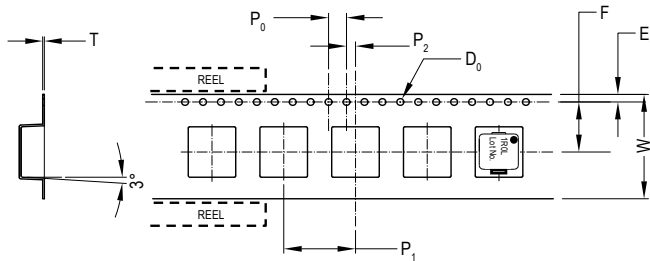
Specifications

Part Number	Dimensions (mm)	Land Pattern
MPLCH0520		
MPLCH618		
MPLCH0740		

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

Taping Specification

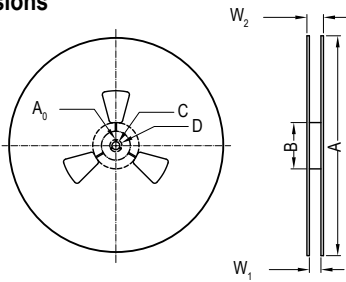
Dimensions of indented square hole plastic tape



Series	Reel Qty		Dimensions (mm)								
			W	F	E ₁	P ₁	P ₂	P ₀	øD 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



Series		Dimensions (mm)							
		A	B	C	D	A ₀	r	W ₁	W ₂
MPLCH0520	Tolerance	±1.0	±10	±1.0	±0.8	±0.5		±1.5	±2.0
	Nominal	ø380	ø95	ø13.5	ø21.0	2.0	R1.0	14.5	18.5
MPLCH0618	Tolerance	±5.0	±10	±1.0	±0.8	±0.5		±1.0	±1.5
	Nominal	ø380	ø95	ø13.5	ø21.0	2.0	R1.0	18.0	21.6
MPLCH0740	Tolerance	±1.0	±5.0	±0.2	±0.8	±0.5		±1.0	±1.0
	Nominal	ø330	ø80	ø13.0	ø21.0	2.0	R1.0	17.5	21.5

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