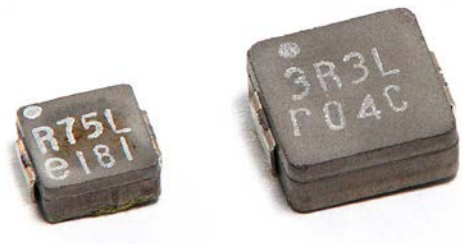
Large-Current Power Inductors MPLC Series

Overview

KEMET's MPLC Series of metal composite inductors offers 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

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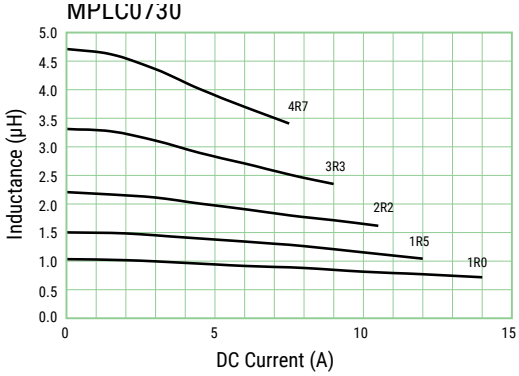
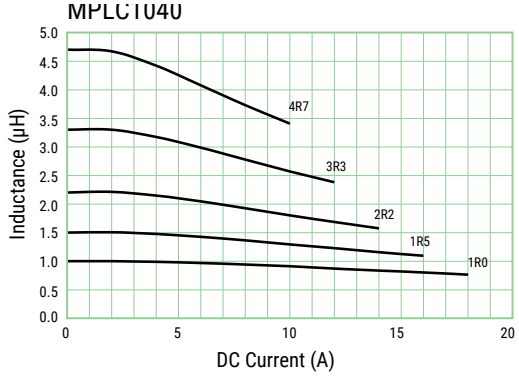
Table 1 – Ratings & Part Number Reference

Part Number	Inductance (µH) at 100 kHz	Inductance Tolerance	DC Resistance (mΩ) ±10%	Rated Current (A)	
				Irms[1] (Ref.)	Isat[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

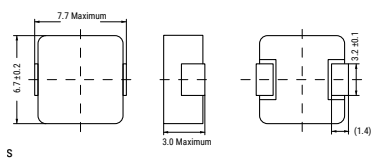
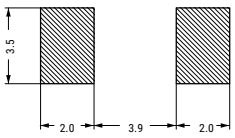
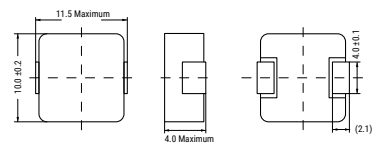
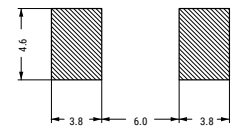
[1] *T = 40 K rise at rated current.*
[2] *Inductance drop 20% at rated current.*

DC-Superposed Characteristics





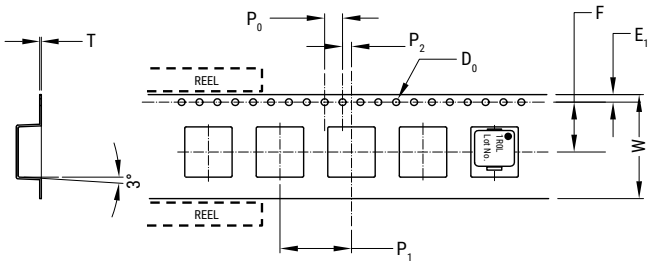
Specifications

Part Number	Dimensions (mm)	Land Pattern
MPLC0730		
MPLC1040		

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

Taping Specification

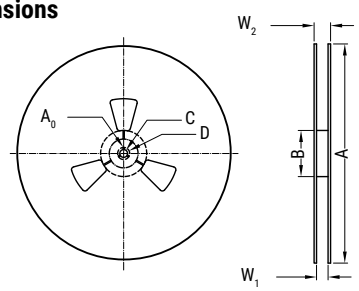
Dimensions of indented square hole plastic tape



Series	Reel Qty		Dimensions (mm)							
			W	F	E_1	P_1	P_2	P_0	$øD_0$	T
MPLC0730	1,000	Tolerance	±0.3	±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
MPLC1040	500	Tolerance	±0.3	±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



Series		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		±0.5	±0.5
	Nominal	ø380	ø80	ø13.5	ø21.0	2.0	R1.0	25.5	29.5
MPLC1040	Tolerance	±2.0	±1.0	±0.5	±0.8	±0.5		±2.0	±3.0
	Nominal	ø330	ø80	ø13.5	ø21.0	2.0	R1.0	24.4	30.4

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