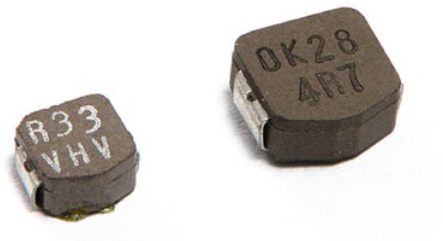
Large-Current Power Inductors MPLCG Series

Overview

KEMET's MPLCG Series of metal composite inductors is ideal for use in DC to DC switching power supplies. The MPLCG's small size makes it ideal in applications with tight space requirements. The combination of composite core material and round wire allows these inductors to be used in applications with high switching frequencies and where efficiency is important.

Applications

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



Part Number System

MPLCG	0530	L	R22
Series	Size L x W (mm)	Inductor	Inductance Code µH
MPLCG	0530 0630		R = decimal point Examples: R22 = .22 µH 1R0 = 1.0 µH

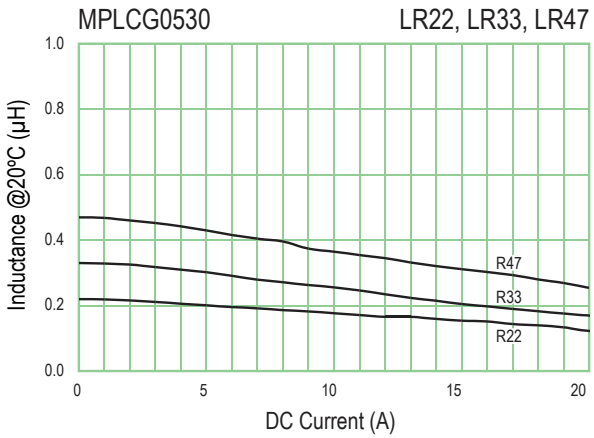
Table 1 – Ratings & Part Number Reference

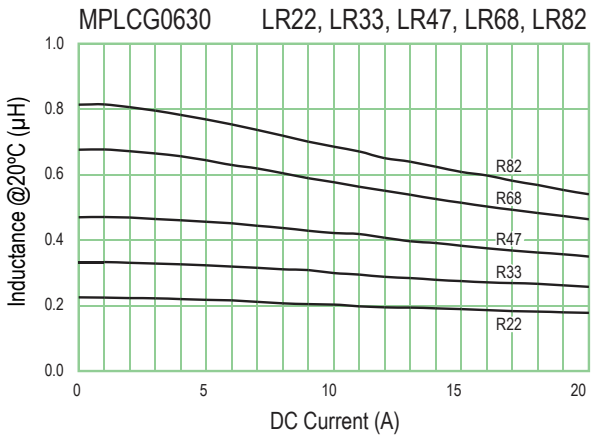
Part Number	Inductance (µH) @ 100 kHz	DC Resistance (mΩ) Maximum	Rated Current (A)	
			Irms[1] (Ref.)	Isat[2] (Ref.)
MPLCG0530LR22	0.22±20%	3.7	14.1	10.2
MPLCG0530LR33	0.33±20%	7.3	10.3	8.9
MPLCG0530LR47	0.47±20%	9.0	9.3	8.7
MPLCG0530L1R0	1.0±20%	14.6	7.4	5.6
MPLCG0530L1R5	1.5±20%	21.7	5.9	5.6
MPLCG0530L2R2	2.2±20%	36.4	4.5	5.0
MPLCG0530L3R3	3.3±20%	58.0	3.6	3.1
MPLCG0530L4R7	4.7±20%	74.0	3.1	3.0
MPLCG0630LR22	0.22±20%	2.7	21.4	17.9
MPLCG0630LR33	0.33±20%	4.3	16.9	17.3
MPLCG0630LR47	0.47±20%	5.0	15.8	15.6
MPLCG0630LR68	0.68±20%	6.0	14.2	12.6
MPLCG0630LR82	0.82±20%	7.0	13.1	11.8
MPLCG0630L1R0	1.0±20%	9.0	11.9	11.3
MPLCG0630L1R5	1.5±20%	15.0	9.9	8.3
MPLCG0630L2R2	2.2±20%	19.0	8.2	7.8
MPLCG0630L3R3	3.3±20%	30.0	6.5	6.3
MPLCG0630L4R7	4.7±20%	41.0	5.5	5.4

[1] *T = 40 K rise at rated current.*

[2] *Inductance drop 20% at rated current.*

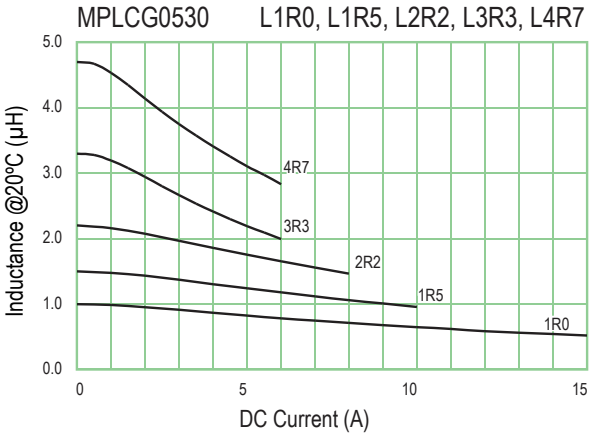
DC-Superposed Characteristics

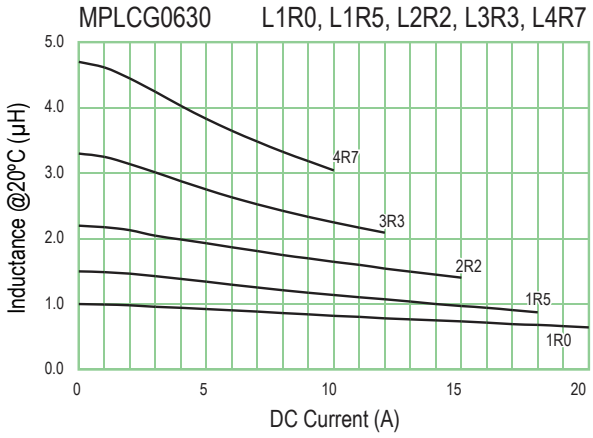




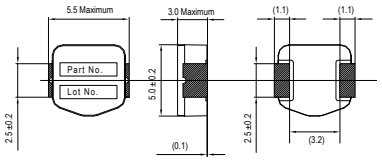
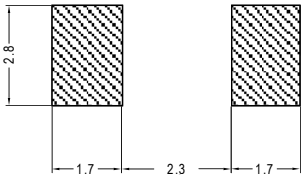
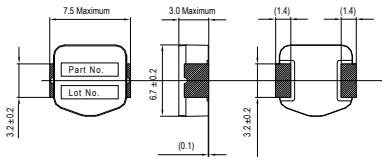
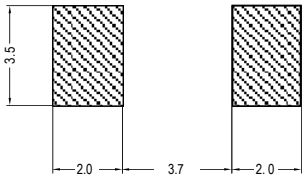
Roll Over for Order Info.

DC-Superposed Characteristics





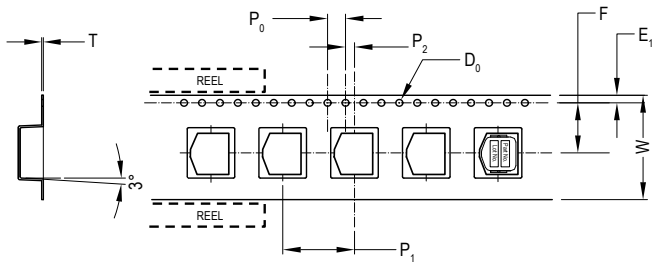
Specifications

Part Number	Dimensions (mm)	Land Pattern
MPLCG0530		
MPLCG0630		

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

Taping Specification

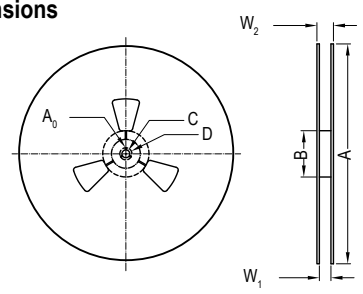
Dimensions of indented square hole plastic tape



Series	Reel Qty		Dimensions (mm)							
			W	F	E_1	P_1	P_2	P_0	$øD_0$	T
MPLCG0530	3,500	Tolerance	±0.3	±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
MPLCG0630	2,000	Tolerance	±0.3	±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
MPLCG0530	Tolerance	±5.0	±10.0	±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
MPLCG0630	Tolerance	±5.0	±10.0	±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

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