

Overview

The KEMET MPLCG metal composite inductors are ideal for use in DC to DC switching power supplies. The MPLCG's small size makes it ideal for 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
- Servers and storage
- HDTVs

Benefits

- Metal composite powder
- Operating temperature up to +125°C
- High inductance
- Low DCR
- Low profile 3 mm maximum
- Low core loss
- Low acoustic noise



Part Number System

MPLCG	0530	L	R22
Series	Size Code	Inductor	Inductance Code μH
MPLCG	0530 0630		R = decimal point Examples: R22 = 0.22 μH 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
 Благоевщенск (4162)22-76-07
 Брянск (4832)59-03-52
 Владивосток (423)249-28-31
 Владикавказ (8672)28-90-48
 Владимир (4922)49-43-18
 Волгоград (844)278-03-48
 Вологда (8172)26-41-59
 Воронеж (473)204-51-73
 Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06
 Ижевск (3412)26-03-58
 Иркутск (395)279-98-46
 Казань (843)206-01-48
 Калининград (4012)72-03-81
 Калуга (4842)92-23-67
 Кемерово (3842)65-04-62
 Киров (8332)68-02-04
 Коломна (4966)23-41-49
 Кострома (4942)77-07-48
 Краснодар (861)203-40-90
 Красноярск (391)204-63-61
 Курск (4712)77-13-04
 Курган (3522)50-90-47
 Липецк (4742)52-20-81

Казахстан +7(7172)727-132

Магнитогорск (3519)55-03-13
 Москва (495)268-04-70
 Мурманск (8152)59-64-93
 Набережные Челны (8552)20-53-41
 Нижний Новгород (831)429-08-12
 Новокузнецк (3843)20-46-81
 Ноябрьск (3496)41-32-12
 Новосибирск (383)227-86-73
 Омск (3812)21-46-40
 Орел (4862)44-53-42
 Оренбург (3532)37-68-04
 Пенза (8412)22-31-16
 Петрозаводск (8142)55-98-37
 Псков (8112)59-10-37
 Пермь (342)205-81-47

Киргизия +996(312)96-26-47

Ростов-на-Дону (863)308-18-15
 Рязань (4912)46-61-64
 Самара (846)206-03-16
 Саранск (8342)22-96-24
 Санкт-Петербург (812)309-46-40
 Саратов (845)249-38-78
 Севастополь (8692)22-31-93
 Симферополь (3652)67-13-56
 Смоленск (4812)29-41-54
 Сочи (862)225-72-31
 Ставрополь (8652)20-65-13
 Сургут (3462)77-98-35
 Сыктывкар (8212)25-95-17
 Тамбов (4752)50-40-97
 Тверь (4822)63-31-35

Тольятти (8482)63-91-07
 Томск (3822)98-41-53
 Тула (4872)33-79-87
 Тюмень (3452)66-21-18
 Ульяновск (8422)24-23-59
 Улан-Удэ (3012)59-97-51
 Уфа (347)229-48-12
 Хабаровск (4212)92-98-04
 Чебоксары (8352)28-53-07
 Челябинск (351)202-03-61
 Череповец (8202)49-02-64
 Чита (3022)38-34-83
 Якутск (4112)23-90-97
 Ярославль (4852)69-52-93

Performance Characteristics

Item	Performance Characteristics
Operating Temperature	-40°C to +125°C (including self-temperature rise)
Rated Inductance Range	0.22 – 4.70 µH at 100 kHz, 1 mA
Inductance Tolerance	±20%
Rated DC Resistance Range	2.7 – 74.0 mΩ maximum
Rated Current Range	4.5 – 14.1 A

Table 1 – Ratings & Part Number Reference

Part Number	Inductance (µH) at 100 kHz, 1 mA	Inductance Tolerance	DC Resistance (mΩ) Maximum	Rated Current (A)	
				I _{rms} ¹ (Ref.)	I _{sat} 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%	8.4	9.5	8.9
MPLCG0530LR68	0.68	±20%	11.6	7.9	6.8
MPLCG0530L1R0	1.00	±20%	14.6	7.4	5.6
MPLCG0530L1R5	1.50	±20%	21.7	5.9	5.6
MPLCG0530L2R2	2.20	±20%	36.4	4.5	5.0
MPLCG0530L3R3*	3.30	±20%	58.0	3.6	3.1
MPLCG0530L4R7*	4.70	±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	1.00	±20%	9.0	11.9	11.3
MPLCG0630L1R5	1.50	±20%	15.0	9.9	8.3
MPLCG0630L2R2	2.20	±20%	19.0	8.2	7.8
MPLCG0630L3R3	3.30	±20%	30.0	6.5	6.3
MPLCG0630L4R7	4.70	±20%	41.0	5.5	5.4

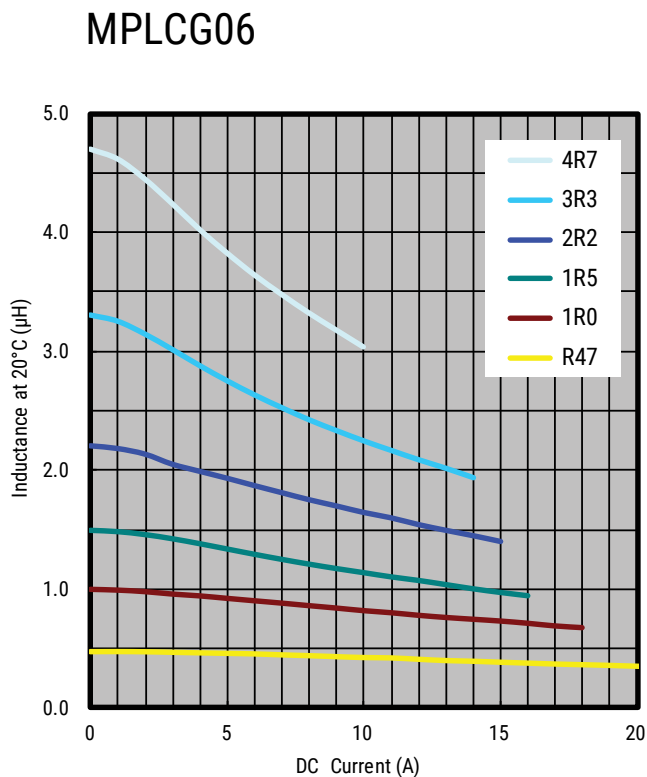
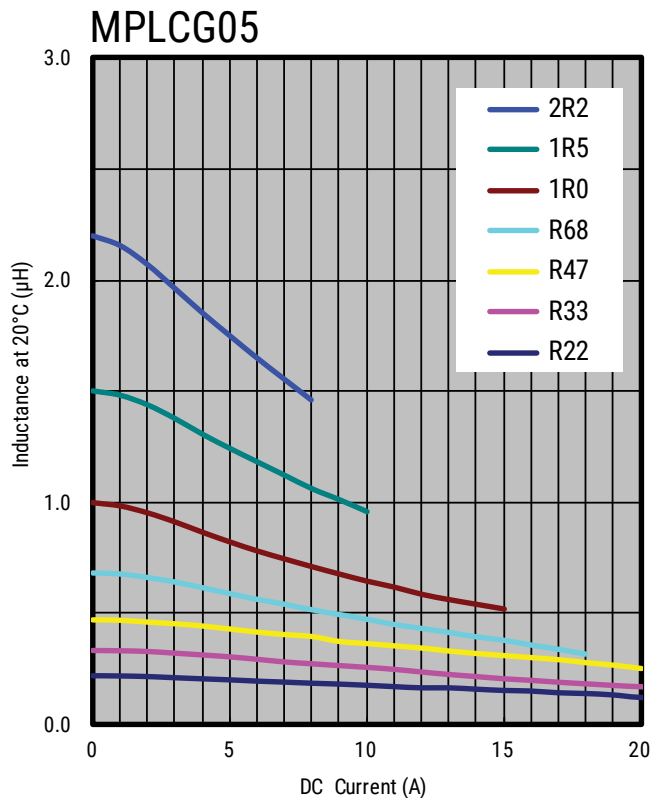
¹ T = 40 K rise at rated current

² Inductance drop 20% at rated current

All electrical characteristics data is referenced to 20°C.

* This part is not for new design.

DC-Superposed Characteristics

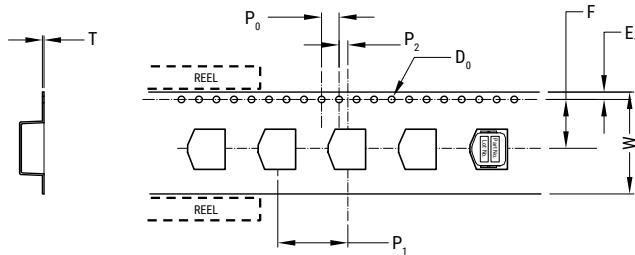


Dimensions

Case Size	Dimensions (mm)	Land Pattern (mm)
MPLCG0530		
MPLCG0630		

Taping Specification

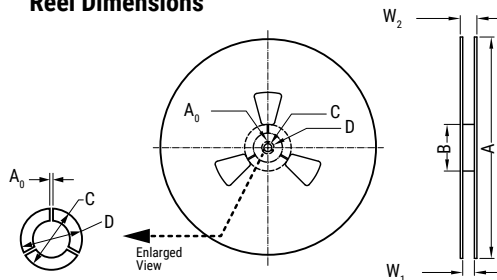
Dimensions of Indented Square Hole Plastic tape



Case Size	Reel Quantity		Dimensions (mm)								
			W	F	E ₁	P ₁	P ₂	P ₀	∅D ₀	T	
MPLCG0530	3,500	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	
MPLCG0630	2,000	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	

Reel Specifications

Reel Dimensions



Case Size		Dimensions (mm)						
		A	B	C	D	A ₀	W ₁	W ₂
MPLCG0530	Tolerance	±5.0	±10.0	±1.0	±0.8	±0.5	±1.5	±2.0
	Nominal	∅380	∅95	∅13.5	∅21.0	2.0	14.5	18.5
MPLCG0630	Tolerance	±5.0	±10.0	±1.0	±0.8	±0.5	±1.0	±1.5
	Nominal	∅380	∅95	∅13.5	∅21.0	2.0	18.0	21.6

