

Nanocrystalline Power Ferrite Product Sheet



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Nanocrystalline Power Ferrite for improving existing filter models

Especially in times of new technologies by rapidly switching IGBTs (eg Silicon Carbide ,SiC' or Gallium Nitride ,GaN') the exigence on the EMC filters is getting higher and makes the use of nanocrystalline toroidal cores for the filter technology more and more essential. A redesign of existing filter models is usually very costly, as many parameters have to be taken into account. In order to increase the performance of the current filter in the short term, the idea is to replace the soft magnetic powder material ferrites with the soft magnetic strip material nano with very similar properties such as mechanical dimen-

sions and similar core inductance. This has the advantage of not having to make any mechanical adjustments and of being able to use the same setting values (number of turns of the wire winding and other filter elements). The nanocrystalline strip material automatically results in a higher saturation current (1.2T vs. 0.4-0.6T), more stable temperature behavior (130°C permanent temperature), higher attenuation over a wide frequency range, reduced power losses and a negligible aging effect, especially in comparison to the neighboring sensitive filter components.

Extract of our catalog parts:

Types / Reference	Nominal dimensions [mm]			max. finished dimensions [mm]			Lfe (cm)	Afe (cm ²)	AL nom. [μH] (μi 10.000 @10kHz)		Finishing
	OD	ID	H	OD	ID	H			10kHz	100kHz	
LF5334-MRC801	53,5	34,5	17	57,5	31	19,5	13,8	1,26	9,2 - 18,3	8,8 - NA	epoxy
LF6139-MRC802	61,5	39,5	25	65,5	36	27,5	15,6	1,97	12,5 - 25,0	9,2 - NA	epoxy
LF7841-MRC803	78,2	41,8	13	82,3	38,4	15,9	18,85	1,84	10,0 - 20,0	7,4 - NA	epoxy
LF10067-MRC804	100,4	67,1	13	104,7	63,6	16	26,31	1,68	6,6 - 13,2	4,78 - NA	epoxy
LF139106-MRC805	139,2	106,8	25	143,7	103,1	28,5	38,64	2,9	7,6 - 15,1	5,46 - NA	epoxy
LF203152-MRC806	203,8	152,4	25	206,9	148,7	28,5	55,95	4,61	8,4 - 16,6	5,99 - NA	epoxy

The information is non-binding and can be adjusted without prior information.

You have not found the right core?
 Please contact us at info@mrccomponents.de

Important note: For safety and the proper usage, you are requested to approve the offered product specification for your application. These products are designed for general electronic devices. Performance and safety of this product for applications which could lead to physical harm is not confirmed. Be sure to examine the performance and safety when the product is used for these applications and take appropriate measures, such as failsafe, to avoid any accident. It is the responsibility of user to take such measures.