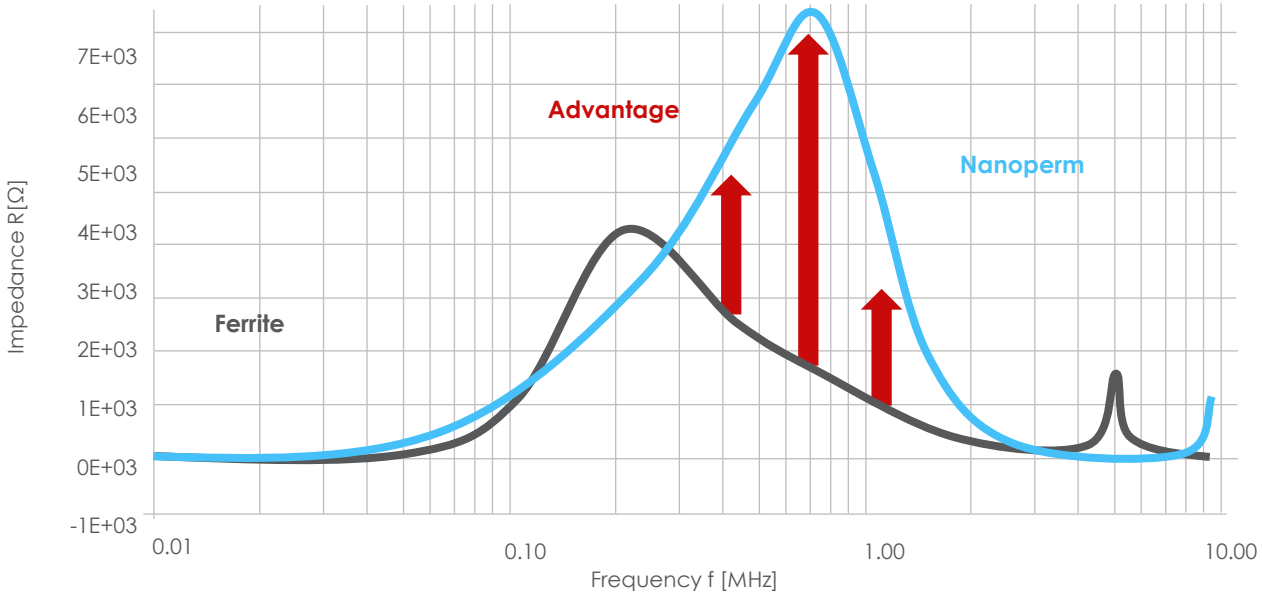
Nanoperm®

3-fold common-mode RFI/EMI suppression chokes acc. to EN60938-1 for mains filter applications

Magnetec

- High inductance and high impedance in a wide frequency range
- Advanced EMI suppression over a wide frequency range
- Low saturation flux density drop at high temperatures
- High operational temperature up to 130°C
- Significantly lower power loss and reduced over-temperature



Magnetec offers this standard range of 3-fold common-mode chokes based on nanocrystalline tape wound cores from Nanoperm for any EMI filter application compared to widely spread ferrite versions, Magnetec's nanocrystalline solutions enable significantly smaller and lighter EMI suppression filters. In frequency inverter applications the smaller size enables to integrate former external filters into the inverter housing which is a very attractive option for the market. Furthermore, the smaller design results in lower copper losses and thus lower overtemperature and reduced cooling cost. Compared to ferrite chokes, the 3-fold common-mode chokes offer significantly higher attenuation levels up to the MHz range, better saturation performance and are more temperature-resistant with the same core size. Chokes are available for the nominal current range from 3,5 – 160 Amps, designed acc. to EN60938-1. The plastic materials fulfill UL-94 V0 and are UL listed.

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Types	I_{nom} [A] convection cooling	I_{nom} [A] forced cooling	$*I_{sat}$ [mA]	L_{nom} @10kHz [mH]	Ls [µH]	Rcu [mΩ]	Pin-Ø [mm]	style	Dimensions [mm] $Do_{max}xDi_{min}xH_{max}$
MB-074[1]	3,5	5	80	3 x 6	~ 20	< 40	0,8	upright	38 x 36 x 21
MB-049[1]	5	7	60	3 x 8	~ 60	< 36	1,12	flat	42 x 42 x 27
MB-650[1]	10	14	110	3 x 11	~ 56	< 15	1,6	flat	60 x 60 x 29
MB-687	12	17	450	3 x 2,5	~ 7	< 9	1,25	upright	47,5 x 47 x 26
MB-652	17	24	300	3 x 3	~ 30	< 7,9	1,8	flat	59 x 59 x 27
MB-637	14	20	80	3 x 4,4	~ 12	< 5,5	1,4	flat	69 x 69 x 29,5
MB-540	15	20	85	3 x 15	~ 16	< 7,0	1,8	flat	48,5 x 48,5 x 26
MB-617	16	22	90	3 x 11	~ 9	< 6	1,8	flat	59,5 x 59,5 x36,5
MB-634	20	28	400	3 x 1,7	~ 14	< 4,85	2,0	flat	52 x 52 x 34
MB-427	20	28	4760	3 x 0,31	~ 8	<2,6	2,5	upright	60 x 30 x 60
MB-653	22	31	270	3 x 4	~ 19	< 4,8	2,24	flat	99,5 x 99,5 x 38
MB-157	25	35	300	3 x 6,2	~ 22	< 5,5	2,36	flat	69 x 69 x 37
MB-043	22	31	300	3 x 1,5	~ 8	< 2,6	2,5	flat	75 x 75 x 34
MB-054	27	38	300	3 x 3,2	~ 9	< 2,6	3,0	flat	60 x 60 x 30
MB-367	28	40	800	3 x 1,2	~ 0,7	< 1,8	3,0	flat	73 x 73 x 35
MB-047	30	42	350	3 x 4	~ 20	< 3,8	5,0	upright	70 x 45 x 70
MB-691	35	50	150	3 x 3	~ 4	< 1,6	2,5	flat	81 x 81 x 62
MB-426	45	64	6660	3 x 0,16	~4,5	<0,95	2 x 2,5	flat	60 x 60 x 34
MB-656[1]	60	85	450	3 x 3,5	~ 17	< 1,35	2 x 3,35	flat	99,5 x 99,5 x 38
MB-657[1]	100	140	500	3 x 2,5	~ 10	< 0,85	11,5	flat	115 x 115 x 50
MB-058[1]	160	225	1200	3 x 2	~ 10	< 0,5	22,5	flat	130 x 130 x 55

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For all information no liability assumed; *Isat: "Quasi Saturation Current" @ B = 1,0 T / μ_{nom} / N = 1, Saturation current Isat of Nanoperm: Peak value of the exiting current when the initial inductance level is dropped to 10 per cent, see www.magnetec.de Overtemperature needs to be checked in the application. Environment temperature usually at 70°C, see datasheets, at another environment temperature, the new nom. current can be estimated acc. to the derating theory: www.magnetec.de/derating . In forced cooling condition, double Rth value is assumed.
[1]preliminary