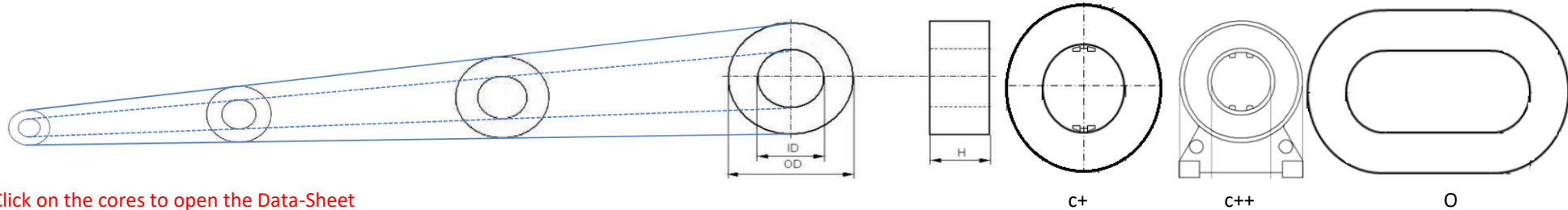


NANOPERM® cased EMC core selection matrix



Click on the cores to open the Data-Sheet

Nom. dim	16x10x6	20x12,5x8	25x20x10	25x16x10	30x20x10	40x32x15	40x25x15	45x30x20	50x40x20
ODxIDxH	<u>18,2x7,8x8,4</u>	<u>22,3x10,3x10</u>	<u>27,8x17,5x12,6</u>	<u>28,2x13,2x12,6</u>	<u>32,7x17,8x12,6</u>	<u>43,1x28,8x17,4</u>	<u>44,5x21,4x19</u>	<u>48,5x25,5x24</u>	<u>53,4x36,6x23,5</u>
$\mu r \sim$ ca.1k	<u>M-1601</u> Isat= 32,5A	<u>M-1201</u> Isat=40,0A	<u>M-1251(c+)</u> Isat=56,3A	<u>M-659(c+)</u> Isat=51,3A	<u>M-660(c+)</u> Isat=62,5A	<u>M-661</u> Isat=90,0A	<u>M-1401</u> Isat=81,3A	<u>M-1451</u> Isat=93,8A	<u>M-1501</u> Isat=112,5A
$\mu r \sim$ ca.2k	<u>M-956</u> Isat=16,3A	<u>M-1202</u> Isat=20,0A	<u>M-1252(c+)</u> Isat=28,1A	<u>M-669(c+)</u> Isat=25,6A	<u>M-670(c+)</u> Isat=31,3A	<u>M-671</u> Isat=45,0A	<u>M-1402</u> Isat=40,6A	<u>M-796**</u> Isat=46,3A	<u>M-1502</u> Isat=56,3A
$\mu r \sim$ ca. 4k	<u>M-957</u> Isat=8,1A	<u>M-1204</u> Isat=10,0A	<u>M-1254(c+)</u> Isat=14,1A	<u>M-679(c+)</u> Isat=12,8A	<u>M-680(c+)</u> Isat=15,6A	<u>M-681</u> Isat=22,5A	<u>M-934</u> Isat=16,3A	<u>M-762</u> Isat=23,4A	<u>M-1504/</u> <u>M-149(O)</u> Isat=28,1A
$\mu r \sim$ ca. 8k	<u>M-709</u> Isat=4,1A	<u>M-1208</u> Isat=5,0A	<u>M-1258(c+)</u> Isat=7,0A	<u>M-449(c+)</u> Isat=6,4A	<u>M-965/</u> <u>M-450(c+)</u> Isat=7,8A	<u>M-451</u> Isat=11,3A	<u>M-831**</u> Isat=9,4A	<u>M-1458</u> Isat=11,7A	<u>M-951</u> Isat=14,1A
$\mu r \sim$ ca. 30k	<u>M-104/</u> <u>M-125(c++)</u> Isat=1,1A	<u>M-556</u> Isat=1,3A	<u>M-061(c+)</u> Isat=1,9A	<u>M-062(c+)</u> Isat=1,7A	<u>M-923</u> Isat=2,1A	<u>M-994</u> Isat=3,0A	<u>M-382</u> Isat=2,7A	<u>M-987</u> Isat=3,1A	<u>M-967/</u> <u>M-049 (O)</u> Isat=4,9/3,8A
$\mu r \sim$ ca. 90k	<u>M-940/</u> <u>M-017(c+)/</u> <u>M-939(c++)</u> Isat=0,4A	<u>M-059</u> Isat=0,5A	<u>M-853(c+)</u> Isat=0,6A	<u>M-974(c+)</u> <u>M-845</u> Isat=0,6A	<u>M-102</u> <u>M-016(c+)</u> Isat=0,7A	<u>M-981</u> Isat=1,0A	<u>M-920</u> Isat=0,9A	<u>M-765</u> Isat=1,0A	<u>M-1592</u> Isat=1,3A

C+: Plastic case with seperator holder /C++: Plastic case with base / O: oval shaped versions /***: preliminary /**: almost same size see datasheet /*Isat: "Quasi Saturation Current" @ B = 1,0 T / μ nom / N = 1
Only for information, no guaranteed value. For further information see datasheet.

Nom. dim	50x40x25	63x50x30	80x63x30	100x80x30	130x100x30	160x130x30	200x175x30 236,5x201x30(O)	300x250x30
ODxDxH	53,6x35,9x29,5	68x43x36	85x57x35,5	105x75x35	135x94x34	165x123x34	208x166x37	305x246,5x35
cut	<u>M-507</u> Isat=11A	<u>M-712</u> Isat=14A	<u>M-713/</u> <u>M-639(O)</u> Isat=6A	<u>M-714/</u> <u>M-640(O)</u> Isat=8A	<u>M-715</u> Isat=10A	<u>M-716</u> Isat=36A	<u>M-717/</u> <u>M-771(O)</u> Isat=16/18A	<u>M-648(O)</u> Isat=23A
$\mu r \sim$ ca.1k	<u>M-1551(c+)</u> Isat=113A	<u>M-662</u> Isat=141A	<u>M-663</u> Isat=179A	<u>M-1801</u> Isat=225A	<u>M-665</u> Isat=288A	<u>M-666</u> Isat=363A	<u>M-667</u> Isat=469A	<u>M-863</u> Isat=688A
$\mu r \sim$ ca.2k	<u>M-1552(c+)</u> Isat=56A	<u>M-672</u> Isat=71A	<u>M-673</u> Isat=89A	<u>M-674**/</u> <u>M-1282(O)</u> Isat=111/113A	<u>M-675</u> Isat=144A	<u>M-676</u> Isat=181A	<u>M-677/</u> <u>M-790(O)</u> Isat=234/273A	<u>M-873 (O)</u> Isat=344A
$\mu r \sim$ ca. 4k	<u>M-1554(c+)</u> Isat=28A	<u>M-682/</u> <u>M-1682(O)</u> Isat=35A	<u>M-683</u> Isat=45A	<u>M-684**/</u> <u>M-1284(O)</u> Isat=56A	<u>M-685</u> Isat=72A	<u>M-686/</u> <u>M-986(O)</u> Isat=91A	<u>M-687/</u> <u>M-791(O)</u> Isat=117/109A	<u>M-883(O)</u> Isat=172A
$\mu r \sim$ ca. 8k	<u>M-1558(c+)</u> Isat=14A	<u>M-452</u> Isat=18A	<u>M-453</u> Isat=22A	<u>M-954</u> Isat=28A	<u>M-455</u> Isat=36A	<u>M-456/</u> <u>M-792(O)</u> Isat=45A	<u>M-457/</u> <u>M-751(O)</u> Isat=59/68A	<u>M-582/</u> <u>M-703(O)</u> Isat=86A
$\mu r \sim$ ca. 30k	<u>M-475(c+)</u> Isat=4A	<u>M-112/</u> <u>M-649(O)</u> Isat=5A	<u>M-113/</u> <u>M-283(O)</u> Isat=6A	<u>M-114/</u> <u>M-284(O)</u> Isat=8A	<u>M-115</u> Isat=10A	<u>M-116/</u> <u>M-302(O)</u> Isat=12A	<u>M-117/</u> <u>M-111(O)</u> Isat=16/18A	<u>M-205***/</u> <u>M-248(O)</u> Isat=23A
$\mu r \sim$ ca. 60k	<u>M-484(c+)</u> Isat=2A	<u>M-612</u> Isat=2A	<u>M-613</u> Isat=3A	<u>M-614</u> <u>M-897(O)</u> Isat=4A	<u>M-615</u> Isat=5A	<u>M-616</u> Isat=6A	<u>M-617</u> Isat=8A	<u>M-618</u> Isat=12A

C+: Plastic case with separator holder /C++: Plastic case with base / O: oval shaped versions /***: preliminary /**: almost same size see datasheet /*Isat: "Quasi Saturation Current" @ B = 1,0 T / μm / N = 1
Only for information, no guaranteed value. For further information see datasheet.

General Information regarding MAGNETEC EMC-cores:

MAGNETEC offers advanced and superb EMC-cores based on nanocrystalline NANOPERM® material. Our NANOPERM® material has excellent magnetic properties as its saturation inductance is ca. 1,2T, permeability is adjustable from 1k up to 90k@10kHz, curie temperature is about 600°C and the losses are only 110W/kg@100kHz, 0,3T sin. MAGNETEC have built up a wide standard range of cased cores and offers them with different permeabilities. Our cased cores are encapsulated in a plastic housing with a max temperature about 130°C. Special high temperature materials are also available, see PB_HT.

See www.magnetec.de for further product information sheets, especially NANOPERM® curves

Definition of Saturation Current Isat of NANOPERM®:

Peak value of the exiting current when the initial inductance level is dropped to 10 per cent. Saturation behaviour is very much depending on frequency, signal shape, leakage field, etc. so the mentioned current value is a calculated value for design help only and cannot be guaranteed.

Isat is calculated @ $B = 1,0 \text{ T} / \mu\text{nom} / N = 1$.
See [here](#) for more information.

Nom. dim	16x10x6	20x12x8	25x20x10	25x16x10	30x20x10	40x32x15	40x25x15	45x30x20	50x40x20
ODxDxH	<u>18,2x7,8x8,4</u>	<u>22,3x10,3x10</u>	<u>27,8x17,5x12,6</u>	<u>28,2x13,2x12,6</u>	<u>32,7x17,8x12,6</u>	<u>43,1x28,8x17,4</u>	<u>44,5x21,4x19</u>	<u>48,5x25,5x24</u>	<u>53,4x36,6x23,5</u>
Isat* = 0A-0,9A*	<u>M-940/</u> <u>M-017(c+)/</u> <u>M-939(c++)</u>	<u>M-059</u>	<u>M-853(c+)</u>	<u>M-974(c+)/</u> <u>M-845</u>	<u>M-102/</u> <u>M-016(c+)</u>	-	<u>M-920</u>	-	-
1A-3A	<u>M-104/</u> <u>M-125(c++)</u>	<u>M-556</u>	<u>M-061(c+)</u>	<u>M-062</u>	<u>M-923</u>	<u>M-981</u> <u>M-994</u>	<u>M-382</u>	<u>M-765/</u> <u>M-987</u>	<u>M-1592</u>
4A-7A	<u>M-709</u>	<u>M-1208</u>	<u>M-1258(c+)</u>	<u>M-449</u>	-	-	-	-	<u>M-967/</u> <u>M-049(O)</u>
8A-14A	<u>M-957</u>	<u>M-1204</u>	<u>M-1254(c+)</u>	<u>M-679</u>	<u>M-965/</u> <u>M-450(c+)</u>	<u>M-451</u>	<u>M-831**</u>	<u>M-1458</u>	<u>M-951</u>
15A-24A	<u>M-956</u>	<u>M-1202</u>	-	-	<u>M-680</u>	<u>M-681</u>	<u>M-934</u>	<u>M-762</u>	-
25A-39A	<u>M-1601</u>	-	<u>M-1252(c+)</u>	<u>M-669</u>	<u>M-670</u>	-	-	-	<u>M-1504/</u> <u>M-149(O)</u>
40A-59A	-	<u>M-1201</u>	<u>M-1251(c+)</u>	<u>M-659(c+)</u>	-	<u>M-671</u>	<u>M-1402</u>	<u>M-796**</u>	<u>M-1502</u>
60A-115A	-	-	-	-	<u>M-660(c+)</u>	<u>M-661</u>	<u>M-1401</u>	<u>M-1451</u>	<u>M-1501</u>

C+: Plastic case with separator holder /C++: Plastic case with base / O: oval shaped versions /***: preliminary /**: almost same size see datasheet /*Isat: "Quasi Saturation Current" @ $B = 1,0 \text{ T} / \mu\text{nom} / N = 1$
Only for information, no guaranteed value. For further information see datasheet.

Nom. dim	50x40x25	63x50x30	80x63x30	100x80x30	130x100x30	160x130x30	200x175x30 236,5x201x30(O)	300x250x30
ODxDxH	<u>53,6x35,9x29,5</u>	<u>68x43x36</u>	<u>85x57x35,5</u>	<u>105x75x35</u>	<u>165x123x34</u>	<u>208x166x37</u>	<u>208x166x37</u>	<u>305x246,5x35</u>
Isat= 2A-7A	<u>M-484(c+)/ M-475(c+)</u>	<u>M-612/ M-112/ M-649(O)</u>	<u>M-613/ M-113/ M-283(O)</u>	<u>M-614/ M-897(O)/ M-114/ M-284(O)</u>	<u>M-615</u>	<u>M-616</u>	-	-
8A-14A	<u>M-1558(c+)</u>	-	-	-	<u>M-115/</u>	<u>M-116/ M-302(O)</u>	<u>M-617</u>	<u>M-618/</u>
15A-24A	-	<u>M-452</u>	<u>M-453</u>	-	-	-	<u>M-117/ M-111(O)</u>	<u>M-205***/ M-248(O)</u>
25A-49A	<u>M-1554(c+)</u>	<u>M-682/ M-1682(O)</u>	<u>M-683</u>	<u>M-954</u>	<u>M-455</u>	<u>M-456/ M-792(O)</u>	-	-
50A-69A	<u>M-1552(c+)</u>	<u>M-672</u>	-	<u>M-684/ M-1284(O)</u>	-	-	<u>M-457/ M-751(O)</u>	-
70A-99A	-	-	<u>M-673</u>	-	<u>M-685</u>	<u>M-686/ M-986(O)</u>	-	<u>M-582/ M-703(O)</u>
100A-149A	<u>M-1551(c+)</u>	<u>M-662</u>	-	<u>M-674/ M-1282(O)</u>	<u>M-675</u>	-	<u>M-687/ M-791(O)</u>	-
150A-300A	-	-	<u>M-180</u>	<u>M-1801</u>	<u>M-665</u>	<u>M-676</u>	<u>M-677/ M-790(O)</u>	<u>M-883</u>
Isat>300A	-	-	-	-	-	<u>M-666</u>	<u>M-667</u>	<u>M-873 M-863</u>

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