

高性能铁氧体磁体
NMF™-12, 15系列

High-performance Ferrite Magnets NMF™-12, 15 Series

常规的应用之外，针对新能源汽车驱动电机，
提供替代稀土磁体的应用方案。

Proposing for applications using rare-earth magnet such as xEV traction motors in addition to conventional applications for ferrite magnets.



电机技术应用领域

概要

磁性能*达到全世界量产同类产品中的最高水平，在汽车
辅助电机和家电等领域之外，针对新能源驱动电机提出
替代传统稀土磁体的材料解决方案

*2024年7月止

Highest-level of magnetic properties among mass-produced ferrite magnets*, which enable us to
propose for application conventionally using rare-earth magnets such as traction motors for xEVs
in addition to auxiliary motors for automotive, motors for home appliance, etc. (*As of July 2024)

特点

全世界量产铁氧体磁体的范围内，磁性能为最高水准
Highest-level of magnetic properties among mass-produced ferrite magnets.

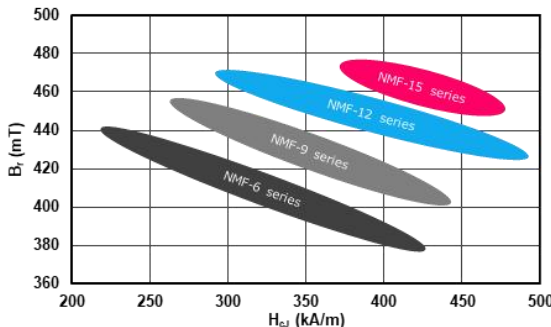
与稀土磁体**相比，电阻高出其数百倍、
可以有效抑制涡电流的产生 **与烧结磁体的对比

Suppressing generation of eddy currents due to that resistivity is three digits
higher than that of rare-earth sintered magnets.

用途 马达
Motors




NMF™系列特性图

Magnetic properties of NMF™ series



驱动电机设计案例

Example of Simulation Results
for Traction Motors

		比较基准 (使用稀土磁体) Reference (Using Rare-earth Magnets)	提案① (电机性能同等) Proposal① (Equivalent Motor Performance)	提案② (电机尺寸同等・高转速化) Proposal② (Equivalent Motor Size, High Speed Rotation)
使用磁体	Magnets in simulation	稀土磁体 Rare-earth Magnets	高性能铁氧体磁体 NMF-15 series High performance Ferrite magnets	高性能铁氧体磁体 NMF-15 series High performance Ferrite magnets
电机样本 1/8 部分	Motor model “1/8”			
最大输出	Max. Output	110 kW	110 kW	105 kW
最大转速	Max. Rotation Speed	10,000 rpm	10,000 rpm	15,000 rpm
磁体Br(相对值)	Magnet Br (relative value)	1.0 (ref.)	0.37	0.37
磁体重量 (相对值)	Magnet Weight (relative value)	1.0 (ref.)	1.7	1.2
轴方向积厚 (相对值)	Motor Length (relative value)	1.0 (ref.)	1.4	1.0
电机重量 (相对值)	Motor Weight (relative value)	1.0 (ref.)	1.3	1.0