

Application

Confidential

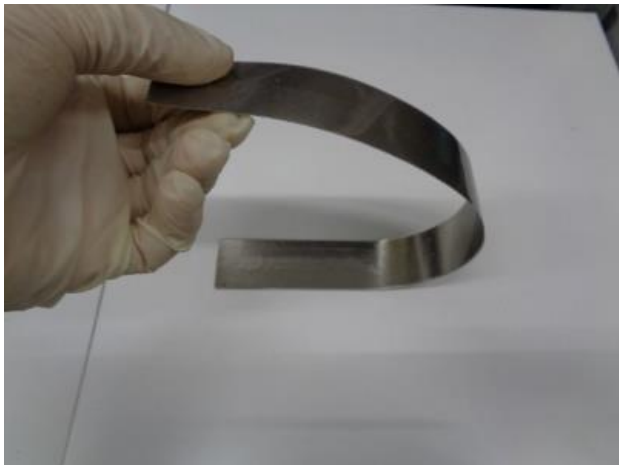
Magnetic shield yoke sheet for wireless charging system in mobile phones, vehicles, etc.

Feature

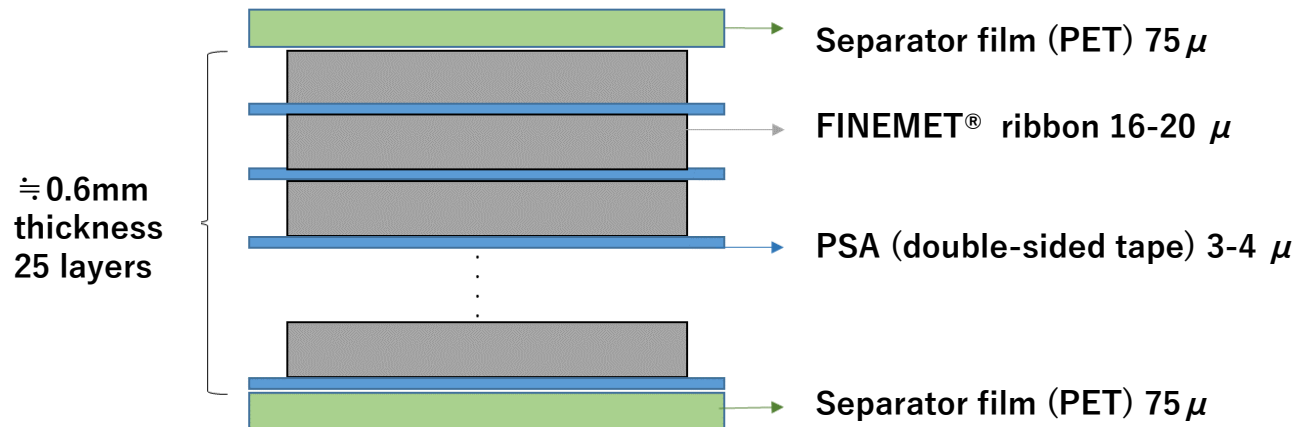
- Significantly improved Q value of our conventional MS series by controlling the magnetic permeability
- Achieved high mechanical reliability with excellent flexibility and impact resistance
- Superiority in the assembling process of the wireless charging system (forming and handling such as cutting, punching, etc.)
- Achieved thinner and lighter sheet with the high saturation magnetic flux density of our FINEMET® sheet(1.23T, ref. Mn-Zn(ML29D) ferrite: 0.54T) (Using FINEMET® is 50% thinner and 35% lighter than with ML29D)

Structure

Photograph of our sheet



Sheet configuration (example)



Note: Sheet size and number of layers differs by the required customer specification.

Characteristic (reference*)

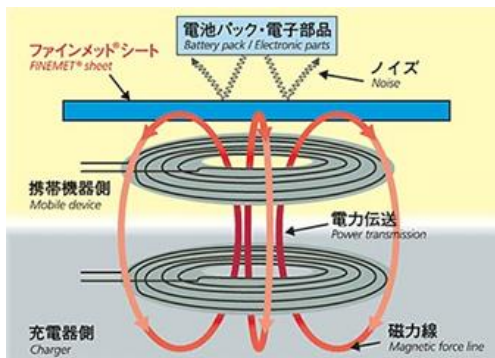
RING CORE

- Significantly improved Q value of the conventional MS series by controlling the magnetic permeability.

	Complex magnetic permeability		Q factor ($\mu r' / \mu r''$)
	$\mu r'$	$\mu r''$	
New MS-HiQ series	1100	50	22
	1600	90	18
	1900	120	16
MS series	13000	6500	2

* Sample : Laminated punched core (ID / OD = 8.0 / 19.8 mm, 25 layer)
 * Measurement conditions : f = 85kHz, V = 0.03V

How FINEMET sheet is used



COIL

- Q value improved by 25% compared to the conventional MS series. Improved charging efficiency and reduced heat generation.

	Layers	permeability $\mu r'$	thickness (mm)	Ls (uH)	Rs (mΩ)	Q factor
Coil	0	-	-	1.0	71.0	7.7
New MS-HiQ series	5	1100	0.22	5.4	55.5	52.0
	15		0.45	5.6	48.0	62.6
	25		0.68	5.7	46.5	65.5
MS series	15	13000	0.45	5.7	61.8	49.7

* Evaluated by the measurement method shown below
 * Measurement conditions : f = 85kHz, V = 0.03V

How measure COIL (Ls, Rs)

