Comparison of soft magnetic materials

Material	Alloy composition	Strip thick-ness [nm]	Losses [W/kg] @ 20kHz, 200mT	Saturation induction B_{sat} [mT]	Magneto-striction η_s [10^{-6}]	Permeability η4 @ 50Hz
Std. crystalline permalloy	$Ni_{60}Fe_{40}$	50	45	1.200	10	20-30k
Adv. crystalline alloy	$Fe_{93,5}Si_{6,5}$	50	40	1.300	0,1	16k
Amorphous alloys I	$Fe_{76}(Si,B)_{24}$	25	18	1.500	25	6,5-8k
High performance ferrites	MnZn	-	17	500	-	1-15k
Adv. cristalline permalloy	$Ni_{80}Fe_{20}$	30	14	800	1	100-300k
Amorphous alloys II a	$Co_{73}(Si,B)_{27}$	25	5	550	< 0,2	100-150k
Amorphous alloys II b	$Co_{77}(Si,B)_{23}$	25	5,5	820	< 0,2	2-4,5k
Amorphous alloys II c	$Co_{80}(Si,B)_{20}$	25	6,5	1.000	< 0,2	1-2,5k
NANOPERM®	$Fe_{73}(Si,B)_{24}$	20	4	1.200	0,1	20-200k

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