

Title (en)

NEAR-ZERO MAGNETOSTRICTIVE GLASSY METAL ALLOYS FOR HIGH FREQUENCY APPLICATIONS

Publication

EP 0329704 B1 19920102 (EN)

Application

EP 87907699 A 19871027

Priority

US 92614786 A 19861103

Abstract (en)

[origin: WO8803699A1] A glassy metal alloy has a value of magnetostriction near-zero and the composition $\text{Co}_a\text{Fe}_b\text{Ni}_c\text{M}_d\text{Be}_e\text{Si}_f$, where "a" ranges from about 65.5 to 70.5 atom percent, "b" ranges from about 3.8 to 4.5 atom percent, "c" ranges from about 0 to 3 atom percent, "d" ranges from about 1 to about 2 atom percent, "e" ranges from about 10 to about 12 atom percent and "f" ranges from about 14 to 15 atom percent when M is selected from vanadium, chromium, molybdenum, niobium and tungsten, when M is manganese, "a" ranges from about 68.0 to 70.0 atom percent, "b" ranges from about 2.5 to 4.0 atom percent, "c" ranges from 0 to 3 atom percent, "d" ranges from 1 to about 4 atom percent, "e" ranges from about 10 to 12 atom percent and "f" ranges from about 14 to about 15 atom percent. The alloy has a saturation magnetostriction value ranging from about -1×10^{-6} to $+1 \times 10^{-6}$, a saturation induction ranging from about 0.65 to about 0.80 Tesla and a Curie temperature ranging from about 245 to 310 DEG C.

IPC 1-7

C22C 1/00; C22C 19/07; H01F 1/16

IPC 8 full level

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CPC (source: EP)

C22C 19/07 (2013.01); **C22C 45/04** (2013.01); **H01F 1/15316** (2013.01)

Citation (examination)

- Patent Abstracts of Japan, volume 8, no. 243 (E-277) (1680), 8 November 1984, & JP-A-59121805
- Patent Abstracts of Japan, volume 8, no. 193 (C-241)(1630), 5 September 1984, & JP-A-5985835
- Patent Abstracts of Japan, volume 9, no. 193 (E-334)(1916), 9 August 1985, & JP-A-6059708
- Patent Abstracts of Japan, volume 10, no.1 (E-371)(2058), 7 January 1986, & JP-A-60165705

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DOCDB simple family (publication)

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DOCDB simple family (application)

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