



(51) International Patent Classification:

H01M 6/18 (2006.01) *A61N 1/378* (2006.01)
H01M 10/04 (2006.01) *H01M 2/02* (2006.01)
H01M 10/056 (2010.01)

(21) International Application Number:

PCT/US2013/072750

(22) International Filing Date:

3 December 2013 (03.12.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/692,729 3 December 2012 (03.12.2012) US

(71) Applicants: **MEDTRONIC, INC.** [US/US]; 710 Medtronic Parkway, NE, Minneapolis, MN 55432 (US). **INFINITE POWER SOLUTIONS, INC.** [US/US]; 11149 Bradford Road, Littleton, CO 80127 (US).

(72) Inventors; and

(71) Applicants : **DAY, John, K.** [US/US]; 710 Medtronic Parkway, NE, Minneapolis, MN 55432 (US). **BARROR, Michael, W.** [US/US]; 710 Medtronic Parkway, NE, Minneapolis, MN 55432 (US). **SNYDER, Shawn, W.** [US/US]; 14083 West 22nd Avenue, Golden, CO 80401 (US). **LAGUARDIA, Alexandra, Z.** [US/US]; 2998 Emporia Street, Denver, CO 80238 (US). **LYTLE, Damon, E.**

[US/US]; 800 Illinois Street, Golden, CO 80401 (US). **NEUDECKER, Bernd, J.** [US/US]; 8 Blue Cedar, Littleton, CO 80127 (US).

(74) Agents: **SHELLER, James, C.** et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 1279 Oakmead Parkway, Sunnyvale, CA 94085-4040 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

[Continued on next page]

(54) Title: SOLID STATE POWER SOURCE WITH FRAMES FOR ATTACHMENT TO AN ELECTRONIC CIRCUIT

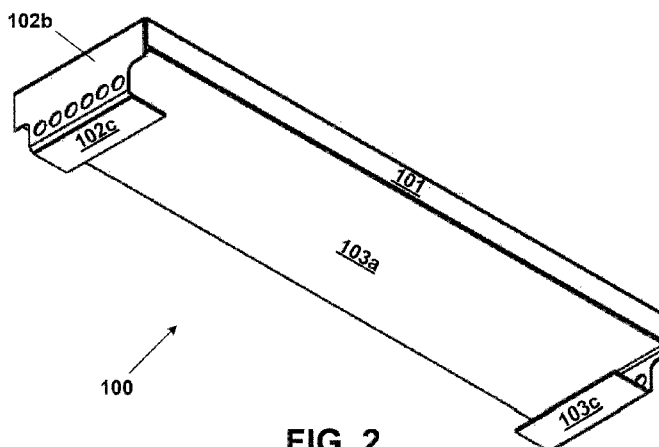


FIG. 2

(57) Abstract: A power source for a solid state device includes: a first frame having a first contact portion, a first bonding portion and a first extension portion between the first contact portion and the first bonding portion; a second frame having a second contact portion, a second bonding portion and a second extension portion between the second contact portion and the second bonding portion; and a first pole layer, an electrolyte layer and a second pole layer positioned between the first and second contact portions, wherein a first portion of the electrolyte layer is positioned between the first extension and the first pole and a second portion of the electrolyte layer is positioned between the first extension and the second pole.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

Published:

— *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:

7 August 2014