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(21) International Application Number: PCT/US99/21184 (22) International Filing Date: 14 September 1999 (14.09.99) (30) Priority Data: 09/158,631 22 September 1998 (22.09.98) US (71) Applicant: ILLINOIS SUPERCONDUCTOR CORPORATION [US/US]; 451 Kingston Court, Mt. Prospect, IL 60056 (US). (72) Inventor: ABDELMONEM, Amr; Apartment 106, 2754 Buffalo Grove Road, Arlington Heights, IL 60004 (US). (74) Agent: BRANDON, Richard, A.; Marshall, O'Toole, Gerstein, Murray & Borun, 6300 Sears Tower, 233 S. Wacker Drive, Chicago, IL 60606-6402 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: DUAL OPERATION MODE FILTER USING SUPERCONDUCTING RESONATORS (57) Abstract A dual operation mode all temperature filter is provided. The dual operation mode filter is provided with a housing defining at least two cavities, an input port and an output port. It is also provided with a non-superconducting resonator disposed in a first one of the cavities and a superconducting resonator disposed in a second one of the cavities. The second resonator comprises a superconducting material containing 8-15 % silver. The dual operation mode filter filters at a relatively high level at temperatures below a threshold temperature and at a lower, conventional level, at temperatures below the threshold.		