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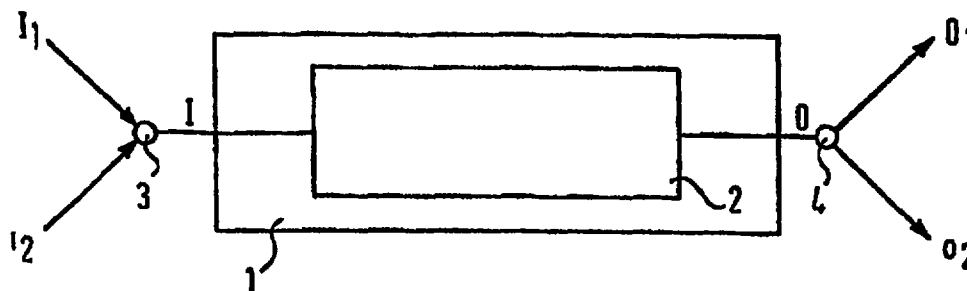
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<p>(21) International Application Number: PCT/EP98/08306 (22) International Filing Date: 17 December 1998 (17.12.98) (30) Priority Data: 97122420.9 18 December 1997 (18.12.97) EP (71) Applicant: SOCIETE EUROPEENNE DES SATELLITES S.A. [LU/LU]; L-6815 Château de Betzdorf (LU). (72) Inventors: BETHSCHEIDER, Gerhard; Wiesenweg 12, D-54441 Ayl (DE). HARLES, Guy; 48A, rue du 9 mai 1944, L-2112 Howald (LU). (74) Agents: ZANGS, Rainer et al.; Hoffman . Eitle, Arabellastrasse 4, D-81925 Munich (DE).</p>		<p>(81) Designated States: 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, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, 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).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>

(54) Title: METHOD AND APPARATUS FOR DETERMINING AN OPERATING POINT OF A NON-LINEAR AMPLIFIER OF A COMMUNICATION CHANNEL



(57) Abstract

For determining the operating point of a non-linear amplifier (2) of a communication channel (1), for example of a transponder in a communication satellite, a first input signal (I_1) is transmitted through the communication channel (1) at a power level (P_{11}) which drives the non-linear amplifier (2) in a non-linear operation mode. In addition, a second input signal (I_2) is transmitted through the communication channel (1) simultaneously with the first input signal (I_1). The second input signal (I_2) is transmitted at a level below the level of the first input signal (I_1). If the contribution of the second input signal (I_2) to the total input of the non-linear amplifier is small, the operating point of the non-linear amplifier is determined almost only by the first input signal. Therefore, the output power (P_{02}) corresponding to the second signal (I_2) is determined most strongly by the input power (P_{11}) of the first signal (I_1). The operating point (I_1, P_0) of said non-linear amplifier (2) is determined on the basis of an output signal (O_2) of said communication channel (1) corresponding to said second signal (I_2).