10-20-2003





FORM PTO-1595 U.S. Department of Commerce **Patent and Trademark Office** T1-35777 102578097 — attents. Please record the attached original documents or copy thereof. To the Assistant Compissioner for 1. Name of conveying party(ies): 2. Name and Address of receiving party(ies): Roy A. Hastings (10/7/03) Name: Texas Instruments Incorporated PO Box 655474, M/S 3999 Lemuel H. Thompson II (10/08/03) Address: City: Dallas 10-14-03 State: Texas Zip: 75265 Additional name(s) attached? ____ Yes _X_No Additional name(s) & address(es) attached? ___ Yes _X_ No 3. Nature of Conveyance: Assignment Merger Security Agreement Change of Name Other Execution Date: October 7, 2003 and October 8, 2003 4. Application number(s) or patent number(s). This document is being filed together with a new application. Execution date of the application: October 7, 2003 and October 8, 2003 CURRENT MODE CIRCUIT FOR IMPLEMENTING THE MINIMUM FUNCTION Docket: TI-35777 Filing Date: 06/06/03 A. Patent Application No.(s) 10/456,360 B. Patent No.(s) Additional numbers attached? ____ Yes _ X_ No Additional numbers attached? _____ Yes __X_ No 5. Name and address of party to whom correspondence concerning 6. Number of applications and patents involved: ___1_ document should be mailed: W. Daniel Swayze Jr. Name: Texas Instruments Incorporated Address: PO Box 655474, M/S 3999 City: Dallas State: Zip: 75265 Texas 7. Amount of fee enclosed or authorized to be charged: \$40 Deposit account number (Attach two copies of this form if paying 10/17/2003 DBYRNE by deposit account): 20-0668 00000155 200668 10456360 01 FC:8021 40.00 DA DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original 10-10-03 ., Registration No. 34,478 Page 1 of 1

> **PATENT** REEL: 014593 FRAME: 0190

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with its principal office at 7839 Churchill Way, M.S. 3999, Dallas, TX 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefore, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year:

TITLE OF INVENTION	Current Mode Circuit for Implementing the Minimum Function		
SIGNATURE OF INVENTOR AND NAME	(1)Roy Alan Hastings	(2)Lemuel Herbert Thompson II	(3)
DATE	6/7/03	10/8/03	
RESIDENCE (City, County, State)			
	Allen, Collin, Texas	Dallas, Dallas, Texas	

PATENT REEL: 014593 FRAME: 0191