

3. DEPARTMENT OF COMMERCE

(Rev. 10/02)	2804946 U.S. Patent and Trademark Office
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3. Nature of conveyance: ✓ Assignment	Street Address: No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu 300-7
	City:_TaiwanState:Zip:
07/16/2004 Execution Date:	Additional name(s) & address(es) attached? Yes V No
A. Patent Application No.(s)	B. Patent No.(s)
Additional numbers at	tached? Yes V No
Name and address of party to whom correspondence concerning document should be mailed: Name:Howard Chen Internal Address:	6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41)\$ Enclosed Authorized to be charged to deposit account
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PATENT

REEL: 015626 FRAME: 0569

ASSIGNMENT AND AGREEMENT

For value received, I/we, Chi-Di An, hereby sell, assign and transfer to Taiwan
Semiconductor Manufacturing Co., Ltd., with its principal place of business located at No. 8,
Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China,
and its successors, assigns and legal representatives, the entire right, title and interest, for the
United States of America, in and to certain inventions related to HIGH VOLTAGE
TOLERANT I/O CIRCUIT described in an application for Letters Patent of the United States
filed on, bearing application number
and all the rights and privileges in said application and under any and all Letters Patent and any
divisions, continuations, continuations-in-part, reexamination certificates, reissues, and
extensions thereof that may be granted in the United States for said inventions; and I also
concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd.
the entire right, title and interest in and to said inventions for all countries foreign to the United
States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in
said countries foreign to the United States for said inventions.

I/we authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I/we hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I/we request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

I/we agree that, when requested, I/we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Assignment and Agreement 1

RECORDED: 07/22/2004

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