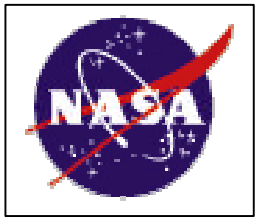

Core Suppliers List (CSL)

Part II

Revision A

Monolithic Microcircuits and Semiconductors

National Aeronautics and Space Administration (NASA)
Goddard Space Flight Center (GSFC)
Greenbelt, Maryland

July 1998

Prepared by:
The Active Part Suppliers Assessment Program (ASAP)

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Active Supplier Assessment Program (ASAP)

Preface

The Active Part Supplier Assessment Program (ASAP) Core Supplier List (CSL) Part II has been revised to accommodate changes reported by suppliers represented in this document.

Due to a large number of changes made in the NASDA Sections IV, V and VI, it was not possible to highlight each change. It is recommended that the user replace the CSL Part II issued in 1996 with the CSL Part II, Revision A, for current information related to ESA and NASDA certified and qualified suppliers.

Additionally, the NASA High Usage Parts information Section VII has been transferred to the Vendor Information Matrix (VIM) Part I, Revision A, managed by the ASAP. ESA Sections I, II and III are under review at the present time.

The ASAP Core Supplier List (CSL) Part II contains manufacturers who are certified and qualified by European Space Agency (ESA) or National Space Development Agency of Japan (NASDA) to provide parts to ESA/SCC or NASDA specifications.

For each manufacturer described herein, there is accompanying information related to the processing technologies and product lines for which the manufacturer is considered a core supplier. The name and telephone number of a corresponding company representative is listed for convenience to users of this list.

The information presented in this document was prepared in collaboration with the NASDA and ESA officials using the NASDA Qualified Products List and ESA/SCC Qualified Parts List.

The part commodity listings are grouped to facilitate part search. Introductory remarks for each commodity section provide an explanation of the information contained therein. Please be aware that the accompanying information on manufacturer's listed herein is considered accurate at the time of issue of this document. The listings are subject to change without notice; revisions or amendments will be issued, as necessary.

The CSL Part II is accessible via the GSFC Component Technologies and Radiation Effects Branch (Code 562) home page at:

http://misspiggy.gsfc.nasa.gov/ctre/hq/asap

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Supplier Assessment Program (ASAP)

Please send comments, questions or corrections to:

Ashok K. Sharma
Code 562
Goddard Space Flight Center
Greenbelt, Maryland 20771
Phone: 301-286-6165
Fax: 301-286-1695
e-mail: ashok.k.sharma.1@gsfc.nasa.gov

NATIONAL SPACE DEVELOPMENT AGENCY OF JAPAN

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Supplier Assessment Program (ASAP)

National Space Development Agency of Japan (NASDA) Parts and Standards Program

General Information

NASDA EEE (Electrical, Electronic and Electromechanical) Parts Program Standard establishes selection criteria, standardization procedure and control of EEE parts. The NASDA qualified parts are commonly used in the Japanese space programs and systems that are developed by NASDA. NASDA point-of-contact and agency location are provided below:

Mr. Matsuda Sumio, Senior Engineer, Electronic and Information Technology Laboratory
NASDA
Tsukuba Space Center
1-1, Sengen 2chome, Tsukuba-city
Ibaraki 305-8505, Japan
Phone: 81-298-52-2295
Fax: 81-298-50-2231
E-mail: Matsuda.sumio@nasda.go.jp

NASDA microcircuit and semiconductor parts general qualification, quality conformance inspection (QCI) and screening requirements are based on the NASDA-QTS-38510 and NASDA-QTS-19500 specifications, respectively. NASDA Reliability Assurance Department reviews manufacturer's materials and processes documentation, applicable test-specification, test data, and evaluation report.

NASDA has contracted HIREC for the data review and continuous qualification activities to support maintenance of NASDA Qualified Products List (QPL) and Preferred Parts List (PPL). HIREC is responsible for reviewing test data and conducting periodic surveys of manufacturer's wafer fabrication, assembly and test facilities. HIREC also performs procurement and distribution of parts listed in the NASDA QPL. NASDA has the final authority in reviewing the test qualification data and manufacturer's audit/survey results for approval and listing in the NASDA QPL. The HIREC point-of-contact and agency location are provided below:

Mr. Takashi Kosakai, Director, Contract Department
Mr. Yasuo Kikuchi, Sales Manager, Contract Department
High-Reliability Components Corporation (HIREC)
Shuwa No. 3 Shiba-park Bldg.
2-10-12 Shiba-daimon, Minato-Ku, Tokyo 105-0012, Japan
Phone: 81-3-3435-9556
Fax: 81-3-3435-9559

Active Supplier Assessment Program (ASAP)

The parts manufactured by various Japanese companies that are listed in the NASDA QPL and NASA Parts Selection List (NPSL), are fabricated, assembled and tested in Japan. EEE parts for NASDA's space systems applications are based on two levels of reliability and quality assurance levels: Class I and Class II. Class I parts are applied to systems, subsystems or equipment, which the NASDA project office has determined to be critical. For applications not requiring Class I parts, Class II parts are used. The detailed information about NASDA manufacturers that are listed in NPSL is supplied in Core Suppliers List (CSL) Part II, which can be accessed at http://misspiggy.gsfc.nasa.gov/ctre/hq/asap

Note: Information contained herein is subject to change by the manufacturer at any time.

National Space Development Agency of Japan

Section IV	.....	Microcircuits
Section V	.....	Transistors
Section VI	.....	Diodes

Section IV
NASDA Monolithic Microcircuits

1. Introduction ……..……. IV-1

2. NEC …….. IV-2

Note: Information contained herein is subject to change by the manufacturer at any time.

NASDA Monolithic Microcircuits
Introduction

The manufacturers listed herein are qualified to the NASDA specifications and meet all of the requirements of the NASDA base specification NASDA-QTS-38510 generic specification for the qualification of monolithic integrated circuits. The base documents contain reference to MIL-STD-883, Test Methods and Procedures for Microelectronics, for test methods. The accompanying information provided for each manufacturer is explained below:

Address and contact:	Self-explanatory.
Specification Number:	NASDA base specification (NASDA-QTS-38510) and detailed specification slash sheet number (/xxx).
NASDA QPL Status:	Only full qualification approval by NASDA and the approved number.
Manufacturer Audits/Surveys:	Audits and/or Surveys performed by NASDA and HIREC once per year and the approval date.
Class:	The EEE parts are based on two reliability and quality assurance levels: Class I and Class II. The Class I parts are applied to systems, subsystems, or equipment, which the NASDA Project Office has determined to be critical. For applications not requiring Class I parts, Class II parts are used.
Technology:	Wafer process technology that has been qualified/certified by the NASDA QTS.
Product Type:	Generic functional description of products that have been qualified/certified.
Certified/Qualified Facility(ies):	Location of qualified/certified facility(ies) listed in the NASDA QPL.

Note: Information contained herein is subject to change by the manufacturer at any time.

NEC

Address	*Specification Number* NASDA-QTS-38501A/	*NASDA QPL Status*	*Mfr. Audits/Surveys*	*Class*	*Contact*
Semiconductor Division 1753 Shimonumabe Nakahara-Ku, Kawasaki-City Kanagawa Pref., Japan	650, 651, 653, 657, 663, 665 657, 658, 662, 663, 919	NASDA-QTA-4-17-5 NASDA-QTA-5-23-5	NASDA 24.2.1997	I	HIREC Ph 81-3-3435-9556 Fax 81-3-3435-9559

Technology:	Product type:
HCMOS	Logic

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
NEC Kansai Ltd. 9-1 Seiran 2-chome Otsu-City, Siga Pref., Japan	NEC Kyusyu Ltd. 1-1 Yahata 1-chome Kumamoto-City Kumanoto Pref., Japan	Semiconductor Division 1753 Shimonumabe Nakahara-Ku, Kawasaki-City Kanagawa Pref., Japan	Semiconductor Division 1753 Shimonumabe Nakahara-Ku, Kawasaki-City Kanagawa Pref., Japan

Package Information:

Package Type:	Flat Pack
Lead Count:	14-16
Lead Finish:	Per Detail Drawing
Lead Pitch:	0.05 inch

Section V
NASDA Transistors

1. Introduction ……. V-1

2. Fuji Electric Company Ltd. ……. V-2

NASDA Transistors
Introduction

The manufacturers listed herein are qualified to the NASDA specifications and meet all of the requirements of the NASDA base specification NASDA-QTS-19500 and generic specification for the qualification of transistors. In general, these specifications establish requirements for the qualification of transistors for NASDA. The base specifications contain references to MIL-STD-750 Test Methods used for testing semiconductor devices. The accompanying information provided for each manufacturer is explained below:

Address and Contact:	Self-explanatory.
Specification Number:	NASDA Base specification (NASDA-QTS-19500) and detailed specification slash sheet number (/xxxx).
NASDA QPL Status:	Only full qualification approval by NASDA and the approved number.
Manufacturer Audits/Surveys:	Audits and/or Surveys performed by NASDA and HIREC once per year and the approval date.
Class:	EEE parts are based on two reliability and quality assurance levels: Class I and Class II. Class I parts are applied to systems, subsystems, or equipment, that NASDA Project Office has determined to be critical. For applications not requiring Class I parts, Class II parts are used.
Technology:	Wafer process technology that has been qualified/certified by the NASDA QTS.
Product Type:	Generic functional descriptionof products that have been qualified/certified.
Certified/Qualified Facility(ies):	Location of qualified/certified facility(ies) listed in the NASDA QPL.

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Suppliers Assessment Program (ASAP)

Fuji Electric Company Ltd.

Address	*Specification Number* NASDA-QTS-19500A/	*NASDA QPL Status*	*Mfr. Audits/Surveys*	*Class*	*Contact*
Matsumoto Factory 4-18-1, Tsukama, Matsumoto Nagano Pref., Japan	1031, 1040A, 1044,1047	NASDA-QTA-9-3 NASDA-QTA-8-12 NASDA-QTA-8-11 NASDA-QTA-7-23-1	NASDA 10-12-1996	I	HIREC Ph 81-3-3435-9556 Fax 81-3-3435-9559

Technology:	Product type:
Silicon, Bipolar FETs	NPN High Power Transistor FETs, N-Ch., Power Transistor

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
Matsumoto Factory	Omachi Fuji Co., Ltd.	Matsumoto Factory	Matsumoto Factory

Note: Information contained herein is subject to change by the manufacturer at any time.

Section VI
NASDA Diodes

1. Introduction ……. VI-1

2. Hitachi Ltd. ……. VI-2

3. NEC ……... VI-3

4. Sharp Corporation ……... VI-4

NASDA Diodes
Introduction

The manufacturers listed herein are qualified to the NASDA specifications and meet all of the requirements of the NASDA base specification NASDA-QTS-19500 and NASDA generic specification for the qualification of diodes. In general, these specifications establish requirements for the qualification of diodes for NASDA. The base documents contain references to MIL-STD-750 and MIL-STD-202 Test Methods for testing discrete semiconductor devices. The accompanying information provided for each manufacturer is explained below:

Address:	Self-explanatory.
Specification Number:	NASDA base specification (NASDA-QTS-19500) and detailed specification slash sheet number (/xxxx).
NASDA QPL Status:	Only full qualification approval by NASDA and the approved number.
Manufacturer Audits/Surveys:	Audits and/or surveys performed by NASDA and HIREC once per year and the approval date.
Class:	EEE parts are based on two reliability and quality assurance levels: Class I and Class II. Class I parts are applied to systems, subsystems, or equipment, that NASDA Project Office has determined to be critical. For applications not requiring Class I parts, Class II parts are used.
Technology:	Wafer process technology that has been qualified/certified by the NASDA QTS.
Product Type:	Generic functional description of products that have been qualified/certified.
Certified/Qualified Facility(ies):	Location of qualified/certified facility(ies) listed in the NASDA QPL.

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Suppliers Assessment Program (ASAP)

Hitachi Ltd.

Address	*Specification Number NASDA-QTS-19500A/*	*NASDA QPL Status*	*Mfr. Audits/Surveys*	*Class*	*Contact*
Hitachi Works Mitachi Limited 3-1-1 Saiwaicho, Hitachi Ibaraki Pref., Japan	1029 1037 1030 1027 1038A	NASDA-QTA-10-4 NASDA-QTA-5-2-4 NASDA-QTA-10-4 NASDA-QTA-10-4 NASDA-QTA-10-4	NASDA 22.5.1998 30.6.1997 22.5.1998 22.5.1998 22.5.1998	I	H. Konishi Space Systems Division Ph 81-3-3258-1111 FAX 81-3-3258-9776

Technology:	Product type:
Swithcing, High Dielectric, Middle Power, Zener	Diode

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
Hitachi Works	Hitachi Works	Hitachi Works	Hitachi Works

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Suppliers Assessment Program (ASAP)

NEC

Address	*Specification Number NASDA-QTS-19500A/*	*NASDA QPL Status*	*Mfr. Audits/Surveys*	*Class*	*Contact*
Semiconductor Division 1753, Shimonumabe Nakahara-Ku, Kawasaki-City Kanagawa Pref., Japan	1033 1045A 1032	NASDA-QTA-61-27-10 NASDA-QTA-8-10-1 NASDA-QTA-61-28-10	NASDA 15.5.1996 22.10.1996 15.5.1996	I	HIREC Ph 81-3-3435-9556 Fax 81-3-3435-9559

Technology:	Product type:
Silicon, Planar	Switching Diodes

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
NEC Kansai Ltd. 9-1 Seiran 2-chome Otsu-City, Siga Pref., Japan	NEC Yamagata Ltd. 1863 Iryuda, Takahata-Town Yamagata-Pref., Japan	Semiconductor Division 1753 Shimoumabe Nakahara-ku, Kawasaki-City Kanagawa Pref., Japan	Semiconductor Division 1753 Shimoumabe Nakahara-ku, Kawasaki-City Kanagawa Pref., Japan

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Suppliers Assessment Program (ASAP)

Sharp Corporation

Address	*Specification Number NASDA-QTS-19500A/*	*NASDA QPL Status*	Mfr. Audits/Surveys	Class	*Contact*
Sharp Corporation Shinjo Factory 282-1 Hajikami, Shinjo-Cho Kitakatsuragi-gum, Nara 639-2198, Japan	1046	NASDA-QTA-5-27-4	NASDA 5.11.1997	I	Y. Uchida Assistant Manager Electronic Components Group Ph 81-745-63-3508 Fax 81-745-63-3589

Technology:	Product type:
Thin Cell	Diode

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory

Note: Information contained herein is subject to change by the manufacturer at any time.

Active Suppliers Assessment Program (ASAP)

Sharp Corporation

Address	*Specification Number NASDA-QTS-19500A/*	*NASDA QPL Status*	*Mfr. Audits/Surveys*	*Class*	*Contact*
Sharp Corporation Shinjo Factory 282-1 Hajikami, Shinjo-Cho Kitakatsuragi-gum, Nara 639-2198, Japan	107B 107B 108 109 208 209	NASDA-QTA-3-20-6 NASDA-QTA-6-11-3 NASDA-QTA-7-21-2 NASDA-QTA-7-22-2 NASDA-QTA-8-14-1 NASDA-QTA-8-14-1	NASDA 5.11.1997	I	Y. Uchida Assistant Manager Electronic Components Group Ph 81-745-63-3508 Fax 81-745-63-3589

Technology:	Product type:
Silicon Solar Cell	Solar Cell

Certified/Qualified Facilities:

Wafer Fabrication	*Assembly*	*Electrical test*	*Environmental test*
Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory	Sharp Corporation Shinjo Factory

Note: Information contained herein is subject to change by the manufacturer at any time.