



***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: 1998 Listing**

**Issued: 01/06/98**

GIDEP Nr:	GIDEP Category:	TRB Nr:
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*This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):*

Product ID (Description):

Proposed Date of Change:

Description of Change:

Effect of Change:

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 (0)8141 35 1495 Email: petra.pavel@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>		

**Other Ref:**

**Associated Notes / Table(s):**

Please note - [S] indicates PCN contains information also relating to Space Level Products

<u>PCN</u>	<u>Nr Date</u>	<u>Description</u>
MA98001	01/06/98	CLC404 Die Redesign [S]
MA98002	01/06/98	CLC406 Die Redesign
MA98003	01/06/98	CLC409 Die Redesign [S]
MA98004	01/06/98	CLC425 Die Redesign [S]
MA98004A	01/07/98	CLC425 Die Redesign - Amended [S]
MA98005	01/06/98	CLC505 Die Redesign [S]
MA98006	02/09/98	ADC & DH Obsolescence
MA98007	02/26/98	Q3FY98 Military Division Obsolescence [S]
MA98007A	02/27/98	First Amendment-Q3FY98 Military Division Obsolescence [S]
MA98007B	03/25/98	Second Amendment-Q3FY98 Military Division Obsolescence [S]
MA98008	02/26/98	LMC555 Test Limit Change
MA98009	03/06/98	Comlinear Sidebrazed to Ceramic Packaged Devices
MA98010	05/07/98	Comlinear Transfer - Industrial Grade Devices
MA98010A	08/14/98	AMENDED: Comlinear Transfer - Industrial Grade Devices
MA98011	05/11/98	Q4FY98 Military Division Obsolescence [S]
MA98012	05/12/98	FA / OBO Integration for Cerdips [S]
MA98013	07/01/98	NSUK Analog Fab - 0.5% Copper Metalization [S]
MA98014	07/07/98	CLC522 Die Revision
MA98014A	08/18/98	AMENDED: CLC522 Die Revision
MA98015	07/07/98	JD54LS11 & JD54LS27 Obsolescence
MA98016	07/13/98	LFAST Fab Transfer (NSUK 4" to 6")
MA98016A	10/16/98	AMENDED: LFAST Fab Transfer (NSUK 4" to 6")
MA98017	07/16/98	SEM Wafer Sampling (Logic Products) [S]
MA98018	07/17/98	Comlinear Commercial Die Products
MA98019	07/20/98	FACT S Level Static Burn-In [S]
MA98020	08/18/98	Q1FY99 Military Division Obsolescence [S]
MA98021	09/10/98	Standard 883/JAN B FAST Processing
MA98022	09/17/98	Removal of Wafer Backside Metalization - Analog [S]
MA98023	10/14/98	11C90 / 11C91 Testing
MA98024	10/27/98	Wafer Backside Metalization Process Transfer - Analog [S]
MA98025	11/09/98	Q2FY99 Military Division Obsolescence [S]
MA98025A	02/17/99	First Amendment - Q2FY99 Military Division Obsolescence [S]
MA98026	12/15/98	FAST Burn-In Reduction (B Level)
MA98027	12/15/98	Package Consolidation for QCI Group D [S]



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98001**

**Issued: 01/06/98**

GIDEP Nr: AH6-C-98-03

GIDEP Category: PCN

TRB Nr:

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**WIDE BAND, HIGH SLEW RATE, MONOLITHIC OP AMP**

5962-9099401MPC	CLC404AMC	CLC404AID
CLC404AIB	CLC404A8D	CLC404A8B
CLC404ALC	CL404L01C	CL404S02D
CL404801F	CL404S01H	

**Proposed Date of Change:**

Date code 9735

**Description of Change:**

The CLC404 die has been redesigned to allow the die to be assembled into a commercial grade plastic SOT23 5 lead package. Military devices were effected as all product levels use the same die design. The die identification was UB1229B but is now UB1928B. Die size has changed from 54 x 54 mils to 45 x 31 mils.

**Effect of Change:**

SSBW change from 150MHz to 140MHz at 25°C. GFR change from 1.0dB to 1.1dB at 25°C.

**In case of further questions please contact:**

**Europe**

National Semiconductor GmbH, Fuerstenfeldbruck, Germany

QA/Spec Control Tel: +49 (0)8141 35-1483 / 1402

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Tel: +49 (0)180 532 7832 (English)

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**Other European contacts**

**N.America**

Customer Support Center Tel: 1-800-272-9959

Email: support@nsc.com

QA Tel: 408-721-5649

PCN Administrator

Tel: 408-721-4189  
Email: sherry.dobbins@nsc.com

**Other N.American contacts**

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(970) 225-7419  
internet : sherri.smith@nsc.com

**Other Ref:**

**Associated Notes / Table(s):**



PCN Administrator

Tel: 408-721-4189  
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**Other Ref:**

**Associated Notes / Table(s):**





***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98003**

**Issued: 01/06/98**

GIDEP Nr: AH6-C-98-03

GIDEP Category: PCN

TRB Nr:

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**VERY WIDEBAND, LOW DISTORTION, MONOLITHIC OP AMP**

5962-9203401MPC  
CLC409AMC  
CLC409A8B  
CLC409AID

CLC409A8D  
CLC409AIB  
CL409S01D  
CLC409A8L-2

CLC409ALC  
  
  
5962-9203401M2A

**Proposed Date of Change:**

Date code 9735

**Description of Change:**

The CLC409 die has been redesigned to allow the die to be assembled into a commercial grade plastic SOT23 5 lead package. Military devices were effected as all product levels use the same die design. The die identification was UB1372A but is now UB1927B. Die size has changed from 54 x 54 mils to 45 x 31 mils.

**Effect of Change:**

HD2 change from -60dB to -56dB at 25°C, and from -57dB to -56dB at minimum and maximum operating temperature.

**In case of further questions please contact:**

**Europe**

National Semiconductor GmbH, Fuerstenfeldbruck, Germany

QA/Spec Control Tel: +49 (0)8141 35-1483 / 1402

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**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98004**

**Issued: 01/06/98**

<b>GIDEP Nr:</b> AH6-C-98-03	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**ULTRA LOW NOISE, WIDEBAND OP AMP**

5962-9325901MPA	CLC425A8B
CLC425AMC	CL425L01C
CLC425ALC	CL425S01D
CLC425AIB	CL425S02D

**Proposed Date of Change:**

Date code 9735

**Description of Change:**

The CLC425 die has been redesigned to allow the die to be assembled into a commercial grade plastic SOT23 5 lead package. Military devices were effected as all product levels use the same die design. The die identification was UB1703A but is now UB1703B. Bond pad layout has been changed. Pinout of packaged devices has not been changed.

**Effect of Change:**

No effect on reliability or product performance.

**In case of further questions please contact:**

**Europe**

National Semiconductor GmbH, Fuerstenfeldbruck, Germany

QA/Spec Control                      Tel: +49 (0)8141 35-1483 / 1402

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  Tel: +49 (0)180 532 7832 (English)

  Email: europe.support@nsc.com

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**Other European contacts**

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**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98004A**

**Issued: 01/07/98**

GIDEP Nr: AH6-C-98-03	GIDEP Category: PCN	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**ULTRA LOW NOISE, WIDEBAND OP AMP**

5962-9325901MPA	CLC425A8B
CLC425AMC	CL425L01C
CLC425ALC	CL425S01D
CLC425AIB	CL425S02D

**Proposed Date of Change:**

Date code 9735

**Description of Change:**

The CLC425 die has been redesigned to allow the die to be assembled into a commercial grade plastic SOT23 5 lead package. Military devices were effected as all product levels use the same die design. The die identification was UB1703A but is now UB1703B. Bond pad layout has been changed. Pinout of packaged devices has not been changed.

**Effect of Change:**

**This section was amended to reflect the following electrical changes:**

SSBW changed from 75 to 60 mHz at +25°C and from 75 to 65 mHz at -55°C.

**In case of further questions please contact:**

**Europe**

National Semiconductor GmbH, Fuerstenfeldbruck, Germany

QA/Spec Control                      Tel: +49 (0)8141 35-1483 / 1402

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  Tel: +49 (0)180 532 7832 (English)

  Email: europe.support@nsc.com

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PCN Administrator

Tel: 408-721-5649  
Tel: 408-721-4189  
Email: sherry.dobbins@nsc.com

**Other N.American contacts**

SHERRI SMITH  
COMLINEAR CONTRACTS  
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**Other Ref:**

**Associated Notes / Table(s):**



***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98005**

**Issued: 01/06/98**

GIDEP Nr: AH6-C-98-03	GIDEP Category: PCN	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**HIGH SPEED, PROGRAMMABLE SUPPLY CURRENT,  
MONOLITHIC OP AMP**

5962-9099301MPC	CLC505A8D
CLC505AMC	CL505M01C
CLC505ALC	CL505S12D
CLC505AID	CL505806D

**Proposed Date of Change:**

Date code 9739

**Description of Change:**

The CLC505 die has been redesigned to allow more die per wafer. Die identification was UB1230B but is now UB1929B. Die size has changed from 54 x 54 mils to 45 x 31 mils.

**Effect of Change:**

No effect on reliability or product performance.

**In case of further questions please contact:**

**Europe**

National Semiconductor GmbH, Fuerstenfeldbruck, Germany

QA/Spec Control Tel: +49 (0)8141 35-1483 / 1402

Customer Support Centre Tel: +49 (0)180 530 8585 (German)

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**Other Ref:**

**Associated Notes / Table(s):**



***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98006**

**Issued: 02/09/98**

GIDEP Nr: AH6-D-98-07	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

<b><u>Standard Microcircuit Drawing Number</u></b>	<b><u>National Part Number</u></b>	<b><u>Description</u></b>
5962-9559301QXA	ADC12062MW-QML	12-Bit A/D Converter
5962-9232901QRA	ADC10061CMJ-QML	10-Bit A/D Converter
5962-9232902QJA	ADC10062CMJ-QML	10-Bit A/D Converter
5962-9232903QXA	ADC10064CMJ-QML	10-Bit A/D Converter
	DH0035G-MIL	Pin Diode Driver

**Proposed Date of Change:**

**January 1998**

Effective immediately, National Semiconductor's Military/Aerospace Division will obsolete the above listed devices.

No Life Time Buys will be accepted.

**Description of Change:**

These parts are no longer manufacturable by National for the following reasons:

We are no longer able to fabricate die for the ADC12062 which meet a critical specification for Signal-to-Noise Ratio.

We no longer have test capability to do the required Hot and Cold Temperature testing for the ADC10061, ADC10062 and ADC10064.

The die for the transistors that are use in the DH0035 are no longer available.

**Effect of Change:**

National Semiconductor apologizes in advance for any inconvenience this

discontinuance may cause.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>		

**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98007**

**Issued: 02/26/98**

GIDEP Nr: AH6-D-98-08	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

REFERENCE TABLE I

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **MARCH 9, 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National semiconductor wishes to inform you that the devices listed in Table I are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 internet: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 internet: brian.stearns@nsc.com



Other Ref:

Associated Notes / Table(s):

Table I

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

NOTE: \*\* indicates Commercial Product sold by the Mil/Aero Division

<b>Column A Standard Military Drawing or Slashsheet</b>	<b>Column B National Part Number</b>	<b>Column C Alternate Part Number</b>	<b>Column D Alternate Source</b>
	54151ADM.	DM54151AJ/883	NATIONAL
	54AC00DM.	54AC00DMQB.	NATIONAL
	54AC02DM.	54AC02DMQB.	NATIONAL
	54AC04DM.	54AC04DMQB.	NATIONAL
	54AC109DM.	54AC109DMQB.	NATIONAL
	54AC10DM.	54AC10DMQB.	NATIONAL
	54AC11DM.	54AC11DMQB.	NATIONAL
	54AC138DM.	54AC138DMQB.	NATIONAL
	54AC139DM.	54AC139DMQB.	NATIONAL
	54AC153DM.	54AC153DMQB.	NATIONAL
	54AC158DM.	54AC158DMQB.	NATIONAL
	54AC163DM.	54AC163DMQB.	NATIONAL
	54AC163FM.	54AC163FMQB.	NATIONAL
	54AC169DM.	54AC169DMQB.	NATIONAL
	54AC174DM.	54AC174DMQB.	NATIONAL
	54AC174FM-MLS	54AC174FMQB.	NATIONAL
	54AC191FM-MLS	54AC191FMQB.	NATIONAL
	54AC20DM.	54AC20DMQB.	NATIONAL
	54AC20FM-MLS	54AC20FMQB.	NATIONAL
	54AC240DM.	54AC240DMQB.	NATIONAL
	54AC244DM.	54AC244DMQB.	NATIONAL
	54AC245DM.	54AC245DMQB.	NATIONAL
	54AC245LM.	54AC245LMQB.	NATIONAL
	54AC251DM.	54AC251DMQB.	NATIONAL
	54AC253DM.	54AC253DMQB.	NATIONAL
	54AC378DM.	54AC378DMQB.	NATIONAL
	54AC521FM-MLS	54AC521FMQB.	NATIONAL
	54AC541DM.	54AC541DMQB.	NATIONAL
	54AC74DM.	54AC74DMQB.	NATIONAL
	54ACQ244FM-MLS	54ACQ244FMQB.	NATIONAL
	54ACQ245FM-MLS	54ACQ245FMQB.	NATIONAL
	54ACT00DM.	54ACT00DMQB.	NATIONAL
	54ACT138DM.	54ACT138DMQB.	NATIONAL
	54ACT139DM.	54ACT139DMQB.	NATIONAL
	54ACT157DM.	54ACT157DMQB.	NATIONAL
	54ACT163DM.	54ACT163DMQB.	NATIONAL
	54ACT174DM.	54ACT174DMQB.	NATIONAL
	54ACT299DM-MLS	54ACT299DMQB.	NATIONAL
	54ACT299DM.	54ACT299DMQB.	NATIONAL
	54ACT377DM.	54ACT377DMQB.	NATIONAL
	54ACT521FM-MLS	54ACT521FMQB.	NATIONAL

	54ACT574DM-MLS	54ACT574DMQB.	NATIONAL
	54ACT74DM.	54ACT74DMQB	NATIONAL
	54ACT74FM.	54ACT74FMQB.	NATIONAL
	54ACT818FM.	54ACT818FMQB.	NATIONAL
	54ACTQ244DM-MLS	54ACTQ244DMQB.	NATIONAL
	54ACTQ373DM-MLS	54ACTQ373DMQB.	NATIONAL
5962-9219901MKA	54ACTQ374DM-MLS	54ACTQ374DMQB.	NATIONAL
	54ACTQ827FMQB.		NONE
	54F00DM.	54F00DMQB.	NATIONAL
	54F02DM.	54F02DMQB.	NATIONAL
	54F109DM.	54F109DMQB.	NATIONAL
	54F10DM.	54F10DMQB.	NATIONAL
	54F11DM.	54F11DMQB.	NATIONAL
	54F138DM.	54138DMQB.	NATIONAL
	54F139DM.	54F139DMQB.	NATIONAL
	54F157ADM.	54F157ADMQB.	NATIONAL
	54F169DM.	54F169DMQB.	NATIONAL
	54F174DM.	54F174DMQB.	NATIONAL
	54F175DM.	54F175DMQB.	NATIONAL
	54F194FM-MLS	54F194FMQB.	NATIONAL
	54F245DM.	54F245DMQB.	NATIONAL
	54F253DM.	54F253DMQB.	NATIONAL
	54F280FM-MLS	54F280FMQB.	NATIONAL
	54F299FMQB.	74F299SC.	FAIRCHILD
	54F373DM.	54F373DMQB.	NATIONAL
	54F378DM.	54F378DMQB.	NATIONAL
	54F533DM.	54F533DMQB.	NATIONAL
	54F646SDM.	54F646SDMQB.	NATIONAL
	54FCT244DM.	54FCT244DMQB.	NATIONAL
	54FCT245DM.	54FCT245DMQB.	NATIONAL
	54FCT373DM.	54FCT373DMQB.	NATIONAL
	54LS00DM.	DM54LS00J/883	NATIONAL
	54LS02DM.	DM54LSO2J/883	NATIONAL
	54LS08DM.	DM54LS08J/883	NATIONAL
	54LS10DM.	DM74LS10N	FAIRCHILD
	54LS20DM.	DM74LS20N	FAIRCHILD
	93L14FMQB.		NONE
	93L38FMQB.		NONE
	9403ADM.	9403ADMQB.	NATIONAL
	96LS02FMQB.	DM96LS02M	FAIRCHILD
	DM5401W/883	SL5401	LANSDALE
	DM54121W/883	ML54121	LANSDALE
	DM5420W/883	ML5420	LANSDALE
	DM5490W/883		NONE
	DM54LS109W/883	DM74LS109	FAIRCHILD
	DM54LS240J-MIL	DM54LS240J/883	NATIONAL
	DM54LS85W-MLS	54LS85	ROCHESTER
	DM9314W/883		NONE
	DS0026H-MLS		NONE
5962-8982101GA	DS1634H-SMD		NONE
	DS1776 MW8		NONE
	DS55113J/883	SN55113	TEXAS INSTRUMENTS
7900801CA	DS7820AJ-SMD	SN55182	TEXAS INSTRUMENTS
	DS7820W/883	DS7820	PHILIPS
	DS7830W/883	DS7830	PHILIPS
	DS7832W/883		NONE

JM38510/32501BSA	DS9615MJ/883	JD55115BEA	NATIONAL
JM38510/30501BCA	JD54LS273BSA	DM74LS273J	FAIRCHILD
5962-3870501BGA	JD54LS32BCA	DM54LS32J/883	NATIONAL
5962-3870501SGA	JL2951BGA	LP2951H/883	NATIONAL
JM38510/11904BGA	JL2951SGA	LP2951H/883	NATIONAL
	JL411BGA	LF411MH/883	NATIONAL
	LF111H-MIL	LF111H	NATIONAL
	LF11201D/883	DG201	HARRIS
	LF156AW-MLS	LF156AH-MLS	NATIONAL
	LF441MH/883	AD548	ANALOG DEVICES
	LM105MDS	LM117K MDS	NATIONAL
5962-8958901PA	LM107J/883	LM107H/883	NATIONAL
5962-8958901CA	LM107J-14/883	LM107H/883	NATIONAL
5962-8992102XA	LM129BH-SMD	LM129BH/883	NATIONAL
	LM140AK-12/883	LM140K-12/883	NATIONAL
	LM140AK-15/883	LM140K-15/883	NATIONAL
	LM140AK-5.0/883	LM140K-5.0/883	NATIONAL
5962-8958602GA	LM1578AH/883		NONE
	LM185BXH2.5/883	LM185BH/883	NATIONAL
	LM185BYH1.2/883	LM185BYH1.2-SMD	NATIONAL
5962-8759402XA	LM185E-2.5/883	LM185BE/883	NATIONAL
	**LM199H	LM199	LINEAR TECHNOLOGY
	LM199H/883	LM199	LINEAR TECHNOLOGY
	** LM285BXH-2.5	LM185BXH-2.5	NATIONAL
	** LM293AH	LM193AH	NATIONAL
	LM2941K-MLS	LM2941K/883	NATIONAL
	** LM345K-5.0	uA7905	TEXAS INSTRUMENTS
	** LM395H	LM195H/883	NATIONAL
	** LM4250H	CLC426AJP	NATIONAL
	LM4250H-MIL	CLC426AJ-QML	NATIONAL
5962-9300401MEA	LM614AMJ/883		NONE
	LM709AH/883	LM108AH/883	NATIONAL
	LM709AJ/883	LM108AJ/883	NATIONAL
	LM709AW/883	LM108AWG/883	NATIONAL
7800701GA	LM709H/883	UA7098	NATIONAL
	LM714H/883	LMC6061AMJ/883	NATIONAL
	LM747AJ-MIL	LM158AJ/883	NATIONAL
	LM748J/883	LMC6061AMJ/883	NATIONAL
5962-9209401MPA	LMC662AMJ/883	LM6482AMJ/883	NATIONAL
5962-9209302MCA	LPC660AMJ/883	LMC6464AMJ/883	NATIONAL
	MM57408D/883		NONE
	NS41024L25E-MCP	NS41024L25E/883	NATIONAL
	NS41024S25E-MCP	NS41024S25E/883	NATIONAL
8203602GA	OP07H/883	LMC6061AMJ/883	NATIONAL



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98007A**

**Issued: 02/27/98**

GIDEP Nr: AH6-D-98-08	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

REFERENCE TABLE I

**AMENDED FOR CORRECTIONS TO TABLE I COLUMN A**

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **MARCH 9, 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National semiconductor wishes to inform you that the devices listed in Table I are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 internet: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 internet: brian.stearns@nsc.com

**Other Ref:**

**Associated Notes / Table(s):**

Table I

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

NOTE: \*\* indicates Commercial Product sold by the Mil/Aero Division

<b>Column A Standard Military Drawing or Slashsheet</b>	<b>Column B National Part Number</b>	<b>Column C Alternate Part Number</b>	<b>Column D Alternate Source</b>
	54151ADM.	DM54151AJ/883	NATIONAL
	54AC00DM.	54AC00DMQB.	NATIONAL
	54AC02DM.	54AC02DMQB.	NATIONAL
	54AC04DM.	54AC04DMQB.	NATIONAL
	54AC109DM.	54AC109DMQB.	NATIONAL
	54AC10DM.	54AC10DMQB.	NATIONAL
	54AC11DM.	54AC11DMQB.	NATIONAL
	54AC138DM.	54AC138DMQB.	NATIONAL
	54AC139DM.	54AC139DMQB.	NATIONAL
	54AC153DM.	54AC153DMQB.	NATIONAL
	54AC158DM.	54AC158DMQB.	NATIONAL
	54AC163DM.	54AC163DMQB.	NATIONAL
	54AC163FM.	54AC163FMQB.	NATIONAL
	54AC169DM.	54AC169DMQB.	NATIONAL
	54AC174DM.	54AC174DMQB.	NATIONAL
	54AC174FM-MLS	54AC174FMQB.	NATIONAL
	54AC191FM-MLS	54AC191FMQB.	NATIONAL
	54AC20DM.	54AC20DMQB.	NATIONAL
	54AC20FM-MLS	54AC20FMQB.	NATIONAL
	54AC240DM.	54AC240DMQB.	NATIONAL
	54AC244DM.	54AC244DMQB.	NATIONAL
	54AC245DM.	54AC245DMQB.	NATIONAL
	54AC245LM.	54AC245LMQB.	NATIONAL
	54AC251DM.	54AC251DMQB.	NATIONAL
	54AC253DM.	54AC253DMQB.	NATIONAL
	54AC378DM.	54AC378DMQB.	NATIONAL
	54AC521FM-MLS	54AC521FMQB.	NATIONAL
	54AC541DM.	54AC541DMQB.	NATIONAL
	54AC74DM.	54AC74DMQB.	NATIONAL
	54ACQ244FM-MLS	54ACQ244FMQB.	NATIONAL
	54ACQ245FM-MLS	54ACQ245FMQB.	NATIONAL
	54ACT00DM.	54ACT00DMQB.	NATIONAL
	54ACT138DM.	54ACT138DMQB.	NATIONAL
	54ACT139DM.	54ACT139DMQB.	NATIONAL
	54ACT157DM.	54ACT157DMQB.	NATIONAL
	54ACT163DM.	54ACT163DMQB.	NATIONAL
	54ACT174DM.	54ACT174DMQB.	NATIONAL
	54ACT299DM-MLS	54ACT299DMQB.	NATIONAL
	54ACT299DM.	54ACT299DMQB.	NATIONAL
	54ACT377DM.	54ACT377DMQB.	NATIONAL
	54ACT521FM-MLS	54ACT521FMQB.	NATIONAL
	54ACT574DM-MLS	54ACT574DMQB.	NATIONAL

	54ACT74DM.	54ACT74DMQB	NATIONAL
	54ACT74FM.	54ACT74FMQB.	NATIONAL
	54ACT818FM.	54ACT818FMQB.	NATIONAL
	54ACTQ244DM-MLS	54ACTQ244DMQB.	NATIONAL
	54ACTQ373DM-MLS	54ACTQ373DMQB.	NATIONAL
5962-9219901MKA	54ACTQ374DM-MLS	54ACTQ374DMQB.	NATIONAL
	54ACTQ827FMQB.		NONE
	54F00DM.	54F00DMQB.	NATIONAL
	54F02DM.	54F02DMQB.	NATIONAL
	54F109DM.	54F109DMQB.	NATIONAL
	54F10DM.	54F10DMQB.	NATIONAL
	54F11DM.	54F11DMQB.	NATIONAL
	54F138DM.	54138DMQB.	NATIONAL
	54F139DM.	54F139DMQB.	NATIONAL
	54F157ADM.	54F157ADMQB.	NATIONAL
	54F169DM.	54F169DMQB.	NATIONAL
	54F174DM.	54F174DMQB.	NATIONAL
	54F175DM.	54F175DMQB.	NATIONAL
	54F194FM-MLS	54F194FMQB.	NATIONAL
	54F245DM.	54F245DMQB.	NATIONAL
	54F253DM.	54F253DMQB.	NATIONAL
	54F280FM-MLS	54F280FMQB.	NATIONAL
	54F299FMQB.	74F299SC.	FAIRCHILD
	54F373DM.	54F373DMQB.	NATIONAL
	54F378DM.	54F378DMQB.	NATIONAL
	54F533DM.	54F533DMQB.	NATIONAL
	54F646SDM.	54F646SDMQB.	NATIONAL
	54FCT244DM.	54FCT244DMQB.	NATIONAL
	54FCT245DM.	54FCT245DMQB.	NATIONAL
	54FCT373DM.	54FCT373DMQB.	NATIONAL
	54LS00DM.	DM54LS00J/883	NATIONAL
	54LS02DM.	DM54LSO2J/883	NATIONAL
	54LS08DM.	DM54LS08J/883	NATIONAL
	54LS10DM.	DM74LS10N	FAIRCHILD
	54LS20DM.	DM74LS20N	FAIRCHILD
	93L14FMQB.		NONE
	93L38FMQB.		NONE
	9403ADM.	9403ADMQB.	NATIONAL
	96LS02FMQB.	DM96LS02M	FAIRCHILD
	DM5401W/883	SL5401	LANSDALE
	DM54121W/883	ML54121	LANSDALE
	DM5420W/883	ML5420	LANSDALE
	DM5490W/883		NONE
	DM54LS109W/883	DM74LS109	FAIRCHILD
	DM54LS240J-MIL	DM54LS240J/883	NATIONAL
	DM54LS85W-MLS	54LS85	ROCHESTER
	DM9314W/883		NONE
	DS0026H-MLS		NONE
5962-8982101GA	DS1634H-SMD		NONE
	DS1776 MW8		NONE
	DS55113J/883	SN55113	TEXAS INSTRUMENTS
7900801CA	DS7820AJ-SMD	SN55182	TEXAS INSTRUMENTS
	DS7820W/883	DS7820	PHILIPS
	DS7830W/883	DS7830	PHILIPS
	DS7832W/883		NONE
	DS9615MJ/883	JD55115BEA	NATIONAL

JM38510/32501BSA	JD54LS273BSA	DM74LS273J	FAIRCHILD
JM38510/30501BCA	JD54LS32BCA	DM54LS32J/883	NATIONAL
5962-3870501BGA	JL2951BGA	LP2951H/883	NATIONAL
5962-3870501SGA	JL2951SGA	LP2951H/883	NATIONAL
JM38510/11904BGA	JL411BGA	LF411MH/883	NATIONAL
	LF111H-MIL	LF111H	NATIONAL
	LF11201D/883	DG201	HARRIS
	LF156AW-MLS	LF156AH-MLS	NATIONAL
	LF441MH/883	AD548	ANALOG DEVICES
	LM105MDS	LM117K MDS	NATIONAL
5962-8958901PA	LM107J/883	LM107H/883	NATIONAL
5962-8958901CA	LM107J-14/883	LM107H/883	NATIONAL
5962-8992102XA	LM129BH-SMD	LM129BH/883	NATIONAL
	LM140AK-12/883	LM140K-12/883	NATIONAL
	LM140AK-15/883	LM140K-15/883	NATIONAL
	LM140AK-5.0/883	LM140K-5.0/883	NATIONAL
5962-8958602GA	LM1578AH/883		NONE
	LM185BXH2.5/883	LM185BH/883	NATIONAL
	LM185BYH1.2/883	LM185BYH1.2-SMD	NATIONAL
5962-87594022A	LM185E-2.5/883	LM185BE/883	NATIONAL
	**LM199H	LM199	LINEAR TECHNOLOGY
	LM199H/883	LM199	LINEAR TECHNOLOGY
	** LM285BXH-2.5	LM185BXH-2.5	NATIONAL
	** LM293AH	LM193AH	NATIONAL
	LM2941K-MLS	LM2941K/883	NATIONAL
	** LM345K-5.0	uA7905	TEXAS INSTRUMENTS
	** LM395H	LM195H/883	NATIONAL
	** LM4250H	CLC426AJP	NATIONAL
	LM4250H-MIL	CLC426AJ-QML	NATIONAL
5962-9300401MEA	LM614AMJ/883		NONE
	LM709AH/883	LM108AH/883	NATIONAL
	LM709AJ/883	LM108AJ/883	NATIONAL
	LM709AW/883	LM108AWG/883	NATIONAL
7800701GA	LM709H/883	UA7098	NATIONAL
	LM714H/883	LMC6061AMJ/883	NATIONAL
	LM747AJ-MIL	LM158AJ/883	NATIONAL
	LM748J/883	LMC6061AMJ/883	NATIONAL
5962-9209401MPA	LMC662AMJ/883	LM6482AMJ/883	NATIONAL
5962-9209302MCA	LPC660AMJ/883	LMC6464AMJ/883	NATIONAL
	MM57408D/883		NONE
	NS41024L25E-MCP	NS41024L25E/883	NATIONAL
	NS41024S25E-MCP	NS41024S25E/883	NATIONAL
8203602GA	OP07H/883	LMC6061AMJ/883	NATIONAL



***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98007B**

**Issued: 03/25/98**

GIDEP Nr: AH6-D-98-08A	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

REFERENCE TABLE I

**First Amendment - AMENDED FOR CORRECTIONS TO TABLE I COLUMN A**

**Second Amendment : DM5420W/883 has been deleted from the Table I and re-instated as a marketable device as of March 1998.**

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **MARCH 9, 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National semiconductor wishes to inform you that the devices listed in Table I are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com



<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 internet: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 internet: brian.stearns@nsc.com
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**Other Ref:**

**Associated Notes / Table(s):**

Table I

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

NOTE: \*\* indicates Commercial Product sold by the Mil/Aero Division

<b>Column A Standard Military Drawing or Slashsheet</b>	<b>Column B National Part Number</b>	<b>Column C Alternate Part Number</b>	<b>Column D Alternate Source</b>
	54151ADM.	DM54151AJ/883	NATIONAL
	54AC00DM.	54AC00DMQB.	NATIONAL
	54AC02DM.	54AC02DMQB.	NATIONAL
	54AC04DM.	54AC04DMQB.	NATIONAL
	54AC109DM.	54AC109DMQB.	NATIONAL
	54AC10DM.	54AC10DMQB.	NATIONAL
	54AC11DM.	54AC11DMQB.	NATIONAL
	54AC138DM.	54AC138DMQB.	NATIONAL
	54AC139DM.	54AC139DMQB.	NATIONAL
	54AC153DM.	54AC153DMQB.	NATIONAL
	54AC158DM.	54AC158DMQB.	NATIONAL
	54AC163DM.	54AC163DMQB.	NATIONAL
	54AC163FM.	54AC163FMQB.	NATIONAL
	54AC169DM.	54AC169DMQB.	NATIONAL
	54AC174DM.	54AC174DMQB.	NATIONAL
	54AC174FM-MLS	54AC174FMQB.	NATIONAL
	54AC191FM-MLS	54AC191FMQB.	NATIONAL
	54AC20DM.	54AC20DMQB.	NATIONAL
	54AC20FM-MLS	54AC20FMQB.	NATIONAL
	54AC240DM.	54AC240DMQB.	NATIONAL
	54AC244DM.	54AC244DMQB.	NATIONAL
	54AC245DM.	54AC245DMQB.	NATIONAL
	54AC245LM.	54AC245LMQB.	NATIONAL
	54AC251DM.	54AC251DMQB.	NATIONAL
	54AC253DM.	54AC253DMQB.	NATIONAL
	54AC378DM.	54AC378DMQB.	NATIONAL
	54AC521FM-MLS	54AC521FMQB.	NATIONAL
	54AC541DM.	54AC541DMQB.	NATIONAL
	54AC74DM.	54AC74DMQB.	NATIONAL
	54ACQ244FM-MLS	54ACQ244FMQB.	NATIONAL
	54ACQ245FM-MLS	54ACQ245FMQB.	NATIONAL
	54ACT00DM.	54ACT00DMQB.	NATIONAL
	54ACT138DM.	54ACT138DMQB.	NATIONAL
	54ACT139DM.	54ACT139DMQB.	NATIONAL
	54ACT157DM.	54ACT157DMQB.	NATIONAL
	54ACT163DM.	54ACT163DMQB.	NATIONAL
	54ACT174DM.	54ACT174DMQB.	NATIONAL
	54ACT299DM-MLS	54ACT299DMQB.	NATIONAL
	54ACT299DM.	54ACT299DMQB.	NATIONAL
	54ACT377DM.	54ACT377DMQB.	NATIONAL
	54ACT521FM-MLS	54ACT521FMQB.	NATIONAL

	54ACT574DM-MLS	54ACT574DMQB.	NATIONAL
	54ACT74DM.	54ACT74DMQB	NATIONAL
	54ACT74FM.	54ACT74FMQB.	NATIONAL
	54ACT818FM.	54ACT818FMQB.	NATIONAL
	54ACTQ244DM-MLS	54ACTQ244DMQB.	NATIONAL
	54ACTQ373DM-MLS	54ACTQ373DMQB.	NATIONAL
5962-9219901MKA	54ACTQ374DM-MLS	54ACTQ374DMQB.	NATIONAL
	54ACTQ827FMQB.		NONE
	54F00DM.	54F00DMQB.	NATIONAL
	54F02DM.	54F02DMQB.	NATIONAL
	54F109DM.	54F109DMQB.	NATIONAL
	54F10DM.	54F10DMQB.	NATIONAL
	54F11DM.	54F11DMQB.	NATIONAL
	54F138DM.	54138DMQB.	NATIONAL
	54F139DM.	54F139DMQB.	NATIONAL
	54F157ADM.	54F157ADMQB.	NATIONAL
	54F169DM.	54F169DMQB.	NATIONAL
	54F174DM.	54F174DMQB.	NATIONAL
	54F175DM.	54F175DMQB.	NATIONAL
	54F194FM-MLS	54F194FMQB.	NATIONAL
	54F245DM.	54F245DMQB.	NATIONAL
	54F253DM.	54F253DMQB.	NATIONAL
	54F280FM-MLS	54F280FMQB.	NATIONAL
	54F299FMQB.	74F299SC.	FAIRCHILD
	54F373DM.	54F373DMQB.	NATIONAL
	54F378DM.	54F378DMQB.	NATIONAL
	54F533DM.	54F533DMQB.	NATIONAL
	54F646SDM.	54F646SDMQB.	NATIONAL
	54FCT244DM.	54FCT244DMQB.	NATIONAL
	54FCT245DM.	54FCT245DMQB.	NATIONAL
	54FCT373DM.	54FCT373DMQB.	NATIONAL
	54LS00DM.	DM54LS00J/883	NATIONAL
	54LS02DM.	DM54LSO2J/883	NATIONAL
	54LS08DM.	DM54LS08J/883	NATIONAL
	54LS10DM.	DM74LS10N	FAIRCHILD
	54LS20DM.	DM74LS20N	FAIRCHILD
	93L14FMQB.		NONE
	93L38FMQB.		NONE
	9403ADM.	9403ADMQB.	NATIONAL
	96LS02FMQB.	DM96LS02M	FAIRCHILD
	DM5401W/883	SL5401	LANSDALE
	DM54121W/883	ML54121	LANSDALE
	DM5490W/883		NONE
	DM54LS109W/883	DM74LS109	FAIRCHILD
	DM54LS240J-MIL	DM54LS240J/883	NATIONAL
	DM54LS85W-MLS	54LS85	ROCHESTER
	DM9314W/883		NONE
	DS0026H-MLS		NONE
5962-8982101GA	DS1634H-SMD		NONE
	DS1776 MW8		NONE
	DS55113J/883	SN55113	TEXAS INSTRUMENTS
7900801CA	DS7820AJ-SMD	SN55182	TEXAS INSTRUMENTS
	DS7820W/883	DS7820	PHILIPS
	DS7830W/883	DS7830	PHILIPS
	DS7832W/883		NONE
	DS9615MJ/883	JD55115BEA	NATIONAL

JM38510/32501BSA	JD54LS273BSA	DM74LS273J	FAIRCHILD
JM38510/30501BCA	JD54LS32BCA	DM54LS32J/883	NATIONAL
5962-3870501BGA	JL2951BGA	LP2951H/883	NATIONAL
5962-3870501SGA	JL2951SGA	LP2951H/883	NATIONAL
JM38510/11904BGA	JL411BGA	LF411MH/883	NATIONAL
	LF111H-MIL	LF111H	NATIONAL
	LF11201D/883	DG201	HARRIS
	LF156AW-MLS	LF156AH-MLS	NATIONAL
	LF441MH/883	AD548	ANALOG DEVICES
	LM105MDS	LM117K MDS	NATIONAL
5962-8958901PA	LM107J/883	LM107H/883	NATIONAL
5962-8958901CA	LM107J-14/883	LM107H/883	NATIONAL
5962-8992102XA	LM129BH-SMD	LM129BH/883	NATIONAL
	LM140AK-12/883	LM140K-12/883	NATIONAL
	LM140AK-15/883	LM140K-15/883	NATIONAL
	LM140AK-5.0/883	LM140K-5.0/883	NATIONAL
5962-8958602GA	LM1578AH/883		NONE
	LM185BXH2.5/883	LM185BH/883	NATIONAL
	LM185BYH1.2/883	LM185BYH1.2-SMD	NATIONAL
5962-87594022A	LM185E-2.5/883	LM185BE/883	NATIONAL
	**LM199H	LM199	LINEAR TECHNOLOGY
	LM199H/883	LM199	LINEAR TECHNOLOGY
	** LM285BXH-2.5	LM185BXH-2.5	NATIONAL
	** LM293AH	LM193AH	NATIONAL
	LM2941K-MLS	LM2941K/883	NATIONAL
	** LM345K-5.0	uA7905	TEXAS INSTRUMENTS
	** LM395H	LM195H/883	NATIONAL
	** LM4250H	CLC426AJP	NATIONAL
	LM4250H-MIL	CLC426AJ-QML	NATIONAL
5962-9300401MEA	LM614AMJ/883		NONE
	LM709AH/883	LM108AH/883	NATIONAL
	LM709AJ/883	LM108AJ/883	NATIONAL
	LM709AW/883	LM108AWG/883	NATIONAL
7800701GA	LM709H/883	UA7098	NATIONAL
	LM714H/883	LMC6061AMJ/883	NATIONAL
	LM747AJ-MIL	LM158AJ/883	NATIONAL
	LM748J/883	LMC6061AMJ/883	NATIONAL
5962-9209401MPA	LMC662AMJ/883	LM6482AMJ/883	NATIONAL
5962-9209302MCA	LPC660AMJ/883	LMC6464AMJ/883	NATIONAL
	MM57408D/883		NONE
	NS41024L25E-MCP	NS41024L25E/883	NATIONAL
	NS41024S25E-MCP	NS41024S25E/883	NATIONAL
8203602GA	OP07H/883	LMC6061AMJ/883	NATIONAL



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98008**

**Issued: 02/26/98**

<b>GIDEP Nr:</b> AH6-C-98-04	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

CMOS Timer

LMC555H/883            5962-8950305GA

LMC555J/883            5962-8950305PA

**Proposed Date of Change:**

**FEBRUARY 16, 1998**

**Description of Change:**

**Test Limit Change**

The +125 degree C limit for "Discharge Transistor Leakage Current" (Icex) has been relaxed from 300 nA to 1000 nA.

**Effect of Change:**

Customers are encouraged to review their applications to determine the possible impact of the above information.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry Mcgee Mil/Aero Analog Eng. Mgr. (408) 721-7231 larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98009**

**Issued: 03/06/98**

GIDEP Nr: AH6-C-98-05

GIDEP Category: PCN

TRB Nr:

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLE I for Devices that will be qualified in the Ceramic package with the first order.

Reference TABLE II for Devices that were previously qualified and available in sidebrazed and ceramic packages but are currently only supplied in the Ceramic version.

**Proposed Date of Change:**

This change is effective immediately but there is some limited stock available of the Sidebrazed Dual-in-Line Package parts which will be used to fill orders until this stock is depleted.

**Description of Change:**

Comlinear produced these devices in an 8 or 14 lead Sidebrazed Dual-in-Line Package. Due to consolidation of Assembly and Test resources, the production of these products will move from assembly in Pantronix (Santa Clara/Milpitas)/Test in Comlinear (Fort Collins -CLC) to Assembly in AMKOR-ANAM (Manila, Philippines) and Test in National Semiconductor's Singapore facility. Due to both diminishing sources for the package materials and capability in the new assembly facility, the product package is changing from the 8 or 14 lead Sidebrazed Dual-in-Line Package to an existing National Semiconductor 8 or 14 lead Ceramic Dual-in-Line Package.

**Effect of Change:**

The Ceramic Dual-in-Line Package is layout and pin for pin compatible to the old Sidebrazed package. There is no change to the functionality of the product, or limits associated with this change. Impact to our customers should be minimal. There is a change in lead finish options, as the new package will only be available in a Hot Solder Dip Lead finish.

The new facilities, processes and package materials are existing, qualified and in current high volume production for similar products.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry Mcgee Mil/Aero Analog Eng. Mgr. (408) 721-7231 larry.mcgee@nsc.com	



**Other Ref:**

**Associated Notes / Table(s):**

TABLE I: Devices to be qualified in the Ceramic version by the first order.

Comlinear Sidebrazed Part Number	Comlinear Sidebrazed SMD#	National Ceramic Part Number	National Ceramic SMD#	Lead Count
CLC115A8D	N/A	CLC115AJ-QML	TBD	14
CLC404A8D	5962-9099401MPC	CLC404AJ-QML	5962-9099401MPA	8
CLC409A8D	5962-9203401MPC	CLC409AJ-QML	5962-9203401MPA	8
CLC505A8D	5962-9099301MPC	CLC505AJ-QML	5962-9099301MPA	8
CLC520A8D	5962-9169401MCC	CLC520AJ-QML	5962-9169401MCA	14
CLC522A8D	5962-9451701MCC	CLC522AJ-QML	5962-9451701MCA	14

TABLE II: Qualified devices currently only available in the Ceramic Package version.

Comlinear Sidebrazed Part Number	Comlinear Sidebrazed SMD#.	National Ceramic Part Number	National Ceramic SMD#	Lead Count
CLC110A8D	5962-8997501PC	CLC110AJ-QML	5962-8997501PA	8
CLC114A8D	5962-9233901MCC	CLC114AJ-QML	5962-9233901MCA	14
CLC400A8D	5962-8997001PC	CLC400AJ-QML	5962-8997001PA	8
CLC401A8D	5962-8997301PC	CLC401AJ-QML	5962-8997301PA	8
CLC402A8D	5962-9203301MPC	CLC402AJ-QML	5962-9203301MPA	8
CLC406A8D	5962-9200401MPC	CLC406AJ-QML	5962-9200401MPA	8
CLC410A8D	5962-9060001PC	CLC410AJ-QML	5962-9060001PA	8
CLC414A8D	5962-9169301MCC	CLC414AJ-QML	5962-9169301MCA	14
CLC415A8D	5962-9305501MCC	CLC415AJ-QML	5962-9305501MCA	14
CLC420A8D	5962-9175801MPC	CLC420AJ-QML	5962-9175801MPA	8
CLC420B8D	5962-9175802MPC	CLC420BJ-QML	5962-9175802MPA	8
CLC430A8D	5962-9203001MPC	CLC430AJ-QML	5962-9203001MPA	8
CLC501A8D	5962-8997401PC	CLC501AJ-QML	5962-8997401PA	8
CLC502A8D	5962-9174301MPC	CLC502AJ-QML	5962-9174301MPA	8
CLC532A8D	5962-9203501MCC	CLC532AJ-QML	5962-9203501MCA	14



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98010**

**Issued: 05/07/98**

<b>GIDEP Nr:</b> AH6-C-98-06	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Industrial Grade Comlinear Analog Products - See Table I

**Proposed Date of Change:**

**April 1998**

**Description of Change:**

These Industrial Grade devices have been approved/released based upon the extension from National's Military Aerospace transfer qualification testing results of the 8 Pin CERDIP that were qualified in accordance with MIL-PRF-38535. (Data is available upon request)

**This transfer activity includes:**

Transfer of Assembly and Test operations from Comlinear facilities, an acquisition of National Semiconductor, to existing National Semiconductor facilities. Assembly transfers from Pantronix, San Jose, CA to AMKOR/ANAM Philippines. Test transfers from Comlinear Fort Collins, Colorado to National Semiconductor Singapore. Die Attach changes from Gold Eutectic to Silver Glass. Comlinear had previously qualified silver glass die attach, but had not implemented production.

Both AMKOR/ANAM Philippines and National Semiconductor Singapore are ISO9002 certified and are a part of National's QML approved facilities for assurance levels Q, B, S and V.

As part of this transfer activity, the generic Comlinear part number package codes and commercial suffix will change to standardize to National's package codes and commercial suffix. (Reference Table I for specific part number changes)

Upon completion of the transfers, the packaged part marking will change from the Comlinear logo to the National Semiconductor logo.

The cage code for Comlinear was 62839 and will be changing to National Semiconductor's cage code of 27014.

**Effect of Change:**

The quality, reliability, interchangeability and performance will not be significantly effected by this transfer.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Eng. Mgr  (408) 721-7231	

**Other Ref:**

**Associated Notes / Table(s):**

TABLE I	
<u>COMLINEAR PART NUMBER</u>	<u>NATIONAL PART NUMBER</u>
CLC400AIB	CLC400AJ
CLC401AIB	CLC401AJ
CLC412AIB	CLC412AJ
CLC425AIB	CLC425AJ



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98010A**

**Issued: 08/14/98**

GIDEP Nr: AH6-C-98-06A

GIDEP Category: PCN

TRB Nr:

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Industrial Grade Comlinear Analog Products - Ref: Table I & Table II

**Proposed Date of Change:**

April 1998

**Description of Change:**

**(This PCN is being amended to include additional devices (Table II) requested by our customer base.)**

These Industrial Grade devices have been approved/released based upon the extension from National's Military Aerospace transfer qualification testing results of the 8 Pin CERDIP that were qualified in accordance with MIL-PRF-38535. (Data is available upon request)

**This transfer activity includes:**

Transfer of Assembly and Test operations from Comlinear facilities, an acquisition of National Semiconductor, to existing National Semiconductor facilities. Assembly transfers from Pantronix, San Jose, CA to AMKOR/ANAM Philippines. Test transfers from Comlinear Fort Collins, Colorado to National Semiconductor Singapore. Die Attach changes from Gold Eutectic to Silver Glass. Comlinear had previously qualified silver glass die attach, but had not implemented production.

Both AMKOR/ANAM Philippines and National Semiconductor Singapore are ISO9002 certified and are a part of National's QML approved facilities for assurance levels Q, B, S and V.

As part of this transfer activity, the generic Comlinear part number package codes and commercial suffix will change to standardize to National's package codes and commercial suffix. (Reference Table I & Table II for specific part number changes)

Upon completion of the transfers, the packaged part marking will change from the Comlinear logo to the National Semiconductor logo.

The cage code for Comlinear was 62839 and will be changing to National Semiconductor's cage code of 27014.

**Effect of Change:**

The quality, reliability, interchangeability and performance will not be significantly effected by this transfer.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Eng. Mgr  (408) 721-7231 email: larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

<b>TABLE I</b>	
<b><u>COMLINEAR PART NUMBER</u></b>	<b><u>NATIONAL PART NUMBER</u></b>
CLC400AIB	CLC400AJ
CLC401AIB	CLC401AJ
CLC412AIB	CLC412AJ
CLC425AIB	CLC425AJ

<b>TABLE II</b>	
<b><u>COMLINEAR PART NUMBER</u></b>	<b><u>NATIONAL PART NUMBER</u></b>
CLC400AID	CLC400AJ
CLC401AID	CLC401AJ
CLC402AID	CLC402AJ
CLC404AIB	CLC404AJ
CLC404AID	CLC404AJ
CLC409AID	CLC409AJ
CLC420AIB	CLC420AJ
CLC430AIB	CLC430AJ
CLC501AID	CLC501AJ
CLC502AID	CLC502AJ



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98011**

**Issued: 05/11/98**

GIDEP Nr: AH6-D-98-10	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

REFERENCE TABLE I

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **JUNE 8, 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National semiconductor wishes to inform you that the devices listed in Table I are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 internet: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 internet: brian.stearns@nsc.com



**Other Ref:**

**Associated Notes / Table(s):**

Table I

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

<b>Column A</b>	<b>Column B</b>	<b>Column C</b>	<b>Column D</b>
<b>SMD or S/S</b>	<b>NSID</b>	<b>Alternate Part</b>	<b>Alternate Source</b>
	CD4001BMW/883	CD4001BMJ/883	NATIONAL
	CD40106BMW/883	CD40106BMJ/883	NATIONAL
	CD4014BMJ/883	JM4014ABEA	NATIONAL
	CD40163BMJ/883	CD40163BMW/883	NATIONAL
8202201FA	CD40174BMW/883	CD40174BMJ/883	NATIONAL
	CD40175BMW/883	CD40175BMJ/883	NATIONAL
	CD40193BMJ/883	CD40193BCN	FAIRCHILD
	CD4069MJ/883	CD4069UBCN	FAIRCHILD
	CD4069MW/883	CD4069UBCM	FAIRCHILD
	DM54LS02J/883	JD54LS02BCA	NATIONAL
	DM54LS02W/883	JD54LS02BDA	NATIONAL
	DM54LS08E/883	JD54LS08B2A	NATIONAL
	DM54LS10E/883	JD54LS10B2A	NATIONAL
	DM54LS139W/883	JD54LS139BFA	NATIONAL
	DM54LS14W/883	DM54LS14J/883	NATIONAL
	DM54LS161AE/883	JD54LS161B2A	NATIONAL
	DM54LS164E/883	JD54LS164B2A	NATIONAL
	DM54LS169W/883	DM54LS169J/883	NATIONAL
	DM54LS299W/883	DM54LS299J/883	NATIONAL
	DM54LS74E/883	JD54LS74B2A	NATIONAL
	DM54LS86W/883	JD54LS86BDA	NATIONAL

	DM54L02W/883	JD54LS02BCA	NATIONAL
	DM54L72W/883		NONE
	DM54154W/883	DM54154J/883	NATIONAL
	DS0026J-8-MLS	DS0026CN	NATIONAL
	DS16F95J-MLS	DS16F95J-QMLV	NATIONAL
	DS26F31MW-MLS	DS26LS31MW-QMLV	NATIONAL
	DS26F32MW-MLS	DS26LS32MW/883	NATIONAL
	DS26LS31MW-MLS	DS26LS31MW-QMLV	NATIONAL
	DS7830W-MLS	DS7830J/883	NATIONAL
	DS7832J-MLS	DS8832N	NATIONAL
8004102EA	DS7832J-SMD	DS8832N	NATIONAL
	DS7832J/883	DS8832N	NATIONAL
8004102FA	DS7832W-SMD	DS8832N	NATIONAL
	DS96F174MW-MLS	DS96F174MW/883	NATIONAL
	DS96F175MW-MLS	DS96F175MW/883	NATIONAL
	DS9616HME/883	DS9616HMJ/883	NATIONAL
JM38510/34304BFA	JD54F193BFA	JD54F193BEA	NATIONAL
JM38510/33204B2A	JD54F540B2A	54F540BRA	NATIONAL
JM38510/34603B2A	JD54F563B2A	54F563LMQB.	NATIONAL
JM38510/30109B2A	JD54LS109B2A	JD54F109B2A	NATIONAL
JM38510/31001B2A	JD54LS11B2A	JD54F11B2A	NATIONAL
*	JD54LS161ABFA	JD54LS161BFA	NATIONAL
JM38510/30106B2A	JD54LS174B2A	JD54F174B2A	NATIONAL
JM38510/30107B2A	JD54LS175B2A	JD54F175B2A	NATIONAL
JM38510/31508B2A	JD54LS193B2A	JD54F193B2A	NATIONAL
JM38510/30007B2A	JD54LS20B2A	JD54F20B2A	NATIONAL
JM38510/32402B2A	JD54LS241B2A	JD54F241B2A	NATIONAL
JM38510/30905BFA	JD54LS251BFA	JD54F251BFA	NATIONAL

JM38510/30302B2A	JD54LS27B2A	JD54LS27BCA	NATIONAL
JM38510/32201BFA	JD54LS365BFA	JD54F365BFA	NATIONAL
JM38510/31201B2A	JD54LS83B2A		NONE
JM38510/01406BFA	JD54151BFA	JD54151BEA	NATIONAL
JM38510/05002BDA	JM4012ABDA	JM4012ABCA	NATIONAL
JM38510/05101BDA	JM4013ABDA	JM4013BABCA	NATIONAL
JM38510/05703BFA	JM4015ABFA	JM4015ABEA	NATIONAL
JM38510/05652BEA	JM4018BBEA	JM4018ABEA	NATIONAL
JM38510/76201BFA	JM54AC151BFA	54AC151FMQB.	NATIONAL
	LM10H-MLS	LM10	LINEAR TECH
8003701GA	LM106H/883	LM106	ROCHESTER
	LM108AW/883	JL108ABHA	NATIONAL
	LM120H-15-MCP	LM120H-15/883	NATIONAL
	LM124W/883	JL124ABDA	NATIONAL
	LM6161W-MLS	LM6161W-SMD	NATIONAL
	LM6164W/883	LM6164W-SMD	NATIONAL
5962-8962501HA	LM6165W-SMD	LM6165J/883	NATIONAL
5962-8754501GA	LM760H/883	LM160H/883	NATIONAL
5962-8754501CA	LM760J/883	LM160H/883	NATIONAL
	LP2951ACM-MPC	LP2951WG/883	NATIONAL
	MM54C02W/883	MM54C02J/883	NATIONAL
	MM54C107J-MIL		NONE
	MM54C157J/883	54AC157DMQB.	NATIONAL
	MM54C161J/883	54AC161DMQB.	NATIONAL
	MM54C163W/883	54AC163FMQB.	NATIONAL
	MM54C165J-MIL		NONE
	MM54C175W/883	54AC175FBQB.	NATIONAL
	MM54C193W/883		NONE

	MM54C32J/883	54AC32DMQB.	NATIONAL
	MM54C74W/883	54AC74FMQB.	NATIONAL
	54ACT151FM-MLS	JM54ACT151BFA	NATIONAL
	54F160AFMQB.	JD54F160BFA	NATIONAL
	54F182FMQB.	JD54F182BFA	NATIONAL
	54F193FMQB.	54F193DMQB.	NATIONAL
	54F194FMQB.	JD54F194BFA	NATIONAL
	54F258AFMQB.	54F258ADMQB.	NATIONAL
	54F379FMQB.	54F379DMQB.	NATIONAL
	54F398FMQB.	54F398DMQB.	NATIONAL
	54F534FMQB.	54F534DMQB.	NATIONAL
	54F544FMQB.	54F544DMQB.	NATIONAL
	948FMQB.		NONE
	* order entry availability for JM38510/31504BFA will be serviced by JD54LS161BFA		



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98012**

**Issued: 05/12/98**

<b>GIDEP Nr:</b> AH6-C-98-07	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b> 133
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

CERDIP products built by the AMKOR/ANAM Hermetic Department for National Semiconductor's Military/Aerospace Division, levels Q,B,V AND S products with the EXCEPTION of ALUMINUM NITRIDE PACKAGED DEVICES LISTED IN TABLE I.

**Proposed Date of Change:**

**DATECODE 9818**

**Description of Change:**

Integration of frame attach furnace curing and organic burn out furnace curing for NSC Military/Aerospace CERDIP products into one furnace insertion.

In this simplified process, the frame to base sealing glass curing shall be done after die attach, during the organic burn out curing.

**Effect of Change:**

Since the two processes are being cured under the same profile peak temperature setting of 430 Deg. C maximum, integration of the two processes will improve cycle time without affecting quality.

Qualification data is on file and available upon request.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com

<b>Other contacts</b>	RITA SCHERBAKOVSKY MIL/AERO QA ENGINEERING (408) 721-4423 rita.scherbakovsky@nsc.com	
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**Other Ref:**

**Associated Notes / Table(s):**

**TABLE I** - THESE DEVICES WILL **NOT** INCORPORATE THIS SIMPLIFIED FLOW AT THIS TIME.

A SEPERATE PCN WILL BE ISSUED IF THEIR FLOW CHANGES IN THE FUTURE.

**NATIONAL PART NUMBER**

**STANDARD MICROCIRCUIT DRAWING**

LM1575J-ADJ-QML	5962-9167101MEA
LM1575J-5.0-QML	5962-9167201QEA
LM1575J-12-QML	5962-9167301QEA
LM1575J-15-QML	5962-9167401QEA
LM2940J-5.0/883	5962-8958701EA
LM2940J-8.0/883	5962-9088301QEA
LM2940J-12/883	5962-9088401QEA
LM2940J-15/883	5962-9088501QEA
LM2941J/883	5962-9166701QEA
LM2990J-5.0-QML	5962-9571101QEA
LM2990J-12-QML	5962-9571001QEA
LM2990J-15-QML	5962-9570901QEA
LM2991J-QML	5962-9650501QEA
LM2595J-ADJ-QML	5962-9650401QEA
LM218200-2D/883	5962-9232501MXA
LP2953AMJ/883	5962-9233601MEA
LP2953AMWG-QMLV	5962-9233601VXA
LP2953AMWG/883	5962-9233601QXA
LP2953AMWG-MLS	
LP2956AMJ-QML	5962-9554701QEA



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98013**

**Issued: 07/01/98**

<b>GIDEP Nr:</b> AH6-C-98-08	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

This change affects the listed SLM bipolar & bifet devices which are fabricated at National's facility in Greenock, Scotland.

Reference Table I for Packaged Devices  
Reference Table II for Die Products

**Proposed Date of Change:**

Datecode 9823

**Description of Change:**

The Al sputter and Al evaporation metallization processes being run at National's Fab in Greenock, Scotland are being consolidated to a single process (sputtered Al with 0.5% Cu). This has been verified to be the optimum metallization process for these device types.

**Effect of Change:**

Addition of 0.5% Cu to pure Aluminum improves the electromigration performance of the metal film and hence the long term reliability. The consolidation to sputter from evaporated metal ensures more consistent layer properties. There will be less variation in metal thickness, and reduced susceptibility to bonding failures. There will also be a reduction in metal damage as all sputter machines have fully automated wafer handling.

There will be no effect on parametric or functional behavior and therefore no effect on device applications.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402



<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Eng. Manager (408) 721-7231 larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

Tables I & II are lengthy. You may want to print this PCN.

TABLE I	
National Part Number	Standard Microcircuit Drawing or Slashesheet Number
DS1632H/883	
DS1632H-SMD	5962-9052201GA
DS1632J-8/883	
DS1632J-8-SMD	5962-9052201PA
JL101ABCA	JM38510/10103BCA
JL101ABGA	JM38510/10103BGA
JL101ABHA	JM38510/10103BHA
JL101ABPA	JM38510/10103BPA
JL101ASGA	JM38510/10103SGA
JL101ASHA	JM38510/10103SHA
JL101ASPA	JM38510/10103SPA
JL109BXA	JM38510/10701BXA
JL109BYA	JM38510/10701BYA
JL109SXA	JM38510/10701SXA
JL111BCA	JM38510/10304BCA
JL111BGA	JM38510/10304BGA
JL111BHA	JM38510/10304BHA
JL111BPA	JM38510/10304BPA
JL111SGA	JM38510/10304SGA
JL111SHA	JM38510/10304SHA
JL111SPA	JM38510/10304SPA
JL117BXA	JM38510/11703BXA
JL117BYA	JM38510/11704BYA

JL117SXA	JM38510/11703SXA
JL117SYA	JM38510/11704SYA
JL118BCA	JM38510/10107BCA
JL118BGA	JM38510/10107BGA
JL118BHA	JM38510/10107BHA
JL118BPA	JM38510/10107BPA
JL118SGA	JM38510/10107SGA
JL118SHA	JM38510/10107SHA
JL118SPA	JM38510/10107SPA
JL119BCA	JM38510/10306BCA
JL119BIA	JM38510/10306BIA
JL120-12BXA	JM38510/11502BXA
JL120-12BYA	JM38510/11506BYA
JL120-12SXA	JM38510/11502SXA
JL120-15BXA	JM38510/11503BXA
JL120-15BYA	JM38510/11507BYA
JL120-15SXA	JM38510/11503SXA
JL120-5BXA	JM38510/11501BXA
JL120-5BYA	JM38510/11505BYA
JL120-5SXA	JM38510/11501SXA
JL120-5SYA	JM38510/11505SYA
JL124ABCA	JM38510/11006BCA
JL124ABDA	JM38510/11006BDA

JL124ASCA	JM38510/11006SCA
JL124ASDA	JM38510/11006SDA
JL124BCA	JM38510/11005BCA
JL124BDA	JM38510/11005BDA

JL124SCA	JM38510/11005SCA
JL124SDA	JM38510/11005SDA
JL137BXA	JM38510/11803BXA
JL137BYA	JM38510/11804BYA
JL137SXA	JM38510/11803SXA
JL137SYA	JM38510/11804SYA
JL139BCA	JM38510/11201BCA
JL139BDA	JM38510/11201BDA
JL139SCA	JM38510/11201SCA
JL139SDA	JM38510/11201SDA
JL140-12BXA	JM38510/10703BXA
JL140-12BYA	JM38510/10707BYA
JL140-12SXA	JM38510/10703SXA
JL140-12SYA	JM38510/10707SYA
JL140-15BXA	JM38510/10704BXA
JL140-15BYA	JM38510/10708BYA
JL140-15SYA	JM38510/10708SYA
JL140-24BYA	JM38510/10709BYA
JL140-5BXA	JM38510/10702BXA
JL140-5BYA	JM38510/10706BYA
JL140-5SXA	JM38510/10702SXA
JL140-5SYA	JM38510/10706SYA
JL147BCA	JM38510/11906BCA
JL148BCA	JM38510/11001BCA
JL148BDA	JM38510/11001BDA
JL148SCA	JM38510/11001SCA
JL148SDA	JM38510/11001SDA
JL155BGA	JM38510/11401BGA

JL156BGA	JM38510/11402BGA
JL156SGA	JM38510/11402SGA
JL193BGA	JM38510/11202BGA
JL193BPA	JM38510/11202BPA
JL198BGA	JM38510/12501BGA
JL198SGA	JM38510/12501SGA
JL2111BEA	JM38510/10305BEA
JL2951BGA	5962-3870501BGA
JL2951BPA	5962-3870501BPA
JL2951S2A	5962-3870501S2A
JL2951SGA	5962-3870501SGA
JL2951SPA	5962-3870501SPA
JL411BGA	JM38510/11904BGA
JL411BPA	JM38510/11904BPA

JL412BGA	JM38510/11905BGA
JL412BPA	JM38510/11905BPA
JL723BCA	JM38510/10201BCA
JL723BIA	JM38510/10201BIA
JL723SCA	JM38510/10201SCA
JL723SIA	JM38510/10201SIA
LF111H-MIL	
LF11201D/883	
LF11331D/883	
LF11333D/883	
LF147J/883	
LF147J-SMD	8102306CA
LF155AH/883	

LF155AH-MLS	
LF155H/883	
LF156AH/883	
LF156AH-MLS	
LF156AW-MLS	
LF156H/883	
LF157AH/883	
LF157H/883	
LF198H/883	
LF198H-MLS	
LF198H-SMD	5962-8760801GA
LF411MH/883	
LF412MH/883	
LF412MJ/883	
LF412MJ-SMD	5962-9676001QPA
LF441MH/883	
LF442MH/883	
LF444MD/883	
LM101AH/883	
LM101AH-MLS	
LM101AJ/883	
LM101AJ-14/883	
LM101AW/883	
LM101AW-MLS	
LM105H/883	5962-8958801GA
LM105H-MLS	
LM105W-MLS	
LM107H/883	5962-8958901GA

LM107J/883	5962-8958901PA
LM107J-14/883	5962-8958901CA
LM109H/883	
LM109K/883	
LM109K-SMD	5962-8777401YA

LM111E/883	
LM111E-MLS	
LM111H/883	
LM111H-MLS	
LM111J/883	
LM111J-8/883	
LM111W/883	
LM111WG/883	
LM111W-MLS	
LM117E/883	
LM117H/883	
LM117H-MLS	
LM117H-SMD	7703401XA
LM117HVH/883	
LM117HVH-MLS	
LM117HVH-SMD	7703402XA
LM117HVK/883	
LM117HVK-MLS	
LM117HVK-SMD	7703402YA
LM117K/883	
LM117K-SMD	7703401YA
LM118H/883	

LM118J/883	
LM118J-8/883	
LM118J-MLS	
LM118W-MLS	
LM119E/883	
LM119E-SMD	86014012A
LM119H/883	
LM119H-MLS	
LM119H-QMLV	5962-9679801VIA
LM119H-SMD	8601401IA
LM119J/883	
LM119J-MLS	
LM119J-QMLV	5962-9679801VCA
LM119J-SMD	8601401CA
LM119W/883	
LM119WG/883	
LM119W-MLS	
LM119W-QMLV	5962-9679801VHA
LM119W-SMD	8601401HA
LM120H-12/883	
LM120H-15/883	
LM120H-15-MCP	
LM120H-15-MLS	
LM120H-5.0/883	

LM120H-8.0/883	
LM120K-12/883	
LM120K-12-MLS	



LM120K-15/883	
LM120K-5.0/883	
LM120K-5.0-MLS	
LM123K/883	
LM124AD-MLS	
LM124AE/883	77043022A
LM124AJ/883	7704302CA
LM124AJ-MLS	
LM124AW/883	
LM124AWG/883	7704302XA
LM124AW-MLS	
LM124E/883	77043012A
LM124J/883	7704301CA
LM124J-MLS	
LM124W/883	
LM124WG/883	7704301XA
LM124W-MLS	
LM125H/883	
LM125H-MLS	
LM126H/883	5962-8993001MIA
LM126H-MLS	
LM136AH-2.5/883	
LM136AH-2.5-MLS	
LM136AH-5.0/883	
LM136AH-5.0-MLS	
LM136AH-5.0-SMD	8418002XA
LM136H-2.5/883	
LM136H-5.0/883	

LM137AH/883	
LM137AK/883	
LM137H/883	
LM137H-MLS	
LM137H-SMD	7703403XA
LM137HVH/883	
LM137HVH-MLS	
LM137HVH-SMD	7703404XA
LM137HVK/883	
LM137HVK-SMD	7703404YA
LM137K/883	
LM137K-SMD	7703403YA
LM138K-MIL	
LM139AE/883	
LM139AE-SMD	5962-87739012A

LM139AJ/883	
LM139AJ-MLS	
LM139AJ-QMLV	5962-9673801VCA
LM139AJ-SMD	5962-8773901CA
LM139AW/883	
LM139AWG/883	
LM139AWG-QMLV	5962-9673801VXA
LM139AW-MLS	
LM139AW-QMLV	5962-9673801VDA
LM139AW-SMD	5962-8773901DA
LM139E/883	
LM139J/883	

LM139W/883	
LM139WG/883	
LM139W-MLS	
LM140AK-12/883	
LM140AK-15/883	
LM140AK-15-MLS	
LM140AK-5.0/883	
LM140H-12/883	
LM140H-15/883	
LM140H-24/883	
LM140H-5.0/883	
LM140H-6.0/883	
LM140H-8.0/883	
LM140K-12/883	
LM140K-12-MLS	
LM140K-15/883	
LM140K-5.0/883	
LM140LAH-12/883	
LM140LAH-15/883	
LM140LAH-15-MLS	
LM140LAH5.0/883	
LM140LAH5.0-MLS	
LM146J/883	
LM148E/883	
LM148J/883	
LM149J/883	
LM150K/883	5962-8767501XA
LM1558H/883	

LM1558J/883	
LM1575HVK12-QML	5962-9167302QXA
LM1575HVK5-QML	5962-9167202QXA
LM1575HVKAD-QML	5962-9167102QXA
LM1575J-12-QML	5962-9167301QEA
LM1575J-15-QML	5962-9167401QEA

LM1575J-5.0-MPR	
LM1575J-5.0-QML	5962-9167201QEA
LM1575J-ADJ/883	
LM1575J-ADJ-QML	5962-9167101MEA
LM1575J-C5/883	
LM1575J-CAD/883	
LM1575K-5.0/883	
LM1575K-5.0-QML	5962-9167201MXA
LM1575K-ADJ/883	
LM1575K-ADJ-QML	5962-9167101MXA
LM1577K-12/883	5962-9216701MXA
LM1577K-ADJ/883	5962-9216601MXA
LM1578AH/883	5962-8958602GA
LM1578H/883	5962-8958601GA
LM158AH/883	
LM158AH-MLS	
LM158AH-SMD	5962-8771002GA
LM158AJ/883	5962-8771002PA
LM158AJ-MLS	
LM158H/883	
LM158H-SMD	5962-8771001GA

LM158J/883	5962-8771001PA
LM169H/883	5962-9456101MGA
LM185BE/883	
LM185BH/883	
LM185BXH2.5/883	
LM185BYH/883	
LM185BYH1.2/883	
LM185BYH1.2-SMD	5962-8759405XA
LM185BYH2.5/883	
LM185BYH2.5-MLS	
LM185BYH2.5-SMD	5962-8759406XA
LM185BYH-SMD	5962-9091401MXA
LM185E-1.2/883	5962-87594012A
LM185E-2.5/883	5962-87594022A
LM185H-1.2/883	
LM185H-1.2-MLS	
LM185H-1.2-SMD	5962-8759401XA
LM185H-2.5/883	
LM185H-2.5-MLS	
LM185H-2.5-SMD	5962-8759402XA
LM193AH/883	5962-9452602MGA
LM193AH-MLS	
LM193AH-QMLV	5962-9452602VGA
LM193AJ/883	5962-9452602MPA
LM193AJ-MLS	

LM193AJ-QMLV	5962-9452602VPA
LM193H/883	

LM193H-MLS	
LM193J/883	
LM195H/883	5962-8777801XA
LM195K/883	5962-8777801YA
LM2940J-12/883	5962-9088401QEA
LM2940J-15/883	5962-9088501QEA
LM2940J-5.0/883	5962-8958701EA
LM2940J-8.0/883	5962-9088301QEA
LM2940K-12/883	5962-9088401MYA
LM2940K-15/883	5962-9088501MYA
LM2940K-15-MIL	
LM2940K-5.0/883	5962-8958701YA
LM2940K-8.0/883	5962-9088301MYA
LM2941J/883	5962-9166701QEA
LM2941K/883	5962-9166701QXA
LM2941K-MLS	
LM4250H-MIL	
LM4250J-MIL	
LM431J-MLS	
LM555H/883	
LM555H-MLS	
LM555J/883	
LM555J-MLS	
LM556J-MIL	
LM714H/883	
LM723E/883	
LM723H/883	
LM723H-MLS	

LM723J/883	
LM723J-MLS	
LM725AH/883	
LM725H/883	5962-9552901MGA
LM741H/883	
LM741J/883	
LM741J-14/883	
LM741W/883	
LM747H/883	
LM747J/883	
LM748H/883	
LM748J/883	
LM78S40J/883	5962-8876101EA
LP2951ACM-MPC	
LP2951E/883	5962-3870501M2A
LP2951H/883	5962-3870501MGA

LP2951H-MCP	
LP2951J/883	5962-3870501MPA
LP2951WG/883	5962-3870501MXA
OP07H/883	8203602GA

TABLE II
Die Products
LF111 MWC
LF147 MW8
LF155 MW8
LF156 MW8
LF157 MW8
LF198 MW8
LF311 MWC
LF347 MWC
LF355 MWC
LF356 MWC
LF357 MWC
LF398 MWC
LF411 MW8
LF411 MWC
LF412 MW8
LF412 MWC
LF441 MWC
LF442 MWC
LF444 MWC
LM101A MW8
LM105 MDS
LM107 MW8
LM109KG MW8
LM111 MDS
LM111 MW8
LM117 MDA



LM117HG MW8
LM117HVH MDS
LM117HVKG MW8
LM117K MDS
LM117KG MW8
LM118 MDS
LM118 MW8
LM119 MDS
LM119 MW8
LM120HG-12 MW8
LM120HG-15 MW8
LM120HG-5 MW8
LM120KG-12 MW8
LM120KG-15 MD8
LM120KG-15 MW8
LM120KG-5 MW8
LM123G MW8
LM124 MDA
LM124 MDS
LM124 MW8

LM136-2.5 MW8
LM136-5.0 MW8
LM137H MDS
LM137HG MW8
LM137K MDS
LM137KG MW8
LM138KG MW8

LM139 MDA
LM139 MDS
LM139 MW8
LM140KG-12 MW8
LM140KG-15 MW8
LM140KG-5 MW8
LM142AH-5.0 MW8
LM1458 MWC
LM148 MW8
LM150G MW8
LM1558 MW8
LM1577G-ADJ MW8
LM1578BX MWC
LM158 MDS
LM158 MW8
LM185-1.2G MW8
LM185-2.5 MW8
LM185-2.5G MW8
LM185-ADJ MDS
LM185-ADJ MW8
LM193 MDS
LM193 MW8
LM2904 MWC
LM2931CT MWC
LM2940CT-15 MWC
LM2940CT-5 MWC
LM2941-ADJ MWC
LM2941K MW8

LM301A MWC
LM3045 MWC
LM307 MWC
LM309K MWC
LM311 MWC
LM317H MWC
LM317K MWC
LM317L MWC
LM318 MWC
LM319 MWC
LM320H-12 MWC
LM320HG-5 MWC

LM320K-12 MWC
LM320K-15 MWC
LM320KG-5 MWC
LM324 MDC
LM324 MWC
LM325 MWC
LM334 MWC
LM336-2.5C MWC
LM336-5 MWC
LM337H MWC
LM337K MWC
LM338 MWC
LM339 MWC
LM340G-12 MWC
LM340G-5 MWC

LM342AG-12 MWC
LM342AG-15 MWC
LM342AG-5 MWC
LM346 MWC
LM348 MWC
LM358 MWC
LM380 MWC
LM385-1.2 MWC
LM385-2.5 MWC
LM385-ADJ MWC
LM3914 MWC
LM392 MWC
LM393 MWC
LM4250 MW8
LM4250C MWC
LM555 MW8
LM555 MWC
LM556 MWC
LM565 MDC
LM565 MWC
LM723 MDS
LM723 MW8
LM723C MWC
LM725 MW8
LM725 MWC
LM741 MW8
LM741C MWC
LM747 MWC

LM747H MW8
LM747J MW8
LM748 MWC
LM79L05A MWC

LM79L12AC MWC
LP2950C MWC
LP2951 MDS
LP2951C MW8
LP2951C MWC
LP324 MWC
LP339 MWC



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98014**

**Issued: 07/07/98**

<b>GIDEP Nr:</b> AH6-C-98-09	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Wideband Variable - Gain Amplifier  
CLC522AE-QML 5962-9451701M2A

**Proposed Date of Change:**

Datecode 9803

**Description of Change:**

Die Revision A to B

Die was redesigned to correct potential filament issues with a metal layer of the die. Prior to the redesign ,wafer sort screening caught the low and high ICC failures. Assembly, final test and shipments to customers were therefore not effected.

**Effect of Change:**

The quality, reliability, and electrical performance of the device will not be adversely affected by these changes.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Product Eng.Mgr. (408) 721-7231 internet: larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**



# MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION

**PCN Nr: MA98014A**

**Issued: 08/18/98**

GIDEP Nr: AH6-C-98-09A	GIDEP Category: PCN	TRB Nr:
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*This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):*

**Product ID (Description):**

CLC522 Wideband Variable - Gain Amplifier

**Proposed Date of Change:**

**This PCN is being amended to add the J package version with its datecode implementation. Also, to list the die sales products effected.**

CLC522AE-QML	5962-9451701M2A	Datecode 9803
CLC522AJ-QML	5962-9451701MCA	Datecode 9818

Die Products: Immediate Implementation

CLC522ALC  
CLC522AMC  
CL522M01C

**Description of Change:**

Die Revision A to B

Die was redesigned to correct potential filament issues with a metal layer of the die. Prior to the redesign ,wafer sort screening caught the low and high ICC failures. Assembly, final test and shipments to customers were therefore not effected.

**Effect of Change:**

The quality, reliability, and electrical performance of the device will not be adversely affected by these changes.

**In Case of further questions please contact:**

	North America	Europe
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com



<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Product Eng.Mgr. (408) 721-7231 internet: larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98015**

**Issued: 07/07/98**

GIDEP Nr: AH6-D-98-11	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLE I

**Proposed Date of Change:**

**JUNE 1998**

Effective immediately, National Semiconductor's Military/Aerospace Division will obsolete the devices listed in Table I.

No Life Time Buys will be accepted.

**Description of Change:**

These parts are no longer manufacturable by National due to the unavailability of die from our wafer fabrication subcontractor.

**Effect of Change:**

National Semiconductor apologizes in advance for any inconvenience this discontinuance may cause.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	James Lyman Mil/Aero Logic Marketing (207) 541-8712 email: james.lyman@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

**TABLE I:**

In the following tables, the Slashsheet Number and National Part Number are being obsoleted.

The Alternate Part Number and Alternate Source are the suggested replacements.

Triple 3-Input AND Gate:

<b>Slashsheet Number</b>	<b>National Part Number</b>	<b>Alternate Part Number</b>	<b>Alternate Source</b>
JM38510/31001BCA	JD54LS11BCA	LS11	Texas Instruments
JM38510/31001BDA	JD54LS11BDA	LS11	Texas Instruments
JM38510/31001B2A	JD54LS11B2A	LS11	Texas Instruments

Triple 3-Input NOR Gate:

<b>Slashsheet Number</b>	<b>National Part Number</b>	<b>Alternate Part Number</b>	<b>Alternate Source</b>
JM38510/30302BCA	JD54LS27BCA	LS27	Texas Instruments
JM38510/30302BDA	JD54LS27BDA	LS27	Texas Instruments
JM38510/30302B2A	JD54LS27B2A	LS27	Texas Instruments



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98016**

**Issued: 07/13/98**

GIDEP Nr: AH6-C-98-10	GIDEP Category: PCN	TRB Nr: 148
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLE I

**Proposed Date of Change:**

DATECODE 9818

**Description of Change:**

Wafer fabrication process transfer from UK fab2 (4 inch) to UK fab3 (6 inch).  
Major process differences caused by this transfer are as follows:

**4" Process Step**

4" Silicon substrate.  
Plasma Nitride: Single freq. PECVD

**6" Process Step**

6" Silicon substrate.  
Plasma Nitride: Novellus

**New backend process from 1st metal deposition to 2nd metal etch:**

<b><u>Process</u></b>	<b><u>4"</u></b>	<b><u>6"</u></b>
Field oxide	Low temp oxidation	Novellus PEVCD
M1	Al 1%Si 2%Cu	Al 2%Cu
Interlayer dielectric	Low Temp Oxidation	Novellus PEVCD
Via etch	dry etch	wet/dry etch
M2	Al 1%si 2%Cu	Al 0.5%Cu

The wafer fab lot# prefix is listed below as an aid for our die sales customers for ease of site location identification.

4" wafer fab lot# prefix was **K** ; 6" wafer fab lot# prefix is **J**

**Effect of Change:**

This wafer fab transfer and process modification was fully qualified by the Mil/Aero Division. Data was reviewed and approved by the Technology Review Board (TRB).

These changes will not adversely affect the device performance, quality or reliability.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Assefa Nedi Mil/Aero Analog Engineering (207) 541-8187 email: assefa.nedi@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

**TABLE I:**

<b><u>NATIONAL PART NUMBER</u></b>	<b><u>SMD DEVICE NUMBER</u></b>
DS16F95J/883	5962-8961501PA
DS16F95E/883	5962-89615012A
DS16F95W/883	
DS16F95W-SMD	5962-8961501HA
DS16F95WG/883	5962-8961501QXA
DS16F95 MDA	
DS16F95 MDS	
DS16F95 MWA	
DS96F172ME/883	5962-9076501M2A
DS96F172MJ/883	MEA
DS96F172MW-MIL	
DS96F172 MW8	
DS96F173ME/883	5962-9076602M2A
DS96F173MJ/883	MEA
DS96F173MW/883	MFA
DS96F174ME/883	5962-9076502M2A
DS96F174MJ/883	MEA
DS96F174MW/883	MFA
DS96F175ME/883	5962-9076601M2A
DS96F175MJ/883	MEA
DS96F175MW/883	MFA
DS26F31ME/883	5962-7802302M2A
DS26F31MJ/883	MEA
DS26F31MW/883	MFA
DS26F31 MDA	
DS26F31 MWA	
DS26F32ME/883	5962-7802005M2A
DS26F32MJ/883	MEA
DS26F32MW/883	MFA
DS26F32 MW8	



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98017**

**Issued: 07/16/98**

GIDEP Nr: AH6-C-98-11

GIDEP Category: PCN

TRB Nr: 128

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

S Level FACT, FAST, LPS, and TTL Logic Products - QML Class V, JAN Class S, and MLS (Exceptions are noted in "Description of Change")

**Proposed Date of Change:**

August 1998

**Description of Change:**

**TEST OPTIMIZATION OF SEM WAFER SAMPLING PLAN**

National Semiconductor's TRB and DSCC have approved changes to the SEM wafer sampling plan used by Fairchild Semiconductor as a supplier of National's S Level logic die.

The previous sampling plan, based upon Mil-Std-883 Test Methods 2018 and 5007, specified that two wafers per metal layer must be pulled for SEM inspection on each S Level wafer lot. Since SEM inspection is a destructive test and most logic products use dual layer metal, typically four wafers were sacrificed per wafer lot. The new sampling plan reduces the number of SEM wafers per metal layer from two to one.

Analysis of SEM step coverage data from FACT, FAST, LPS, and TTL wafers showed that these processes have step coverage results that are consistently above the limits and with small enough variation that a reduction in wafer sample size is justified. Along with the one wafer sample, a control limit and a corrective action procedure will be implemented to ensure that S Level wafer lots continue to meet Test Method 2018 step coverage requirements. In the unlikely event that the SEM wafer fails the control limit, the corrective action procedure will reactivate the two wafer sample. Successive failures would require continued use of the two wafer sample until the SEM data supports returning to the one wafer sample.

Currently this change applies to FAST single layer metal products (gates) and to the top layer metal on FAST dual layer metal products (buffers, flip-flops, transceivers, multiplexers, etc.), but not to the bottom layer metal on FAST



dual layer metal products. The bottom layer metal will be covered when the SEM data supports this change. This change also does not apply to any S Level ECL products.

**Effect of Change:**

There will be no effect on product form, fit, function, or quality. This change will only reduce the number of SEM photos and step coverage measurements provided in the Wafer Lot Acceptance report.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Steve Lombard Mil/Aero Logic Product Engineering (207) 541-6274 email: steve.lombard@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98018**

**Issued: 07/17/98**

<b>GIDEP Nr:</b> AH6-C-98-12	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

**(This PCN addresses COMMERCIAL material processed by the Die Products Group which is a department of the Military Aerospace Division of National.)**

**COMLINEAR COMMERCIAL DIE PRODUCTS - TABLE I**

**Proposed Date of Change:**

September 1, 1998

**Description of Change:**

1. Suffix change from ALC to MDC (ie., CLC109ALC to CLC109 MDC).
2. Change from 100% visual inspection to sample visual inspection.
3. Change those selected die type as noted on Table I from gold back die to bare back die.

**Effect of Change:**

Above changes will align Comlinear commercial die products to be consistent with National Semiconductor's die naming convention and standard processing. These changes will have no effect on form, fit or function.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Fay Small Mil/Aero Customer Program Manager (207) 541-8249 email: fay.l.small@nsc.com	

Other Ref:

Associated Notes / Table(s):

	<b>TABLE 1</b>	
NATIONAL SEMICONDUCTOR OLD IDENTIFICATION NUMBER	NATIONAL SEMICONDUCTOR NEW IDENTIFICATION NUMBER	ORIGINALLY GOLD BACK CONVERTING TO BARE BACK
CLC109ALC	CLC109 MDC	
CLC110ALC	CLC110 MDC	X
CLC111ALC	CLC111 MDC	
CLC114ALC	CLC114 MDC	X
CLC115ALC	CLC115 MDC	X
CLC400ALC	CLC400 MDC	X
CLC401ALC	CLC401 MDC	X
CLC402ALC	CLC402 MDC	X
CLC404ALC	CLC404 MDC	
CLC405ALC	CLC405 MDC	X
CLC406ALC	CLC406 MDC	
CLC407ALC	CLC407 MDC	X
CLC409ALC	CLC409 MDC	
CLC410ALC	CLC410 MDC	X
CLC411ALC	CLC411 MDC	X
CLC412ALC	CLC412 MDC	X
CLC414ALC	CLC414 MDC	X
CLC415ALC	CLC415 MDC	X
CLC420ALC	CLC420 MDC	X
CLC425ALC	CLC425 MDC	
CLC426ALC	CLC426 MDC	X
CLC428ALC	CLC428 MDC	X

CLC430ALC	CLC430 MDC	X
CLC431ALC	CLC431 MDC	
CLC432ALC	CLC432 MDC	
CLC440ALC	CLC440 MDC	X
CLC446ALC	CLC446 MDC	X
CLC449ALC	CLC449 MDC	X
CLC452ALC	CLC452 MDC	
CLC501ALC	CLC501 MDC	X
CLC502ALC	CLC502 MDC	X
CLC505ALC	CLC505 MDC	
CLC520ALC	CLC520 MDC	X
CLC522ALC	CLC522 MDC	X
CLC532ALC	CLC532 MDC	
CLC533ALC	CLC533 MDC	X

NOTES :

1. NOTICE THAT A SPACE HAS BEEN ADDED PRECEDING THE MDC IN THE NATIONAL SEMICONDUCTOR NEW IDENTIFICATION NUMBER.
2. ALL NATIONAL SEMICONDUCTOR IDENTIFICATION NUMBERS NOT LISTED AS CONVERTING FROM GOLD TO BARE BACK ARE CURRENTLY ONLY AVAILABLE AS BARE BACK.



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98019**

**Issued: 07/20/98**

GIDEP Nr: AH6-C-98-13

GIDEP Category: PCN

TRB Nr: 142

***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

FACT S Level Logic Products - QML Class V, JAN Class S, and Standard MLS

**Proposed Date of Change:**

AUGUST 1998

**Description of Change:**

**FACT S LEVEL STATIC BURN-IN REDUCTION - REMOVAL OF STATIC LOW BURN-IN**

National Semiconductor's TRB and DSCC have approved changes to the burn-in flow used on FACT S Level products, allowing removal of Static Low burn-in. The previous burn-in flow, which was based on SMDs and slashesheets, has two Static burn-ins: 1) Static Low, during which inputs are tied to Ground. 2) Static High, during which inputs are tied to VCC.

Analysis of all Static Low burn-in failures collected over a four month period found no units that would not also have failed Static High burn-in. (The number of failures was eight in 11,500 units tested.) This is evidence that Static Low burn-in can be eliminated without affecting product reliability.

Static Low burn-in can be reactivated based upon a 2.5% PDA (Percent Defective Allowable) that is being implemented as part of the new flow. Lots with more than 2.5% Static High burn-in failures will be submitted to Static Low burn-in with analysis performed on all failures. This will ensure that lots with greater than expected numbers of failures will still receive, as a minimum, two Static burn-ins.

This change applies to all standard FACT S level products - QML Class V, JAN Class S, and Standard MLS. Standard MLS products have S level processing, but no source control drawing. This change does not apply to MLS products where a source control drawing exists, unless the drawing specifies this reduced burn-in flow.

**Effect of Change:**

Quality and reliability with the new burn-in flow will be equal to or better than with the previous burn-in flow.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Steve Lombard Mil/Aero Logic Product Engineering (207) 541-6274 email: steve.lombard@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**





## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98020**

**Issued: 08/18/98**

<b>GIDEP Nr:</b> AH6-D-98-13	<b>GIDEP Category:</b> DMSMS	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLES I & III MILITARY PRODUCTS

Reference TABLES II & IV COMMERCIAL PRODUCTS MANAGED BY THE MIL/AERO DIVISION

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **SEPTEMBER 8, 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National Semiconductor wishes to inform you that the devices listed in Tables I, II, III & IV are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com

<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 internet: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 internet: brian.stearns@nsc.com
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**Other Ref:**

**Associated Notes / Table(s):**

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

COLUMN A	COLUMN B	COLUMN C	COLUMN D
STANDARD MICROCIRCUIT DRAWING NUMBER	NATIONAL PART NUMBER	ALTERNATE PART NUMBER	ALTERNATE SOURCE
	CB0075J-MSP		NONE
5962-8760801GA	LF198H-SMD	AD583, HA2420	ANALOG DEVICES, HARRIS
7702807XA	LM103H-3.3-SMD	REF196	ANALOG DEVICES
	LM103H-3.3/883	REF196	ANALOG DEVICES
5962-8777401YA	LM109K-SMD	LM109	PHILIPS, SGS-THOMSON
	LM111H-MLS	JL111SGA	NATIONAL
	LM113-1H-MLS	ICL8069 LM185-1.2	HARRIS LINEAR TECHNOLOGY
	LM113-1H/883	ZN423	GEC PLESSEY
5962-8671103XA	LM113-2H-SMD	ZN423	GEC PLESSEY
	LM113-2H/883	ICL8069 LM185-1.2	HARRIS LINEAR TECHNOLOGY
	LM113H-MLS	ICL8069	HARRIS
	LM113H/883	ICL8069 LM185-1.2	HARRIS LINEAR TECHNOLOGY
	LM120H-8.0/883	MC7905, SG120	MOTOROLA, LINFINITY
	LM124E/883	LM124WG/883	NATIONAL
	LM1596H-MIL		NONE
5962-9088401MYA	LM2940K-12/883	LM2940J-12/883	NATIONAL
	LM2940K-15-MIL	LM2940J-15/883	NATIONAL
5962-8958701YA	LM2940K-5.0/883	LM2940J-5.0/883	NATIONAL
5962-9088301MYA	LM2940K-8.0/883	LM2940J-8.0/883	NATIONAL
5962-9166701QXA	LM2941K/883	LM2941J/883	NATIONAL
5962-9081802MPA	LM6181AMJ/883	CLC430AJ-QML	NATIONAL

5962-9460301MCA	LM6182AMJ/883	CLC432AJ-QML	NATIONAL
	LM741J-14/883	LM741J/883	NATIONAL
	MM9098MCU-F-MSP		NONE
	54F253FMQB.	MC54F253 SN54F253	MOTOROLA TEXAS INSTRUMENTS
	54F651SDMQB.		NONE
	932DMQB.		NONE
	932FMQB.		NONE

**TABLE II: COMMERCIAL PACKAGED DEVICES MANAGED BY THE MIL/AERO DIVISION**

COLUMN A	COLUMN B	COULMN C	COLUMN D
	NATIONAL PART NUMBER	ALTERNATE PART NUMBER	ALTERNATE SOURCE
	LF353H	LF412MH	NATIONAL
	LM285BYH-1.2	LM285	MOTOROLA
	LM320K-5.0	LM120K-5.0	NATIONAL
	LM340AK-5.0	LM140K-5.0	NATIONAL
	LM340LAH-15	LM140LAH-15	NATIONAL
	LM393AH	LM2903	NATIONAL
	LM78L05ACH	LM140LAH-5.0	NATIONAL
	LM78L12ACH	LM140LAH-12	NATIONAL
	LM78L15ACH	LM140LAH-15	NATIONAL

**TABLE III: MILITARY DIE**

COLUMN A	COLUMN B	COLUMN C	COLUMN D
	NATIONAL PART NUMBER	ALTERNATE PART NUMBER	ALTERNATE SOURCE
	LM185-2.5G MW8		NONE
	LM747H MW8		NONE

**TABLE IV: COMMERCIAL DIE MANAGED BY THE MIL/AERO DIVISION**

COLUMN A	COLUMN B	COLUMN C	COLUMN D
	NATIONAL PART NUMBER	ALTERNATE PART NUMBER	ALTERNATE SOURCE
	ADC0820 MWC	ADC0820	TEXAS INSTRUMENTS
	ADC0820 MWC	AD7820	ANALOG DEVICES
	DM74LS126A MWC		NONE
	DS0026 MWC		NONE
	DS14C89A MWC	SN75C189A	TEXAS INSTRUMENTS
	LMC555 MWC		NONE
	LM2990T-15 MWC		NONE
	LM2991T MWC		NONE
	LM306 MWC	MAX907	MAXIM
	LM556 MWC		NONE
	LM75A-5.0 MDC		NONE
	LP339 MWC	LP339	TEXAS INSTRUMENTS
	LP365 MWC	LP365	RAYTHEON
	MM58167B MWC		NONE
	PT86W521VCC MDC		NONE
	PT86W522VCC MDC		NONE



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98021**

**Issued: 09/10/98**

<b>GIDEP Nr:</b> AH6-C-98-14	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b> 150
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Logic Family: FAST PRODUCTS

**Proposed Date of Change:**

September 13, 1998

**Description of Change:**

Under the provisions of MIL-PRF-38535, National Semiconductor has moved the process flow location of 100% and group "A" AC/DC testing at -55C and 125C temperature on the FAST logic products.

This change applies to JAN Level B and 883 level FAST devices.

This process modification was fully qualified and approved by the National Semiconductor Technology Review Board.

**Effect of Change:**

Beginning September 13, 1998, the 100% and Group "A" -55C and 125C AC/DC testing will be performed prior to burn-in for the FAST product family. Group C Operating Life testing will continue in the standard order.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Scott Morash Mil/Aero Product Line Engineering (207) 541-8161 email: scott.morash@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98022**

**Issued: 09/17/98**

<b>GIDEP Nr:</b> AH6-C-98-15	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Analog Products supplied as Military Packaged devices (ceramics and metal cans), Commercial Metal Can packaged devices and Military Wafer/Die products.

Includes Military Product Assurance Levels S, B, Q and V and selected commercial products.

**Reference Table:**

Part I - Military Packaged Devices

Part II - Commercial Products

Part III - Die/Wafer Products

**Proposed Date of Change:**

Date Code 9840 - October 1998

**Description of Change:**

**REMOVAL OF WAFER BACKSIDE METALIZATION**

National Semiconductor is removing the gold metalization plating from the backside of selected Analog products. The products effected are available in package styles that use either gold eutectic or silver glass die attach technologies.

**Effect of Change:**

National uses non gold back die for hundreds of similar products using the same packages and die attach techniques and materials.

The quality, reliability and interchangeability of these devices will not be adversely effected by this change.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402



<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 8141 35 1492 / 1495 Email: paul.wakefield@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Eng. Mgr. (408) 721-7231 email: larry.mcgee@nsc.com	

Other Ref:

Associated Notes / Table(s):

<b>PART I - MIL/AERO PRODUCTS</b>	
<b>STANDARD MICROCIRCUIT DRAWING OR SLASHSHEET NUMBER</b>	<b>NATIONAL PART NUMBER</b>
JM38510/10103BCA	JL101ABCA
JM38510/10103BGA	JL101ABGA
JM38510/10103BHA	JL101ABHA
JM38510/10103BPA	JL101ABPA
JM38510/10103SGA	JL101ASGA
JM38510/10103SHA	JL101ASHA
JM38510/10103SPA	JL101ASPA
JM38510/10304BCA	JL111BCA
JM38510/10304BGA	JL111BGA
JM38510/10304BHA	JL111BHA
JM38510/10304BPA	JL111BPA
JM38510/10304SGA	JL111SGA
JM38510/10304SHA	JL111SHA
JM38510/10304SPA	JL111SPA
JM38510/10107BCA	JL118BCA
JM38510/10107BGA	JL118BGA
JM38510/10107BHA	JL118BHA
JM38510/10107BPA	JL118BPA
JM38510/10107SGA	JL118SGA
JM38510/10107SHA	JL118SHA
JM38510/10107SPA	JL118SPA
JM38510/10306BCA	JL119BCA

JM38510/10306BIA	JL119BIA
JM38510/11006BCA	JL124ABCA
JM38510/11006BDA	JL124ABDA
JM38510/11006SCA	JL124ASCA
JM38510/11006SDA	JL124ASDA
JM38510/11005BCA	JL124BCA
JM38510/11005BDA	JL124BDA
JM38510/11005SCA	JL124SCA
JM38510/11005SDA	JL124SDA
JM38510/11201BCA	JL139BCA
JM38510/11201BDA	JL139BDA
JM38510/11201SCA	JL139SCA
JM38510/11201SDA	JL139SDA
JM38510/11906BCA	JL147BCA
JM38510/11001BCA	JL148BCA
JM38510/11001BDA	JL148BDA
JM38510/11001SCA	JL148SCA
JM38510/11001SDA	JL148SDA
JM38510/11202BGA	JL193BGA
JM38510/11202BPA	JL193BPA
JM38510/12501BGA	JL198BGA
JM38510/12501SGA	JL198SGA
JM38510/11904BGA	JL411BGA
JM38510/11904BPA	JL411BPA
38510/11905BGA	JL412BGA
JM38510/11905BPA	JL412BPA
	LM101AW-MLS
	LM105H-MLS

	LM105W-MLS
	LM111H-MLS
	LM111W-MLS
5962-9679801VIA	LM119H-QMLV
	LM119J-MLS
5962-9679801VCA	LM119J-QMLV
	LM119W-MLS
5962-9679801VHA	LM119W-QMLV
	LM124AW-MLS
	LM124W-MLS
	LM139AJ-MLS
5962-9673801VCA	LM139AJ-QMLV
	LM139AW-MLS
5962-9673801VDA	LM139AW-QMLV
5962-9673801VXA	LM139AWG-QMLV
	LM139W-MLS
	LM158AH-MLS
	LM158AJ-MLS
	LM193AH-MLS
5962-9452602VGA	LM193AH-QMLV
5962-9452602VPA	LM193AJ-QMLV
	LM193H-MLS
5962-9650201QEA	LM2595J-12-QML
5962-9687901QEA	LM2595J-3.3-QML
5962-9650301QEA	LM2595J-5.0-QML
5962-9650401QEA	LM2595J-ADJ-QML
5962-9571001QEA	LM2990J-12-QML
5962-9570901QEA	LM2990J-15-QML

5962-9571101QEA	LM2990J-5-QML
	LM2991J-MLS
5962-9650501QEA	LM2991J-QML
5962-9650501VEA	LM2991J-QMLV

<b><i>PART II - COMMERCIAL PRODUCTS</i></b>
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LF156H
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LF256H
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LF356BH
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LM105H
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<b><i>PART III - DIE/WAFER PRODUCTS</i></b>
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LM111 MDS
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LM118MDS
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LM119 MDS
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LM124 MDS
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LM139 MDS
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LM158 MDS
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LM193 MDS
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***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98023**

**Issued: 10/14/98**

<b>GIDEP Nr:</b> AH6-C-99-01	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b> 141
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Prescalers

**/883 PART #**

11C90DMQB

11C91DMQB

**Proposed Date of Change:**

October 13, 1998

**Description of Change:**

The maximum clock frequency test (FMAX) in the ECL operation mode will no longer be tested. This parameter will now be guaranteed by characterization data. There are no changes to the actual limit (600 MHz for both devices).

**Effect of Change:**

This change should have no impact on customers. FMAX on NSC Mil Aero logic product is usually a guaranteed parameter and not tested. The test on the 11C90 and 11C91 could not be done on Automated Test Equipment and was a manual bench test. Both devices were characterized for FMAX and it was determined by NSC's Technology Review Board (log # 141) that testing was no longer required. Thus, the 600 MHz FMAX limit is now a guaranteed parameter for both of these devices.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 (0)8141 35 1495 Email: petra.pavel@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com

<b>Other contacts</b>	Don Miller, Logic Product Engineering (207)541-8492 email: don.miller@nsc.com	
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**Other Ref:**

**Associated Notes / Table(s):**



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98024**

**Issued: 10/27/98**

GIDEP Nr: AH6-C-99-02	GIDEP Category: PCN	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Analog Products supplied as Military Packaged devices (ceramics and metal cans), Commercial Metal Can packaged devices and Military Wafer/Die products.

Includes Military Product Assurance Levels S, B, Q and V and selected commercial products.

**Reference Table:**

Part I - Military Packaged Devices  
Part II - Commercial Products  
Part III - Die/Wafer Products

**Proposed Date of Change:**

Date Code 9840 - October 1998

**Description of Change:**

**TRANSFER OF WAFER BACKSIDE METALIZATION PROCESS**

National Semiconductor is advising that we are transferring our wafer backside metalization process from Santa Clara, California to a subcontractor with an existing goldback process in the Philippines. The backside of selected Analog wafers are metalized with a layer of gold to provide maximum thermal performance. The products effected are available in package styles that use either gold eutectic or silver glass die attach methodologies.

Additionally the gold thickness will change from 2500 - 12,000 Angstroms to 5,000 - 7,000 Angstroms.

**Effect of Change:**

The quality, reliability and interchangeability of these devices will not be adversely effected by this change.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402

<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 (0)8141 35 1495 Email: petra.pavel@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Larry McGee Mil/Aero Analog Eng. Mgr. 408-721-7231 email: larry.mcgee@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

<b>PART I</b>	
<b>STANDARD MICROCIRCUIT DRAWING OR SLASHSHEET NUMBER</b>	<b>NATIONAL PART NUMBER</b>
JM38510/10701BXA	JL109BXA
JM38510/10701BYA	JL109BYA
JM38510/10701SXA	JL109SXA
JM38510/11703BXA	JL117BXA
JM38510/11704BYA	JL117BYA
JM38510/11703SXA	JL117SXA
JM38510/11704SYA	JL117SYA
JM38510/11502BXA	JL120-12BXA
JM38510/11506BYA	JL120-12BYA
JM38510/11503BXA	JL120-15BXA
JM38510/11507BYA	JL120-15BYA
JM38510/11503SXA	JL120-15SXA
JM38510/11501BXA	JL120-5BXA
JM38510/11505BYA	JL120-5BYA
JM38510/11505SYA	JL120-5SYA
JM38510/11803BXA	JL137BXA
JM38510/11804BYA	JL137BYA
JM38510/11803SXA	JL137SXA
JM38510/11804SYA	JL137SYA
JM38510/10703BXA	JL140-12BXA
JM38510/10707BYA	JL140-12BYA
JM38510/10703SXA	JL140-12SXA

JM38510/10707SYA	JL140-12SYA
JM38510/10704BXA	JL140-15BXA
JM38510/10708BYA	JL140-15BYA
JM38510/10708SYA	JL140-15SYA
JM38510/10709BYA	JL140-24BYA
JM38510/10702BXA	JL140-5BXA
JM38510/10706BYA	JL140-5BYA
JM38510/10702SXA	JL140-5SXA
JM38510/10706SYA	JL140-5SYA
JM38510/11401BGA	JL155BGA
JM38510/11402BGA	JL156BGA
JM38510/11402SGA	JL156SGA
JM38510/10201BCA	JL723BCA
JM38510/10201BIA	JL723BIA
JM38510/10201SCA	JL723SCA
JM38510/10201SIA	JL723SIA
	LF155AH-MLS
	LF155AH/883
	LF155H/883
	LF156AH-MLS
	LF156AH/883
	LF156H/883
	LF412MH/883
	LM109H/883
5962-8777401YA	LM109K-SMD
	LM109K/883
	LM117E/883
	LM117H-MLS
7703401XA	LM117H-SMD
	LM117H/883

	LM117HVH-MLS
7703402XA	LM117HVH-SMD
	LM117HVH/883
	LM117HVK-MLS
7703402YA	LM117HVK-SMD
	LM117HVK/883
7703401YA	LM117K-SMD
	LM117K/883
	LM120H-12/883
	LM120H-15-MCP
	LM120H-15/883
	LM120H-5.0/883
	LM120H-8.0/883
	LM120K-12/883
	LM120K-15/883
	LM120K-5.0/883
	LM123K/883
	LM125H/883
5962-8993001MIA	LM126H/883
	LM129AH/883
5962-8992101XA	LM129AH-SMD
	LM129BH/883
5962-8992102XA	LM129BH-SMD
	LM135H-MIL
	LM135H-MLS
	LM136AH-2.5-MLS
	LM136AH-5.0-MLS
	LM137AH/883
	LM137AK/883
7703403XA	LM137H-SMD

	LM137H/883
	LM137HVH-MLS
7703404XA	LM137HVH-SMD
	LM137HVH/883
7703404YA	LM137HVK-SMD
	LM137HVK/883
7703403YA	LM137K-SMD
	LM137K/883
	LM138K-MIL
	LM140AK-12/883
	LM140AK-15/883
	LM140AK-5.0/883
	LM140H-12/883
	LM140H-15/883
	LM140H-5.0/883
	LM140K-12/883
	LM140K-15/883
	LM140K-5.0/883
	LM140LAH-12/883
	LM140LAH-15/883
	LM140LAH5.0/883
5962-8767501XA	LM150K/883
5962-9167302QXA	LM1575HVK12-QML
5962-9167202QXA	LM1575HVK5-QML
5962-9167102QXA	LM1575HVKAD-QML
5962-9167301QEA	LM1575J-12-QML
5962-9167401QEA	LM1575J-15-QML
	LM1575J-5.0-MPR
5962-9167201QEA	LM1575J-5.0-QML
5962-9167101MEA	LM1575J-ADJ-QML

	LM1575J-C5/883
	LM1575J-CAD/883
5962-9167201MXA	LM1575K-5.0-QML
	LM1575K-5.0/883
5962-9167101MXA	LM1575K-ADJ-QML
5962-9216701MXA	LM1577K-12/883
5962-9216601MXA	LM1577K-ADJ/883
5962-8958602GA	LM1578AH/883
5962-8958601GA	LM1578H/883
5962-9456101MGA	LM169H/883
	LM185BE/883
	LM185BH/883
5962-9091401MXA	LM185BYH-SMD
	LM185BYH/883
5962-8759405XA	LM185BYH1.2-SMD
	LM185BYH1.2/883
	LM185BYH2.5-MLS
5962-8759406XA	LM185BYH2.5-SMD
	LM185BYH2.5/883
5962-87594012A	LM185E-1.2/883
5962-87594022A	LM185E-2.5/883
	LM185H-1.2-MLS
5962-8759401XA	LM185H-1.2-SMD
	LM185H-1.2/883
	LM185H-2.5-MLS
5962-8759402XA	LM185H-2.5-SMD
	LM185H-2.5/883
5962-8777801XA	LM195H/883
5962-8777801YA	LM195K/883
	LM714H/883



	LM723E/883
	LM723H/883
	LM723J/883

<b>PART II COMMERCIAL PRODUCTS</b>
LM109H
LM109K STEEL
LM117H
LM117HVH
LM117K STEEL
LM120H-12
LM120H-15
LM120H-5.0
LM123K STEEL
LM129AH
LM129BH
LM129CH
LM133K STEEL
LM135H
LM135AH
LM136AH-2.5
LM136AH-5.0
LM136H-2.5
LM136H-5.0
LM138K STEEL
LM137H
LM140K-12
LM140K-15
LM140K-5.0
LM140LAH-12

LM140LAH-15
LM140LAH-5.0
LM150K STEEL
LM185BH
LM185BXH-2.5
LM185BYH
LM185BYH-2.5
LM185H-2.5
LM235H
LM235AH
LM236AH-2.5
LM236AH-5.0
LM236H-2.5
LM236H-5.0
LM309H
LM309K STEEL
LM317AH
LM317H
LM317HVH
LM317HVK STEEL
LM317K STEEL
LM320H-12
LM320H-15
LM320H-5.0
LM320K-12
LM320K-15
LM320K-5.0
LM323AK STEEL
LM323K STEEL
LM325H

LM329AH
LM329BH
LM329CH
LM329DH
LM333K STEEL
LM335H
LM335AH
LM337H
LM337HVH
LM337HVK STEEL
LM337K STEEL
LM338K STEEL
LM340AK-5.0
LM340K-12
LM340K-15
LM340K-5.0
LM340LAH-12
LM340LAH-15
LM340LAH-5.0
LM345K-5.0
LM34AH
LM34CAH
LM34CH
LM34H
LM350K STEEL
LM35AH
LM35CAH
LM35CH
LM35DH
LM35H

LM395H
LM78L05ACH
LM78L12ACH
LM78L15ACH
LM78M05CH
LM78M12CH
LM78M15CH

<b>PART III DIE/WAFER PRODUCTS</b>
LF156 MW8
LM109KG MW8
LM117 MDA
LM117H MWA
LM117HG MW8
LM117K MDS
LM117HVH MDS
LM117HVKG MW8
LM117KG MW8
LM120HG-12 MW8
LM120HG-15 MW8
LM120HG-5 MW8
LM120KG-12 MW8
LM120KG-15 MD8
LM120KG-15 MW8
LM120KG-5 MD8
LM120KG-5 MW8
LM129 MW8
LM135G MW8
LM137H MDS
LM137HG MW8
LM137K MDS
LM137KG MW8
LM138KG MW8
LM140KG-12 MW8

LM140KG-15 MW8
LM140KG-5 MW8
LM142AH-5.0 MW8
LM150G MW8
LM1577G-ADJ MW8
LM185-2.5 MW8
LM185-2.5G MW8
LM185-ADJ MDS
LM309K MWC
LM317H MWC
LM317K MWC
LM320H-12 MWC
LM320HG-5 MWC
LM320K-12 MWC
LM320K-15 MWC
LM320KG-5 MWC
LM325 MWC
LM329 MWC
LM335 MWC
LM337H MWC
LM337K MWC
LM338 MWC
LM340G-12 MWC
LM340G-5 MWC
LM340T-5.0 MWC
LM342AG-5 MWC
LM723 MDS
LM723 MW8



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98025**

**Issued: 11/09/98**

GIDEP Nr: AH6-D-99-01	GIDEP Category: DMSMS	TRB Nr:
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLES I	Military Packaged Products
Reference TABLES II	Die Sales Managed by the Mil/Aero Division

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **7 DECEMBER 1999**.

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National Semiconductor wishes to inform you that the devices listed in Tables I & II are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 (0)8141 35 1495 Email: petra.pavel@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com



<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 email: kirk.lemon@nsc.com	Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 email: brian.stearns@nsc.com
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**Other Ref:**

**Associated Notes / Table(s):**

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

<b>TABLE I: MILITARY PACKAGED PRODUCTS</b>			
<b>COLUMN A</b>	<b>COLUMN B</b>	<b>COLUMN C</b>	<b>COLUMN D</b>
<b>SLASHSHEET OR STANDARD MICROCIRCUIT DRAWING NUMBER</b>	<b>NATIONAL SEMICONDUCTOR PART NUMBER</b>	<b>ALTERNATE PART NUMBER</b>	<b>ALTERNATE SOURCE</b>
	CD4020BMJ/883		NONE
8101803EA	CD4053BMJ/883		NONE
	DM54LS00J/883	SN54LS00	MOTOROLA
	DM54LS00J/883	SN54LS00	TEXAS INSTRUMENTS
	DM54LS08J/883	GD54LS08	GOLDSTAR
	DM54LS08J/883	SL54LS08	LANSDALE
	DM54LS08W/883	GD54LS08	GOLDSTAR
	DM54LS08W/883	SL54LS08	LANSDALE
	DM54LS161AJ/883	GD54LS161A	GOLDSTAR
	DM54LS161AJ/883	SN54LS161A	TEXAS INSTRUMENTS
	DM54LS175J/883	GD54LS175	GOLDSTAR
	DM54LS175J/883	SL54LS175	LANSDALE
	DM54LS257AJ/883	GD54LS257A	GOLDSTAR
	DM54LS257AJ/883	SN54LS257A	MOTOROLA
	DM54LS257AW/883		NONE
	DM54LS279W/883	SN54LS279A	TEXAS INSTRUMENTS
	DM54LS279W/883	T54LS279	SGS-THOMSON
	DM54LS32J/883	GD54LS32	GOLDSTAR
	DM54LS32J/883	SL54LS32	LANSDALE

	DS7820AW-MLS	SN55182	TEXAS INSTRUMENTS
	DS7820AW-MLS	55182	ROCHESTER
	DS7837J/883	MC3437	MOTOROLA
	DS7837J/883	N8T37	PHILIPS
	DS9615MW-MIL		NONE
	DS9616HMJ/883		NONE
JM38510/30102B2A	JD54LS74B2A		NONE
JM38510/10404BEA	JD55115BEA		NONE
JM38510/10404BFA	JD55115BFA		NONE
	LF11331D/883		NONE
	LF11333D/883	HI303	HARRIS
	LF11333D/883	SW06	ANALOG DEVICES
7703401XA	LM117H-SMD	LM117H/883	NATIONAL
5962-9088501MYA	LM2940K-15/883	LM2940J-15/883	NATIONAL
	LM709H-MLS	LM108AH-MLS	NATIONAL
	MM9706-E23-MPR		NONE
	MM9715-E23-MPR		NONE

<b>TABLE II: MIL/AERO DIVISION DIE SALES</b>			
	<b>COLUMN B</b>	<b>COLUMN C</b>	<b>COLUMN D</b>
	<b>NATIONAL SEMICONDUCTOR PART NUMBER</b>	<b>ALTERNATE SOURCE PART NUMBER</b>	<b>ALTERNATE SOURCE</b>
	DS26LS32AC MWC	DS26LS32C MWC	NATIONAL
	DS78C120 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	DS9615 MW8		NONE
	LMC6062 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	LMC6081 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	LM135G MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM1577G-ADJ MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM193 MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM320K-15 MWC	LM120HG-15 MW8	NATIONAL



***MILITARY / AEROSPACE  
DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98025A**

**Issued: 02/17/99**

<b>GIDEP Nr:</b> AH6-D-99-01A	<b>GIDEP Category:</b> DMSMS	<b>TRB Nr:</b>
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

Reference TABLES I            Military Packaged Products  
Reference TABLES II        Die Sales Managed by the Mil/Aero Division

**First Amendment : CD4053BMJ/883 (SMD# 8101803EA) has been deleted from the Table I and re-instated as a marketable device as of February 1999.**

**Proposed Date of Change:**

Lifetime buy purchase orders will be accepted until **7 DECEMBER 1999.**

**Description of Change:**

**PRODUCT OBSOLESCENCE**

National Semiconductor wishes to inform you that the devices listed in Tables I & II are being discontinued. The decision to obsolete these mature products was primarily due to low volume or minimal demand from our customer base. In most cases, National can provide an upgrade to meet your system needs. Where no upgrade is available National has established aftermarket support.

**Effect of Change:**

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
<b>PCN Administrator</b>	Tel: 408-721-4189 Email: sherry.dobbins@nsc.com	Eur Mil Aero Marketing: Tel: +49 (0)8141 35 1495 Email: petra.pavel@nsc.com
<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com

<b>Other contacts</b>	Kirk Lemon Mil/Aero Analog Marketing (408) 721-4172 email: kirk.lemon@nsc.com  Brian Stearns Mil/Aero Logic Marketing (207) 541-8671 email: brian.stearns@nsc.com	
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**Other Ref:**

**Associated Notes / Table(s):**

Columns A and B are the devices being obsoleted; Column C is the suggested alternate replacement part; Column D is the alternate source manufacturer.

<b>TABLE I: MILITARY PACKAGED PRODUCTS</b>			
<b>COLUMN A</b>	<b>COLUMN B</b>	<b>COLUMN C</b>	<b>COLUMN D</b>
<b>SLASHSHEET OR STANDARD MICROCIRCUIT DRAWING NUMBER</b>	<b>NATIONAL SEMICONDUCTOR PART NUMBER</b>	<b>ALTERNATE PART NUMBER</b>	<b>ALTERNATE SOURCE</b>
	CD4020BMJ/883		NONE
	DM54LS00J/883	SN54LS00	MOTOROLA
	DM54LS00J/883	SN54LS00	TEXAS INSTRUMENTS
	DM54LS08J/883	GD54LS08	GOLDSTAR
	DM54LS08J/883	SL54LS08	LANSDALE
	DM54LS08W/883	GD54LS08	GOLDSTAR
	DM54LS08W/883	SL54LS08	LANSDALE
	DM54LS161AJ/883	GD54LS161A	GOLDSTAR
	DM54LS161AJ/883	SN54LS161A	TEXAS INSTRUMENTS
	DM54LS175J/883	GD54LS175	GOLDSTAR
	DM54LS175J/883	SL54LS175	LANSDALE
	DM54LS257AJ/883	GD54LS257A	GOLDSTAR
	DM54LS257AJ/883	SN54LS257A	MOTOROLA
	DM54LS257AW/883		NONE
	DM54LS279W/883	SN54LS279A	TEXAS INSTRUMENTS
	DM54LS279W/883	T54LS279	SGS-THOMSON
	DM54LS32J/883	GD54LS32	GOLDSTAR
	DM54LS32J/883	SL54LS32	LANSDALE
	DS7820AW-MLS	SN55182	TEXAS INSTRUMENTS

	DS7820AW-MLS	55182	ROCHESTER
	DS7837J/883	MC3437	MOTOROLA
	DS7837J/883	N8T37	PHILIPS
	DS9615MW-MIL		NONE
	DS9616HMJ/883		NONE
JM38510/30102B2A	JD54LS74B2A		NONE
JM38510/10404BEA	JD55115BEA		NONE
JM38510/10404BFA	JD55115BFA		NONE
	LF11331D/883		NONE
	LF11333D/883	HI303	HARRIS
	LF11333D/883	SW06	ANALOG DEVICES
7703401XA	LM117H-SMD	LM117H/883	NATIONAL
5962-9088501MYA	LM2940K-15/883	LM2940J-15/883	NATIONAL
	LM709H-MLS	LM108AH-MLS	NATIONAL
	MM9706-E23-MPR		NONE
	MM9715-E23-MPR		NONE



<b>TABLE II: MIL/AERO DIVISION DIE SALES</b>			
	<b>COLUMN B</b>	<b>COLUMN C</b>	<b>COLUMN D</b>
	<b>NATIONAL SEMICONDUCTOR PART NUMBER</b>	<b>ALTERNATE SOURCE PART NUMBER</b>	<b>ALTERNATE SOURCE</b>
	DS26LS32AC MWC	DS26LS32C MWC	NATIONAL
	DS78C120 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	DS9615 MW8		NONE
	LMC6062 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	LMC6081 MWC	COMMERCIAL PACKAGED PRODUCTS	NATIONAL
	LM135G MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM1577G-ADJ MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM193 MW8	MILITARY PACKAGED PRODUCTS	NATIONAL
	LM320K-15 MWC	LM120HG-15 MW8	NATIONAL



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98026**

**Issued: 12/15/98**

<b>GIDEP Nr:</b> AH6-C-99-03	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b> 149
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

ALL B level FAST products - /883, SMD and JAN B.  
See Tables I & II for affected ordering codes.

**Proposed Date of Change:**

December 14, 1998

**Description of Change:**

The FAST B level devices manufactured after the above date will no longer have 100% production burn-in. A burn-in process monitor has been established to insure continued quality and reliability. Operational life burn-in will continue to be performed on FAST JAN B and /883 product per standard Quality Conformance Inspection rules.

This reduction does not affect any S level product.

Under the guidelines of MIL-PRF-38535 QML process reduction procedures, National Semiconductor's Technology Review Board has reviewed and approved this process modification.

**Effect of Change:**

This change should have no impact on quality or reliability to customers. FAST is a mature product line which has been manufactured in the same FAB facility in excess of 15 years. The FAB process is well understood and controlled. The burn-in process monitor that has been instituted will insure continued process control.

**In Case of further questions please contact:**

	<b>North America</b>	<b>Europe</b>
<b>QA / Spec Control</b>	Tel: 408-721-5649	Tel: +49 (0)8141 35-1483 / 1402
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<b>Customer Support Center</b>	Tel: 1-800-272-9959 Email: support@nsc.com	Tel: +49 (0)180 530 8585 (German) Tel: +49 (0)180 532 7832 (English) Email: europe.support@nsc.com
<b>Other contacts</b>	Don Miller, Logic Product Eng. (207) 541-8492 email: don.miller@nsc.com	

**Other Ref:**

**Associated Notes / Table(s):**

**TABLE I:**

**JAN B FAST devices with burn-in reduction:**

<b><u>JAN PART NUMBER</u></b>	<b><u>SLASHSHEET PART NUMBER</u></b>
JD54F00BCA	JM38510/33001BCA
JD54F00BDA	JM38510/33001BDA
JD54F00B2A	JM38510/33001B2A
JD54F02BCA	JM38510/33301BCA
JD54F02BDA	JM38510/33301BDA
JD54F02B2A	JM38510/33301B2A
JD54F04BCA	JM38510/33002BCA
JD54F04BDA	JM38510/33002BDA
JD54F04B2A	JM38510/33002B2A
JD54F08BCA	JM38510/34001BCA
JD54F08BDA	JM38510/34001BDA
JD54F08B2A	JM38510/34001B2A
JD54F10BCA	JM38510/33003BCA
JD54F10BDA	JM38510/33003BDA
JD54F10B2A	JM38510/33003B2A
JD54F109BEA	JM38510/34102BEA
JD54F109BFA	JM38510/34102BFA
JD54F109B2A	JM38510/34102B2A
JD54F11BCA	JM38510/34002BCA
JD54F11BDA	JM38510/34002BDA
JD54F11B2A	JM38510/34002B2A
JD54F138BEA	JM38510/33701BEA
JD54F138BFA	JM38510/33701BFA
JD54F138B2A	JM38510/33701B2A
JD54F139BEA	JM38510/33702BEA
JD54F139BFA	JM38510/33702BFA
JD54F139B2A	JM38510/33702B2A
JD54F151BEA	JM38510/33901BEA
JD54F151BFA	JM38510/33901BFA
JD54F151B2A	JM38510/33901B2A
JD54F153BEA	JM38510/33902BEA
JD54F153BFA	JM38510/33902BFA
JD54F153B2A	JM38510/33902B2A
JD54F157BEA	JM38510/33903BEA
JD54F157BFA	JM38510/33903BFA
JD54F157B2A	JM38510/33903B2A

JD54F161BEA	JM38510/34301BEA
JD54F161BFA	JM38510/34301BFA
JD54F161B2A	JM38510/34301B2A
JD54F163BEA	JM38510/34302BEA
JD54F163BFA	JM38510/34302BFA
JD54F163B2A	JM38510/34302B2A
JD54F174BEA	JM38510/34107BEA
JD54F174BFA	JM38510/34107BFA
JD54F174B2A	JM38510/34107B2A
JD54F175BEA	JM38510/34104BEA
JD54F175BFA	JM38510/34104BFA
JD54F175B2A	JM38510/34104B2A
JD54F181BKA	JM38510/33801BKA
JD54F181BLA	JM38510/33801BLA
JD54F182BEA	JM38510/33802BEA
JD54F182BFA	JM38510/33802BFA
JD54F182B2A	JM38510/33802B2A
JD54F193BEA	JM38510/34304BEA
JD54F193BFA	JM38510/34304BFA
JD54F193B2A	JM38510/34304B2A
JD54F194BEA	JM38510/33601BEA
JD54F194BFA	JM38510/33601BFA
JD54F194B2A	JM38510/33601B2A
JD54F20BCA	JM38510/33004BCA
JD54F20BDA	JM38510/33004BDA
JD54F20B2A	JM38510/33004B2A
JD54F241BRA	JM38510/33202BRA
JD54F241BSA	JM38510/33202BSA
JD54F241B2A	JM38510/33202B2A
JD54F244BRA	JM38510/33203BRA
JD54F244BSA	JM38510/33203BSA
JD54F244B2A	JM38510/33203B2A
JD54F245BRA	JM38510/34803BRA
JD54F245BSA	JM38510/34803BSA
JD54F245B2A	JM38510/34803B2A
JD54F251BEA	JM38510/33905BEA
JD54F251BFA	JM38510/33905BFA
JD54F251B2A	JM38510/33905B2A
JD54F253BEA	JM38510/33908BEA
JD54F253BFA	JM38510/33908BFA
JD54F253B2A	JM38510/33908B2A
JD54F257BEA	JM38510/33906BEA
JD54F257BFA	JM38510/33906BFA
JD54F257B2A	JM38510/33906B2A
JD54F258BEA	JM38510/33907BEA
JD54F258B2A	JM38510/33907B2A

JD54F280BCA	JM38510/34901BCA
JD54F280BDA	JM38510/34901BDA
JD54F280B2A	JM38510/34901B2A
JD54F283BEA	JM38510/34201BEA
JD54F283BFA	JM38510/34201BFA
JD54F283B2A	JM38510/34201B2A
JD54F32BCA	JM38510/33501BCA
JD54F32BDA	JM38510/33501BDA
JD54F32B2A	JM38510/33501B2A
JD54F365BEA	JM38510/35101BEA
JD54F365BFA	JM38510/35101BFA
JD54F373BRA	JM38510/34601BRA
JD54F373BSA	JM38510/34601BSA
JD54F373B2A	JM38510/34601B2A
JD54F374BRA	JM38510/34105BRA
JD54F374BSA	JM38510/34105BSA
JD54F374B2A	JM38510/34105B2A
JD54F38BCA	JM38510/35202BCA
JD54F38BDA	JM38510/35202BDA
JD54F38B2A	JM38510/35202B2A
JD54F398BRA	JM38510/35001BRA
JD54F398B2A	JM38510/35001B2A
JD54F399BEA	JM38510/35002BEA
JD54F399BFA	JM38510/35002BFA
JD54F399B2A	JM38510/35002B2A
JD54F521BRA	JM38510/34701BRA
JD54F521BSA	JM38510/34701BSA
JD54F521B2A	JM38510/34701B2A
JD54F534BRA	JM38510/34106BRA
JD54F534B2A	JM38510/34106B2A
JD54F540BRA	JM38510/33204BRA
JD54F540BSA	JM38510/33204BSA
JD54F540B2A	JM38510/33204B2A
JD54F563B2A	JM38510/34603B2A
JD54F573BRA	JM38510/34604BRA
JD54F573BSA	JM38510/34604BSA
JD54F573B2A	JM38510/34604B2A
JD54F64BCA	JM38510/33401BCA
JD54F64BDA	JM38510/33401BDA
JD54F64B2A	JM38510/33401B2A
JD54F74BCA	JM38510/34101BCA
JD54F74BDA	JM38510/34101BDA
JD54F74B2A	JM38510/34101B2A

JD54F86BCA  
JD54F86BDA  
JD54F86B2A

JM38510/34501BCA  
JM38510/34501BDA  
JM38510/34501B2A

**TABLE II:**

/883 & SMD FAST devices with burn-in reduction

<u>/883 ORDERING CODE</u>	<u>SMD ORDERING CODE</u> (if available)
54F00DMQB	
54F00FMQB	
54F00LMQB	
54F02DMQB	
54F02FMQB	
54F02LMQB	
54F04DMQB	5962-9759301QCA
54F04FMQB	5962-9759301QDA
54F04LMQB	5962-9759301Q2A
54F08DMQB	
54F08FMQB	
54F08LMQB	
54F10DMQB	
54F10FMQB	
54F10LMQB	
54F109DMQB	
54F109FMQB	
54F109LMQB	
54F11DMQB	
54F11FMQB	
54F11LMQB	
54F132DMQB	5962-8948701CA
54F132LMQB	5962-89487012A
54F138DMQB	5962-9758201QEA
54F138FMQB	5962-9758201QFA
54F138LMQB	5962-9758201Q2A
54F139DMQB	
54F139FMQB	
54F139LMQB	
54F14DMQB	5962-8875201CA
54F14FMQB	5962-8875201DA
54F14LMQB	5962-88752012A
54F151ADMQB	
54F151AFMQB	
54F151ALMQB	
54F153DMQB	5962-9758301QEA
54F153FMQB	5962-9758301QFA
54F153LMQB	5962-9758301Q2A
54F157ADMQB	



54F157AFMQB  
54F157ALMQB

54F158ADMQB  
54F158ALMQB

54F160ADMQB  
54F160AFMQB

54F161ADMQB  
54F161ALMQB

54F163ADMQB  
54F163ALMQB

54F164ADMQB	5962-8607101CA
54F164AFMQB	5962-8607101DA
54F164ALMQB	5962-86071012A

54F169DMQB	5962-8607201EA
54F169FMQB	5962-8607201FA
54F169LMQB	5962-86072012A

54F174DMQB  
54F174FMQB  
54F174LMQB

54F175DMQB  
54F175FMQB  
54F175LMQB

54F181SDMQB	
54F181DMQB	5962-8671002JA
54F181LMQB	5962-86710023A

54F182DMQB  
54F182FMQB

54F189DLQB

54F190DMQB

54F191DMQB	5962-9058201EA
54F191FMQB	5962-9058201FA
54F191LMQB	5962-90582012A

54F192DMQB  
54F192FMQB

54F193DMQB  
54F193FMQB  
54F193LMQB

54F194DMQB  
54F194FMQB  
54F194LMQB

54F20DMQB	5962-9758401QCA
54F20FMQB	5962-9758401QDA
54F20LMQB	5962-9758401Q2A

54F219DLQB  
54F219LLQB

54F2244DMQB  
54F2244FMQB

5962-9325001MRA  
5962-9325001MSA

54F244DMQB  
54F244FMQB  
54F244LMQB

54F245DMQB  
54F245FMQB  
54F245LMQB

54F251ADMQB  
54F251AFMQB  
54F251ALMQB

54F253DMQB  
54F253FMQB  
54F253LMQB

54F257ADMQB  
54F257AFMQB  
54F257ALMQB

54F258ADMQB  
54F258AFMQB  
54F258ALMQB

54F273DMQB  
54F273FMQB  
54F273LMQB

5962-8855001RA  
5962-8855001SA  
5962-88550012A

54F280DMQB  
54F280FMQB  
54F280LMQB

54F283DMQB  
54F283FMQB  
54F283LMQB

54F299DMQB  
54F299FMQB  
54F299LMQB

54F32DMQB  
54F32FMQB  
54F32LMQB

54F322DMQB

5962-8607401RA

54F365DMQB  
54F365FMQB

54F373DMQB  
54F373FMQB  
54F373LMQB

54F374DMQB

54F374FMQB  
54F374LMQB

54F377DMQB  
54F377FMQB  
54F377LMQB

5962-9091001MRA  
5962-9091001MSA  
5962-9091001M2A

54F378DMQB  
54F378FMQB

5962-8855501EA  
5962-8855501FA

54F379DMQB  
54F379FMQB  
54F379LMQB

54F38DMQB  
54F38FMQB  
54F38LMQB

54F398DMQB  
54F398FMQB  
54F398LMQB

54F398DMQB  
54F398LMQB

54F402DMQB  
54F402LMQB

5962-9059301MEA  
5962-9059301M2A

54F407DMQB

54F410DMQB

54F413DMQB

54F521DMQB  
54F521LMQB

54F533DMQB  
54F533FMQB  
54F533LMQB

54F534DMQB  
54F534FMQB  
54F534LMQB

54F544SDMQB  
54F544FMQB  
54F544LMQB

54F545DMQB

54F573DMQB  
54F573LMQB

5962-9173801MRA  
5962-9173801M2A

54F574DMQB

54F64DMQB  
54F64LMQB

54F646SDMQB

5962-8975401LA

54F646FMQB 5962-8975401KA  
54F646LMQB 5962-89754013A

54F648SDMQB 5962-8975402LA  
54F648LMQB 5962-89754023A

54F652SDMQB 5962-8955801LA  
54F652LMQB 5962-89558013A

54F676DMQB  
54F676SDMQB  
54F676FMQB

54F74DMQB  
54F74FMQB  
54F74LMQB

54F821SDMQB 5962-8943801LA  
54F821LMQB 5962-89438013A

54F823SDMQB  
54F823FMQB  
54F823LMQB

54F825SDMQB  
54F825LMQB

54F827SDMQB 5962-9209001MLA  
54F827LMQB 5962-9209001M3A

54F86DMQB  
54F86FMQB  
54F86LMQB



## ***MILITARY / AEROSPACE DESIGN/PROCESS CHANGE NOTIFICATION***

**PCN Nr: MA98027**

**Issued: 12/15/98**

<b>GIDEP Nr:</b> AH6-C-99-04	<b>GIDEP Category:</b> PCN	<b>TRB Nr:</b> 117 & 145
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***This is to advise you that a Design and/or Process Change will be made to the following MIL/AERO product(s):***

**Product ID (Description):**

ALL National Military Packaged Products.

**Proposed Date of Change:**

December 1998 (Datecode 9849 onward)

**Description of Change:**

National Semiconductor has defined and invoked package family groupings for Group D QCI testing (MIL-STD-883 Method 5005) for all military packaged products.

Under the guidelines of MIL-PRF-38535 QML process reduction procedures, National Semiconductor's Technology Review Board has reviewed and approved this process modification.

**Effect of Change:**

There will be no effect on product form, fit, function, or quality. Device attributes summaries will reflect this change as it is implemented.

**In Case of further questions please contact:**

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**Other Ref:**

**Associated Notes / Table(s):**