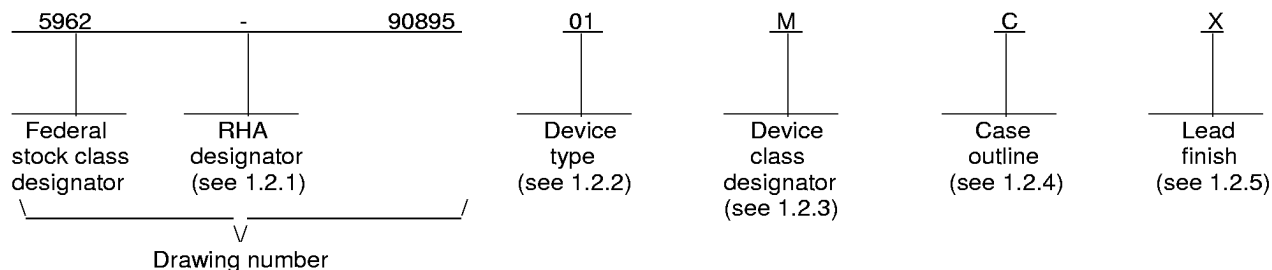


REVISIONS																			
LTR	DESCRIPTION										DATE (YR-MO-DA)				APPROVED				
A	Add device type 03 with vendor Cage 01295. Editorial changes throughout.										91-04-17				William Heckman				
B	Changes in accordance with NOR 5962-R330-92.										92-12-09				M. A. Frye				
C	Changes in accordance with NOR 5962-R017-97.										96-10-10				Ray Monnin				
D	Incorporate NORs B and C and change the limit values under electrical performance characteristics for device type 04 under the supply voltage rejection ratio test. Updated boiler plate. -lgt										99-09-03				Ray Monnin				
REV																			
SHEET																			
REV																			
SHEET																			
REV STATUS					REV		D	D	D	D	D	D	D	D	D	D			
OF SHEETS					SHEET		1	2	3	4	5	6	7	8	9	10	11		
PMIC N/A					PREPARED BY GARY ZAHN					DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216									
STANDARD MICROCIRCUIT DRAWING THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A					CHECKED BY CHARLES E. BESORE														
					APPROVED BY WILLIAM K. HECKMAN					MICROCIRCUIT, LINEAR, CHOPPER-STABILIZED, OPERATIONAL AMPLIFIER, MONOLITHIC SILICON									
					DRAWING APPROVAL DATE 90-07-27														
					REVISION LEVEL D					SIZE A	CAGE CODE 67268		5962-90895						
										SHEET 1 OF 11									

1. SCOPE

1.1 Scope. This drawing documents two product assurance class levels consisting of high reliability (device classes Q and M) and space application (device class V). A choice of case outlines and lead finishes are available and are reflected in the Part or Identifying Number (PIN). When available, a choice of Radiation Hardness Assurance (RHA) levels are reflected in the PIN.

1.2 PIN. The PIN is as shown in the following example:



1.2.1 RHA designator. Device classes Q and V RHA marked devices meet the MIL-PRF-38535 specified RHA levels and are marked with the appropriate RHA designator. Device class M RHA marked devices meet the MIL-PRF-38535, appendix A specified RHA levels and are marked with the appropriate RHA designator. A dash (-) indicates a non-RHA device.

1.2.2 Device type(s). The device type(s) identify the circuit function as follows:

<u>Device type</u>	<u>Generic number</u>	<u>Circuit function</u>
01	TLC2652	Precision chopper stabilized operational amplifier
02	TLC2654	Low noise chopper stabilized operational amplifier
03	TLC2652A	Precision chopper stabilized operational amplifier
04	TLC2654A	Low noise chopper stabilized operational amplifier

1.2.3 Device class designator. The device class designator is a single letter identifying the product assurance level as follows:

<u>Device class</u>	<u>Device requirements documentation</u>
M	Vendor self-certification to the requirements for MIL-STD-883 compliant, non-JAN class level B microcircuits in accordance with MIL-PRF-38535, appendix A
Q or V	Certification and qualification to MIL-PRF-38535

1.2.4 Case outline(s). The case outline(s) are as designated in MIL-STD-1835 and as follows:

<u>Outline letter</u>	<u>Descriptive designator</u>	<u>Terminals</u>	<u>Package style</u>
C	GDIP1-T14 or CDIP2-T14	14	Dual in-line package
G	MACY1-X8	8	Metal can package
P	GDIP1-T8 or CDIP2-T8	8	Dual in-line package
2	CQCC1-N20	20	Square chip carrier package

1.2.5 Lead finish. The lead finish is as specified in MIL-PRF-38535 for device classes Q and V or MIL-PRF-38535, appendix A for device class M.

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1.3 Absolute maximum ratings. 1/

Supply voltage (V_{DD+}) 2/	+8 V dc
Supply voltage (V_{DD-}) 2/	-8 V dc
Differential input voltage 3/	± 16 V dc
Input voltage range (V_i) (any input) 2/	± 8 V dc
Voltage on CLK IN and INT/ $\overline{\text{EXT}}$ pins	V_{DD-} to $V_{DD-} + 5.2$ V dc
Input current (I_i) (each input)	± 5 mA
Output current (I_o)	± 50 mA
Duration of short circuit current at (or below) $+25^\circ\text{C}$ 4/	Unlimited
Current into CLK IN and INT/ $\overline{\text{EXT}}$ pins	± 5 mA
Ambient temperature for 60 seconds:	
Case 2	$+260^\circ\text{C}$
Lead temperature, soldering 6 mm (.062") from case for 60 seconds:	
Cases C, G, P	$+300^\circ\text{C}$
Power dissipation ($T_A \leq +25^\circ\text{C}$):	
Cases C and 2 5/	1375 mW
Case G 5/	650 mW
Case P 5/	1050 mW
Thermal resistance, junction-to-case (θ_{JC})	See MIL-STD-1835
Junction temperature (T_J)	$+150^\circ\text{C}$

1.4 Recommended operating conditions.

Supply voltage (V_{DD}) :	
Device types 01 and 03	± 1.9 V dc min to ± 8 V dc max
Device types 02 and 04	± 2.3 V dc min to ± 8 V dc max
Common-mode input voltage (V_{IC}) :	
Device types 01 and 03	V_{DD-} min to $V_{DD+} - 1.9$ V dc max
Device types 02 and 04	V_{DD-} min to $V_{DD+} - 2.3$ V dc max
Clock input voltage	V_{DD-} to $V_{DD-} + 5$ V dc
Ambient operating temperature range (T_A)	-55°C to $+125^\circ\text{C}$

1/ Stresses above the absolute maximum rating may cause permanent damage to the device. Extended operation at the maximum levels may degrade performance and affect reliability.

2/ All voltage values, except differential voltages, are with respect to the midpoint between V_{DD+} and V_{DD-} .

3/ Differential voltages are at the noninverting input with respect to the inverting input.

4/ The output may be shorted to either supply. Temperature or supply voltage or both must be limited to ensure that the maximum dissipation rating is not exceeded.

5/ Above $+25^\circ\text{C}$ derate at a factor of 11.0 mW/ $^\circ\text{C}$ for cases C and 2, 5.2 mW/ $^\circ\text{C}$ for case G, and 8.4 mW/ $^\circ\text{C}$ for case P.

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2. APPLICABLE DOCUMENTS

2.1 Government specification, standards, and handbooks. The following specification, standards, and handbooks form a part of this drawing to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-38535 - Integrated Circuits, Manufacturing, General Specification for.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-883 - Test Method Standard Microcircuits.
MIL-STD-973 - Configuration Management.
MIL-STD-1835 - Interface Standard For Microcircuit Case Outlines.

HANDBOOKS

DEPARTMENT OF DEFENSE

MIL-HDBK-103 - List of Standard Microcircuit Drawings (SMD's).
MIL-HDBK-780 - Standard Microcircuit Drawings.

(Unless otherwise indicated, copies of the specification, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Order of precedence. In the event of a conflict between the text of this drawing and the references cited herein, the text of this drawing takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Item requirements. The individual item requirements for device classes Q and V shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein. The individual item requirements for device class M shall be in accordance with MIL-PRF-38535, appendix A for non-JAN class level B devices and as specified herein.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein for device classes Q and V or MIL-PRF-38535, appendix A and herein for device class M.

3.2.1 Case outline(s). The case outline(s) shall be in accordance with 1.2.4 herein.

3.2.2 Terminal connections. The terminal connections shall be as specified on figure 1.

3.3 Electrical performance characteristics and postirradiation parameter limits. Unless otherwise specified herein, the electrical performance characteristics and postirradiation parameter limits are as specified in table I and shall apply over the full ambient operating temperature range.

3.4 Electrical test requirements. The electrical test requirements shall be the subgroups specified in table II. The electrical tests for each subgroup are defined in table I.

3.5 Marking. The part shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's PIN may also be marked as listed in MIL-HDBK-103. For packages where marking of the entire SMD PIN number is not feasible due to space limitations, the manufacturer has the option of not marking the "5962-" on the device. For RHA product using this option, the RHA designator shall still be marked. Marking for device classes Q and V shall be in accordance with MIL-PRF-38535. Marking for device class M shall be in accordance with MIL-PRF-38535, appendix A.

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3.5.1 Certification/compliance mark. The certification mark for device classes Q and V shall be a "QML" or "Q" as required in MIL-PRF-38535. The compliance mark for device class M shall be a "C" as required in MIL-PRF-38535, appendix A.

3.6 Certificate of compliance. For device classes Q and V, a certificate of compliance shall be required from a QML-38535 listed manufacturer in order to supply to the requirements of this drawing (see 6.6.1 herein). For device class M, a certificate of compliance shall be required from a manufacturer in order to be listed as an approved source of supply in MIL-HDBK-103 (see 6.6.2 herein). The certificate of compliance submitted to DSCC-VA prior to listing as an approved source of supply for this drawing shall affirm that the manufacturer's product meets, for device classes Q and V, the requirements of MIL-PRF-38535 and herein or for device class M, the requirements of MIL-PRF-38535, appendix A and herein.

3.7 Certificate of conformance. A certificate of conformance as required for device classes Q and V in MIL-PRF-38535 or for device class M in MIL-PRF-38535, appendix A shall be provided with each lot of microcircuits delivered to this drawing.

3.8 Notification of change for device class M. For device class M, notification to DSCC-VA of change of product (see 6.2 herein) involving devices acquired to this drawing is required for any change as defined in MIL-STD-973.

3.9 Verification and review for device class M. For device class M, DSCC, DSCC's agent, and the acquiring activity retain the option to review the manufacturer's facility and applicable required documentation. Offshore documentation shall be made available onshore at the option of the reviewer.

3.10 Microcircuit group assignment for device class M. Device class M devices covered by this drawing shall be in microcircuit group number 85 (see MIL-PRF-38535, appendix A).

4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling and inspection. For device classes Q and V, sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein. For device class M, sampling and inspection procedures shall be in accordance with MIL-PRF-38535, appendix A.

4.2 Screening. For device classes Q and V, screening shall be in accordance with MIL-PRF-38535, and shall be conducted on all devices prior to qualification and technology conformance inspection. For device class M, screening shall be in accordance with method 5004 of MIL-STD-883, and shall be conducted on all devices prior to quality conformance inspection.

4.2.1 Additional criteria for device class M.

a. Burn-in test, method 1015 of MIL-STD-883.

(1) Test condition B or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to the preparing or acquiring activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015.

(2) $T_A = +125^{\circ}\text{C}$, minimum.

b. Interim and final electrical test parameters shall be as specified in table II herein.

4.2.2 Additional criteria for device classes Q and V.

a. The burn-in test duration, test condition and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document revision level control of the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.

b. Interim and final electrical test parameters shall be as specified in table II herein.

c. Additional screening for device class V beyond the requirements of device class Q shall be as specified in MIL-PRF-38535, appendix B.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions -55°C ≤ T _A ≤ +125°C V _{DD±} = ± 5V unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Input offset voltage <u>1/</u>	V _{IO}	V _{IC} = 0 V, R _S = 50Ω	1	01		3.5	μV
			2, 3			10	
			1	02		20	
			2, 3			50	
			1	03		3	
			2, 3			8	
			1	04		10	
			2, 3			40	
Temperature coefficient of input offset voltage <u>2/</u>	alpha V _{IO}	V _{IC} = 0 V, R _S = 50Ω	1, 2, 3	01, 03		0.03	μV/°C
				02, 04		0.30	
Input offset voltage long term drift <u>2/</u>	V _D	V _{IC} = 0 V, R _S = 50Ω, T _A = +25°C	1	01, 02		0.06	μV/mo
				03, 04		0.02	
Input offset current	I _{IO}	V _{IC} = 0 V, R _S = 50Ω T _A = -55°C, 125°C	2, 3	01, 02, 03, 04		500	pA
Input bias current	I _{IB}	V _{IC} = 0 V, R _S = 50Ω T _A = -55°C, 125°C	2, 3	01, 02, 03, 04		500	pA
Common-mode input voltage range	V _{ICR}	R _S = 50Ω	1, 2, 3	01, 03	-5 to 3.1		V
				02, 04	-5 to 2.7		
Maximum positive peak output voltage swing	V _{OM+}	R _L = 10 kΩ <u>3/</u>	1, 2, 3	01, 02, 03, 04	4.7		V
Maximum negative peak output voltage swing	V _{OM-}	R _L = 10 kΩ <u>3/</u>	1, 2, 3	01, 02, 03, 04	-4.7		V
Large-signal differential voltage amplification	A _{VD}	V _O = ±4 V, R _L = 10 kΩ	1, 2, 3	01, 02	120		dB
			1	03, 04	135		
			2, 3		120		
Clamp on-state current	I _{CON}	V _O = -5 V to 5 V	1, 2, 3	01, 02, 03, 04	25		μA
Clamp off-state current	I _{COFF}	R _L = 100 kΩ	1	01, 02, 03, 04		100	pA
			2, 3			500	

See footnotes at end of table.

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TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions -55°C ≤ T _A ≤ +125°C V _{DD±} = ± 5V unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Common mode rejection ratio	CMRR	V _O = 0 V, V _{IC} = V _{ICR} min, R _S = 50Ω	1, 2, 3	01, 03	120		dB
				02	105		
				04	110		
Supply voltage rejection ratio ($\frac{\Delta V_{DD\pm}}{\Delta V_{IO}}$)	k _{SVR}	V _{DD±} = ±1.9 V to ±8 V, V _O = 0 V, R _S = 50Ω	1, 2, 3	01, 03	120		dB
		V _{DD±} = ±2.3 V to ±8 V, V _O = 0 V, R _S = 50Ω	1	02	110		
			2, 3		105		
			1	04	110		
			2, 3		110		
Supply current	I _{DD}	V _O = 0 V, no load	1	All		2.4	mA
			2, 3			2.5	
Positive slew rate at unity gain	SR ₊	V _O = ±2.3 V, R _L = 10 kΩ, C _L = 100 pF	4	01, 03	2		V/μs
			5, 6		1.3		
			4	02, 04	1.5		
			5, 6		1.1		
Negative slew rate at unity gain	SR ₋	V _O = ±2.3 V, R _L = 10 kΩ, C _L = 100 pF	4	01, 03	2.3		V/μs
			5, 6		1.6		
			4	02, 04	2.3		
			5, 6		1.3		

See footnotes at end of table.

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TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions -55°C ≤ T _A ≤ +125°C V _{DD±} = ± 5V unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Equivalent input noise voltage <u>2/</u>	V _N	F = 10 Hz, T _A = +25°C	4	01, 03		140	nV $\sqrt{\text{Hz}}$
				02, 04		75	
		F = 1 kHz, T _A = +25°C		01, 03		35	
				02, 04		20	

1/ Subgroups 1, 2, and 3 of this parameter are guaranteed by design. Thermocouple effects preclude measurement of these voltages in high speed automatic testing. V_{IO} is measured to a limit determined by the test equipment capacity.

2/ Not production tested.

3/ Output clamp is not connected.

4.3 Qualification inspection for device classes Q and V. Qualification inspection for device classes Q and V shall be in accordance with MIL-PRF-38535. Inspections to be performed shall be those specified in MIL-PRF-38535 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

4.4 Conformance inspection. Technology conformance inspection for classes Q and V shall be in accordance with MIL-PRF-38535 including groups A, B, C, D, and E inspections and as specified herein except where option 2 of MIL-PRF-38535 permits alternate in-line control testing. Quality conformance inspection for device class M shall be in accordance with MIL-PRF-38535, appendix A and as specified herein. Inspections to be performed for device class M shall be those specified in method 5005 of MIL-STD-883 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

4.4.1 Group A inspection.

- a. Tests shall be as specified in table II herein.
- b. Subgroups 7 and 8 in table I, method 5005 of MIL-STD-883 shall be omitted.

4.4.2 Group C inspection. The group C inspection end-point electrical parameters shall be as specified in table II herein.

4.4.2.1 Additional criteria for device class M. Steady-state life test conditions, method 1005 of MIL-STD-883:

- a. Test condition B or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to the preparing or acquiring activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.
- b. T_A = +125°C, minimum.
- c. Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

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Device types	01, 02, 03, and 04		
Case outlines	C	G and P	2
Terminal number	Terminal symbol		
1	CXB	CXA	NC
2	CXA	IN-	CXB
3	NC	IN+	CXA
4	IN-	V _{DD} -	NC
5	IN+	CLAMP	NC
6	NC	OUT	IN-
7	V _{DD} -	V _{DD} +	NC
8	C RETURN	CXB	IN+
9	CLAMP	-----	NC
10	OUT	-----	V _{DD} -
11	V _{DD} +	-----	NC
12	CLK OUT	-----	C RETURN
13	CLK IN	-----	CLAMP
14	INT/ $\overline{\text{EXT}}$	-----	OUT
15	-----	-----	NC
16	-----	-----	V _{DD} +
17	-----	-----	NC
18	-----	-----	CLK OUT
19	-----	-----	CLK IN
20	-----	-----	INT/ $\overline{\text{EXT}}$

NC = No connection

FIGURE 1. Terminal connections.

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TABLE II. Electrical test requirements.

Test requirements	Subgroups (in accordance with MIL-STD-883, method 5005, table I)	Subgroups (in accordance with MIL-PRF-38535, table III)	
	Device class M	Device class Q	Device class V
Interim electrical parameters (see 4.2)	-----	-----	-----
Final electrical parameters (see 4.2)	1, 2, 3, 4 <u>1</u> /	1, 2, 3, 4 <u>1</u> /	1, 2, 3, 4 <u>1</u> /
Group A test requirements (see 4.4)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6
Group C end-point electrical parameters (see 4.4)	1	1	1
Group D end-point electrical parameters (see 4.4)	1	1	1
Group E end-point electrical parameters (see 4.4)	1, 4	1, 4	1, 4

1/ PDA applies to subgroup 1 excluding V_{IO} .

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4.4.2.2 Additional criteria for device classes Q and V. The steady-state life test duration, test condition and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The test circuit shall be maintained under document revision level control by the device manufacturer's TRB in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.

4.4.3 Group D inspection. The group D inspection end-point electrical parameters shall be as specified in table II herein.

4.4.4 Group E inspection. Group E inspection is required only for parts intended to be marked as radiation hardness assured (see 3.5 herein).

- a. End-point electrical parameters shall be as specified in table II herein.
- b. For device classes Q and V, the devices or test vehicle shall be subjected to radiation hardness assured tests as specified in MIL-PRF-38535 for the RHA level being tested. For device class M, the devices shall be subjected to radiation hardness assured tests as specified in MIL-PRF-38535, appendix A for the RHA level being tested. All device classes must meet the postirradiation end-point electrical parameter limits as defined in table I at $T_A = +25^{\circ}\text{C} \pm 5^{\circ}\text{C}$, after exposure, to the subgroups specified in table II herein.
- c. When specified in the purchase order or contract, a copy of the RHA delta limits shall be supplied.

5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38535 for device classes Q and V or MIL-PRF-38535, appendix A for device class M.

6. NOTES

6.1 Intended use. Microcircuits conforming to this drawing are intended for use for Government microcircuit applications (original equipment), design applications, and logistics purposes.

6.1.1 Replaceability. Microcircuits covered by this drawing will replace the same generic device covered by a contractor prepared specification or drawing.

6.1.2 Substitutability. Device class Q devices will replace device class M devices.

6.2 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated with the users of record for the individual documents. This coordination will be accomplished in accordance with MIL-STD-973 using DD Form 1692, Engineering Change Proposal.

6.3 Record of users. Military and industrial users should inform Defense Supply Center Columbus when a system application requires configuration control and which SMD's are applicable to that system. DSCC will maintain a record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronic devices (FSC 5962) should contact DSCC-VA, telephone (614) 692-0525.

6.4 Comments. Comments on this drawing should be directed to DSCC-VA, Columbus, Ohio 43216-5000, or telephone (614) 692-0674.

6.5 Abbreviations, symbols, and definitions. The abbreviations, symbols, and definitions used herein are defined in MIL-PRF-38535 and MIL-HDBK-1331.

6.6 Sources of supply.

6.6.1 Sources of supply for device classes Q and V. Sources of supply for device classes Q and V are listed in QML-38535. The vendors listed in QML-38535 have submitted a certificate of compliance (see 3.6 herein) to DSCC-VA and have agreed to this drawing.

6.6.2 Approved sources of supply for device class M. Approved sources of supply for class M are listed in MIL-HDBK-103. The vendors listed in MIL-HDBK-103 have agreed to this drawing and a certificate of compliance (see 3.6 herein) has been submitted to and accepted by DSCC-VA.

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STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 99-09-03

Approved sources of supply for SMD 5962-90895 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38535 during the next revision. MIL-HDBK-103 will be revised to include the addition or deletion of sources. The vendors listed below have agreed to this drawing and a certificate of compliance has been submitted to and accepted by DSCC-VA. This bulletin is superseded by the next dated revision of MIL-HDBK-103 and QML-38535.

Standard microcircuit drawing PIN <u>1</u> /	Vendor CAGE number	Vendor similar PIN <u>2</u> /
5962-9089501MCA	01295	TLC2652MJB
5962-9089501MGX	<u>3</u> /	TLC2652MLB
5962-9089501MPA	01295	TLC2652MJGB
5962-9089501M2A	01295	TLC2652MFKB
5962-9089502MCA	01295	TLC2654MJB
5962-9089502MGX	<u>3</u> /	TLC2654MLB
5962-9089502MPA	01295	TLC2654MJGB
5962-9089502M2A	01295	TLC2654MFKB
5962-9089503MCA	01295	TLC2652AMJB
5962-9089503MGX	<u>3</u> /	TLC2652AMLB
5962-9089503MPA	01295	TLC2652AMJGB
5962-9089503M2A	01295	TLC2652AMFKB
5962-9089504QCA	01295	TLC2654AMJB
5962-9089504QPA	01295	TLC2654AMJGB
5962-9089504Q2A	01295	TLC2654AMFKB

- 1/ The lead finish shown for each PIN representing a hermetic package is the most readily available from the manufacturer listed for that part. If the desired lead finish is not listed contact the vendor to determine its availability.
- 2/ Caution. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.
- 3/ Not available from an approved source of supply.

Vendor CAGE
number

01295

Vendor name
and address

Texas Instruments, Incorporated
13500 North Central Expressway
P.O. Box 655303
Dallas, TX 75265
Point of Contact: 6412 Highway 75 South
Sherman, TX 75090-0084

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