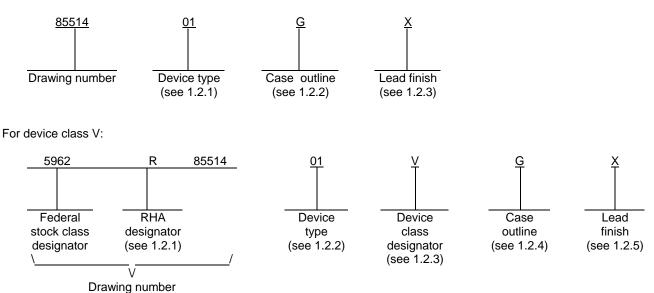
								I	REVISI	ONS										
LTR					[	DESCF	RIPTIO	N					DA	ATE (Y	R-MO-	DA)		APPF	ROVED	)
A	Change to military drawing format. Changes to output adju conditions for load regulation test at -55°C and +125°C. Ch subgroups for load regulation and line regulation tests, and temperature coefficient. Add vendor CAGE 64155. Editori- throughout.				C. Chas, and o	ange gr output v	oup A oltage		88-03-17			M. A.	. FRYE							
В				07933 tage tei						case ou	itline 2.			89-0	)4-12			M. A.	. FRYE	
С	Add d 54186	levice 6 and (	type 02 )7933.	2. Edito Add vo	orial ch endor (	anges CAGE <sup>-</sup>	through 1ES66.	nout. D	elete v	rendors	CAGE	s		92-1	11-25			M. A.	. FRYE	
D	Add c and T	lass V ABLE	device IIB. M	es. Rep ake ch	blace C anges	AGE 0 to 1.2.2	6665 w 2 and T	/ith 243 ABLE	355. Ao II.	dd case	outline	еH		97-0	06-10			R. M	ONNIN	
E	Add ra	adiatio	n hardı	ness as	ssuranc	ce requ	iiremen	ts r	0					98-0	)8-07			R. M	ONNIN	
F	Make coeffi	chang cient te	es to 1	.5, tab specifie	le IIA, 4 ed in tal	1.4.1b, ble I	and ou ro	tput vo	ltage te	empera	ture			00-0	)1-21			R. M	ONNIN	
G				)3 and fied un				.2.2 ar	nd to the	e outpu	t voltag	ge		01-0	)2-07		R. MONNIN			
н	Drawi	ing upo	dated to	o reflec	t curre	nt requ	iremen	tsrrp	)					05-1	2-07			R. M	ONNIN	
		E 670	-	HIS DI	RAWIN	ig has	S BEEN	I REPL	ACED.											
CURRENT CAO REV SHEET	GE COD	E 672	-		RAWIN		BEEN		ACED.											
REV SHEET REV	GE COD	E 672	-		RAWIN		BEEN	I REPL	ACED.											
REV SHEET		E 672	-	REV			BEEN	I REPL	ACED.	H	H	H	H	H	Н	H				
REV SHEET REV SHEET		E 672	-		/						H 5	H 6	H 7	H 8	Н 9	H 10				
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A			-	REV SHE PRE C	/	D BY D OSB	H 1	H	H	H	5	6 EFEN	7 SE S	8 UPPL	9 .Y CE	10		   990	US	
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A	NDAR		-	REV SHE PRE C	/ EET PAREE DONAL	D BY D OSB	H 1	H 2	H	H	5	6 EFEN	7 SE SI	8 UPPL	9 .Y CE , OHI	10 NTER	218-3	990	SUS	
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A STAI MICRO DRA THIS DRAWIN FOR U	NDAR	2D SUIT G VAILAR	68	REV SHE PRE C CHE C APP	/ EET PAREE DONAL	D BY D OSB BY . A. DiC	H 1 ORNE	H 2	H	H 4 MIC HA	5 DI CROC	efen Co CIRCI NED,	7 SE SI DLUW http UIT, I +5 V	8 UPPL IBUS o://ww	9 , OHI , OHI vw.ds	10 NTER 0 432 cc.dla RADIA JSTA	218-3 a.mil	990	CISI	
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A STAI MICRO DRA THIS DRAWIN FOR U	NDAR DCIRC AWING SE BY A RTMENT NCIES C	CD CUIT G VAILAR ALL TS OF THE	68	REV SHE PRE CHE CHE	/ EET PAREE DONAL CKED DANIEL PROVE N. A. H	D BY D OSB BY . A. DIC D BY AUCK	H 1 ORNE CENZO	H 2	H	H 4 MIC HA	5 DI CROC	efen Co CIRCI NED,	7 SE SI DLUW http UIT, I +5 V	8 UPPL IBUS o://ww	9 , OHI , OHI vw.ds	10 NTER 0 432 cc.dla RADIA JSTA	218-3 a.mil	990 N PRE	CISI	
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A STAI MICRO DRA THIS DRAWIN FOR U DEPAN	NDAR DCIRC AWING SE BY A RTMENT NCIES C	CD CUIT G VAILAR ALL TS OF THE	68	REV SHE PRE CHE CHE	/ EET PAREE DONAL CKED DANIEL PROVE N. A. H	D BY D OSB BY . A. DIC D BY AUCK APPR( 6-03-08	H 1 ORNE ENZO	H 2	H	H 4 MIC HAI VO	5 DI CROC	6 EFEN CC CIRCI NED, SE RI	7 SE SI DLUW http UIT, I +5 V	8 IBUS D://ww LINE/ OLT RENC	9 , OHI , OHI vw.ds	10 NTER 0 432 cc.dla RADIA JSTA	218-3 a.mil ATIO BLE LITH	990 N PRE	CISI	

# 1. SCOPE

1.1 <u>Scope</u>. 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 examples.

For device classes M and Q:



1.2.1 <u>RHA designator</u>. 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 <u>Device type(s)</u>. The device type(s) identify the circuit function as follows:

Device type	Generic number	Circuit function	Output voltage noise
01	REF02A	Precision reference +5-volt adjustable output	18 μV <sub>P-P</sub>
02	REF02	Precision reference +5-volt adjustable output	18 μV <sub>P-P</sub>
03	REF02A	Precision reference +5-volt adjustable output	100 μV <sub>P-P</sub>
04	REF02	Precision reference +5-volt adjustable output	100 μV <sub>P-P</sub>

1.2.3 <u>Device class designator</u>. The device class designator is a single letter identifying the product assurance level as listed below. Since the device class designator has been added after the original issuance of this drawing, device classes M and Q designators will not be included in the PIN and will not be marked on the device.

Device class	Device requirements documentation
Μ	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
STANDARD	SIZE 85514

MICROCIRCUIT DRAWING	A		85514
DEFENSE SUPPLY CENTER COLUMBUS		REVISION LEVEL	SHEET
COLUMBUS, OHIO 43218-3990		<b>H</b>	2

1.2.4 <u>Case outline(s)</u> . T	he case outline(s) are as design	ated in MIL-STD-1838	5 and as follows:	
Outline letter	Descriptive designator	<u>Terminals</u>	Package style	
G H P 2	MACY1-X8 GDFP1-F10 or CDFP2-F10 GDIP1-T8 or CDIP2-T8 CQCC1-N20	8 10 8 20	Can Flat pack Dual-in-line Square leadless chip ca	arrier
1.2.5 <u>Lead finish</u> . The lead finish is appendix A for device class	ead finish is as specified in MIL-F s M.	PRF-38535 for device	classes Q and V or MIL-PR	F-38535,
1.3 Absolute maximum	ratings. <u>1</u> /			
Power dissipation (P Output short circuit of Storage temperature Lead temperature (s Junction temperature	D) Juration oldering, 10 seconds) e (T <sub>J</sub> ) junction-to-case ( $\theta_{JC}$ )		. 500 mW <u>2</u> / . Indefinite 65°C to +150°C . +300°C . +150°C	
1.4 Recommended oper	ating conditions.			
Ambient operating te	emperature range (T <sub>A</sub> )		55°C to +125°C	
1.5 <u>Radiation features</u> .				
Maximum total dose	available (dose rate = 50 - 300	rads(Si)/s)	100 Krads(Si) <u>3</u> /	
2. APPLICABLE DOCU	MENTS			
2.1 <u>Government specific</u> of this drawing to the exten solicitation or contract.	ation, standards, and handbook t specified herein. Unless other	<u>s</u> . The following spec wise specified, the iss	ification, standards, and har ues of these documents are	ndbooks form a part those cited in the
DEPARTMENT OF DE	FENSE SPECIFICATION			
MIL-PRF-38535 -	ntegrated Circuits, Manufacturin	g, General Specificati	on for.	
DEPARTMENT OF DE	FENSE STANDARDS			
	Fest Method Standard Microcircu nterface Standard Electronic Co		es.	
maximum levels may or 2/ Derate 7.1 mW/°C abo 7.8 mW/°C above +72 3/ These parts may be do	se rate sensitive in a space envi its for the noted parameters are	reliability. ckages, 6.6 mW/°C al ronment and may der	pove +75°C for the "P" pack	age, and se rate effects.
	ANDARD	SIZE A		85514
DEFENSE SUPPL	CUIT DRAWING Y CENTER COLUMBUS OHIO 43218-3990		REVISION LEVEL	SHEET
DSCC FORM 2234	, 01110 702 10-0000		H	3

#### DEPARTMENT OF DEFENSE HANDBOOKS

MIL-HDBK-103 - List of Standard Microcircuit Drawings. MIL-HDBK-780 - Standard Microcircuit Drawings.

(Copies of these documents are available online at <u>http://assist.daps.dla.mil/quicksearch/</u> or <u>http://assist.daps.dla.mil</u> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 <u>Order of precedence</u>. 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 <u>Item requirements</u>. 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 <u>Design, construction, and physical dimensions</u>. 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 outlines. The case outlines shall be in accordance with 1.2.4 herein.

3.2.2 <u>Terminal connections</u>. The terminal connections shall be as specified on figure 1.

3.2.3 <u>Radiation exposure circuit</u>. The radiation exposure circuit shall be as specified on figure 2.

3.3 <u>Electrical performance characteristics and postirradiation parameter limits</u>. 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 <u>Electrical test requirements</u>. The electrical test requirements shall be the subgroups specified in table IIA. The electrical tests for each subgroup are defined in table I.

3.5 <u>Marking</u>. The part shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's PIN may also be marked. 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.

3.5.1 <u>Certification/compliance mark</u>. 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 <u>Certificate of compliance</u>. 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 <u>Certificate of conformance</u>. 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 <u>Notification of change for device class M</u>. 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 that affects this drawing.

STANDARD MICROCIRCUIT DRAWING	SIZE A		85514
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43218-3990		REVISION LEVEL <b>H</b>	SHEET <b>4</b>

	L	ABLE I. <u>t</u>	Electrical performance	e characteristic	<u>.s</u> .			
Test	Symbol	-55°0	Conditions $1/C \le T_A \le +125^{\circ}C$ otherwise specified	Group A subgroups	Device type	Limits		Unit
						Min	Max	
Quiescent supply current	ISY	No load	1	1	All		1.4	mA
				2,3			2.0	]
			M,D,P,L,R <u>2</u> / <u>3</u> /	1	01		1.4	
Output adjustment <u>4</u> / range	$\Delta V_{TRIM}$	R <sub>P</sub> = 10	0 kΩ, T <sub>A</sub> = +25°C	1	All	±3.0	 	%
Output voltage	Vo	IL = 0 m	A	1	01,03	4.985	5.015	V
					02,04	4.975	5.025	
				2,3	01,03	4.978	5.022	1
					02,04	4.953	5.047	
			M,D,P,L,R <u>2</u> / <u>3</u> /	1	01	4.975	5.025	<u> </u>
Short circuit current 4/	IOS	$V_{O} = 0$	V, T <sub>A</sub> = +25°C	1	All	+15	+60	mA
Sink current <u>4</u> /	IS	T <sub>A</sub> = +2	<u>25°C</u>	1	All	-0.3		mA
Load regulation	LD reg	lL = 0 n	nA to 10 mA <u>5</u> /	1	All		0.01	%/mA
			M,D,P,L,R <u>2</u> / <u>3</u> /	1	01		0.015	1
		lL = 0 n	nA to 8 mA <u>5</u> /	2,3	01,03		0.012	
					02,04		0.015	1
Line regulation	LN reg	V <sub>IN</sub> = 8	V to 33 V <u>5</u> /	1	01,03		0.010	%/V
					02,04		0.012	
				2,3	All		0.015	
			M,D,P,L,R <u>2</u> / <u>3</u> /	1	01		0.030	
Load current	۱L	T <sub>A</sub> = +2	25°C <u>4</u> / <u>6</u> /	1	All	10		mA
Output voltage noise	enp-p	0.1 Hz t	to 10 Hz <u>4</u> /	4	01,02		18	μνρ-ρ
					03,04		100	
Output voltage	TCVO	<u>4/ 7/</u>		8	01,03		±8.5	ppm/°C
temperature coefficient					02,04		±25	

<u>1</u>/  $V_{IN} = 15 V.$ 

2/ Devices supplied to this drawing have been characterized through all levels M, D, P, L, and R of irradiation. However, this device is only tested at the "R" level. Pre and Post irradiation values are identical unless otherwise specified in table I. When performing post irradiation electrical measurements for any RHA level, T<sub>A</sub> = +25°C.

3/ These parts may be dose rate sensitive in a space environment and may demonstrate enhanced low dose rate effects. Radiation end point limits for the noted parameters are guaranteed only for the conditions specified in MIL-STD-883, method 1019, condition A.

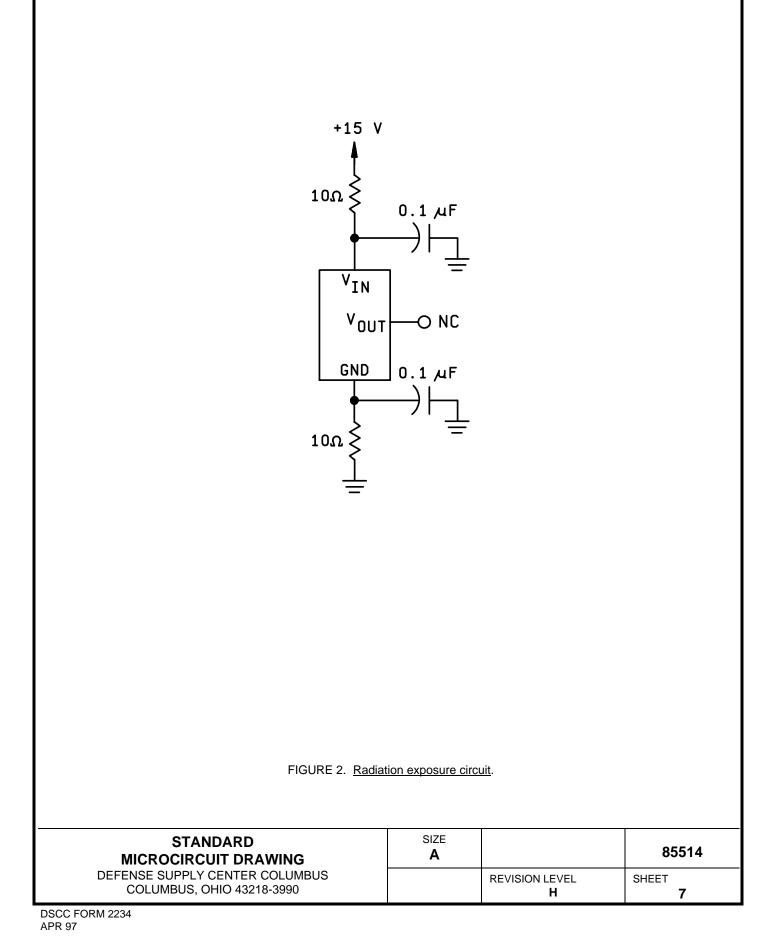
This parameter is not tested to post irradiation. 4/

 $\overline{5}$  Line and load regulation specifications include the effect of self heating.

 $\underline{6}$ / Minimum of 10 mA load current guaranteed by load regulation test.  $\underline{7}$ / TCV<sub>O</sub> = (V<sub>MAX</sub> - V<sub>MIN</sub>) / 5 V x ((-55°C to +125°C) x (1 x 10<sup>6</sup>)) / 180°C.

STANDARD MICROCIRCUIT DRAWING	SIZE A		85514
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43218-3990		REVISION LEVEL	SHEET 5

Device types	01,02,03,04	01	01,02,03,04	
Case outlines	G and P	н	2	-
Terminal number		Terminal sy	mbol	_
1	NC	NC	NC	_
2	V <sub>IN</sub>	VIN	NC	_
3	TEMP	TEMP	NC	-
4	GND	GND	NC	-
5	TRIM	TRIM	VIN	-
6	Vout	Vout	NC	_
7	NC	NC	TEMP	_
8	NC	NC	NC	-
9		NC	NC	_
10		NC	GND	_
11			NC	_
12			TRIM	_
13			NC	_
14			NC	_
15			Vout	
16			NC	_
17			NC	_
18			NC	_
19			NC	_
20			NC	_
NC = No connection	FIGURE 1. <u>Terr</u>	ninal connections.		_
STANDARD MICROCIRCUIT DRAWIN		SIZE A		85514
DEFENSE SUPPLY CENTER COLU COLUMBUS, OHIO 43218-399			REVISION LEVEL H	SHEET 6



3.9 <u>Verification and review for device class M</u>. 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 <u>Microcircuit group assignment for device class M</u>. Device class M devices covered by this drawing shall be in microcircuit group number 59 (see MIL-PRF-38535, appendix A).

### 4. VERIFICATION

4.1 <u>Sampling and inspection</u>. 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 <u>Screening</u>. 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 method 1015.
  - (2)  $T_A = +125^{\circ}C$ , minimum.
- b. Interim and final electrical test parameters shall be as specified in table IIA 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 method 1015 of MIL-STD-883.
- b. Interim and final electrical test parameters shall be as specified in table IIA 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.

4.3 <u>Qualification inspection for device classes Q and V</u>. 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 <u>Conformance inspection</u>. 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. 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 IIA herein.
- b. Subgroups 5, 6, 7, 9, 10, and 11 in table I, method 5005 of MIL-STD-883 shall be omitted.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		85514
DEFENSE SUPPLY CENTER COLUMBUS		REVISION LEVEL	SHEET
COLUMBUS, OHIO 43218-3990		<b>H</b>	8

Test requirements	Subgroups (in accordance with MIL-STD-883, method 5005, table I)	Subgr (in accord: MIL-PRF-385	ance with
	Device	Device	Device
	class M	class Q	class V
Interim electrical			
parameters (see 4.2)			
Final electrical	1,2,3,4 <u>1</u> /	1,2,3,4 <u>1</u> /	1,2,3,4 <u>1</u> / <u>2</u> /
parameters (see 4.2)			
Group A test	1,2,3,8	1,2,3,8	1,2,3,8
requirements (see 4.4)			
Group C end-point electrical	1,2,3	1,2,3	1,2,3 <u>2</u> /
parameters (see 4.4)			
Group D end-point electrical	1,2,3	1,2,3	1,2,3
parameters (see 4.4)			
Group E end-point electrical			1
parameters (see 4.4)			

### TABLE IIA. Electrical test requirements.

1/ PDA applies to subgroup 1.

2/ Delta limits as specified in table IIB shall be required where specified, and the delta limits shall be computed with reference to the previous interim electrical parameters.

TABLE IIB. 240 hour and 1000 hour life test deltas.
---

Test	Symbol	End point		Delta	Units
		Min	Max		
Output voltage	Vo	4.985	5.015	±3	mV

4.4.2 Group C inspection. The group C inspection end-point electrical parameters shall be as specified in table IIA 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 method 1005 of MIL-STD-883.
- b.  $T_A = +125^{\circ}C$ , minimum.
- c. Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

STANDARD MICROCIRCUIT DRAWING DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43218-3990	SIZE A		85514
		REVISION LEVEL H	SHEET 9

4.4.2.2 <u>Additional criteria for device classes Q and V</u>. 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 method 1005 of MIL-STD-883.

4.4.3 <u>Group D inspection</u>. The group D inspection end-point electrical parameters shall be as specified in table IIA herein.

4.4.4 <u>Group E inspection</u>. Group E inspection is required only for parts intended to be marked as radiation hardness assured (see 3.5 herein). RHA levels for device classes M, Q, and V shall be as specified in MIL-PRF-38535. End-point electrical parameters shall be as specified in table IIA herein.

4.4.4.1 <u>Total dose irradiation testing</u>. Total dose irradiation testing shall be performed in accordance with MIL-STD-883 method 1019, condition A and as specified herein.

4.4.4.1.1 <u>Accelerated aging test</u>. Accelerated aging tests shall be performed on all devices requiring a RHA level greater than 5k rads(Si). The post-anneal end-point electrical parameter limits shall be as specified in table I herein and shall be the preirradiation end-point electrical parameter limit at 25°C  $\pm$ 5°C. Testing shall be performed at initial qualification and after any design or process changes which may affect the RHA response of the device.

4.4.4.2 <u>Dose rate burnout</u>. When required by the customer test shall be performed on devices, SEC, or approved test structures at technology qualifications and after any design or process changes which may effect the RHA capability of the process. Dose rate burnout shall be performed in accordance with test method 1023 of MIL-STD-883 and as specified herein.

### 5. PACKAGING

5.1 <u>Packaging requirements</u>. 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 <u>Intended use</u>. Microcircuits conforming to this drawing are intended for use for Government microcircuit applications (original equipment), design applications, and logistics purposes.

6.1.1 <u>Replaceability</u>. Microcircuits covered by this drawing will replace the same generic device covered by a contractorprepared specification or drawing.

6.2 <u>Configuration control of SMD's</u>. All proposed changes to existing SMD's will be coordinated with the users of record for the individual documents. This coordination will be accomplished using DD Form 1692, Engineering Change Proposal.

6.3 <u>Record of users</u>. Military and industrial users should inform Defense Supply Center Columbus (DSCC) 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 <u>Comments</u>. Comments on this drawing should be directed to DSCC-VA, Columbus, Ohio 43218-3990, or telephone (614) 692-0547.

6.5 <u>Abbreviations, symbols, and definitions</u>. 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 <u>Sources of supply for device classes Q and V</u>. 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 <u>Approved sources of supply for device class M</u>. 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.

STANDARD MICROCIRCUIT DRAWING DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43218-3990	SIZE A		85514
		REVISION LEVEL <b>H</b>	SHEET 10

#### STANDARD MICROCIRCUIT DRAWING BULLETIN

## DATE: 05-12-07

Approved sources of supply for SMD 85514 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 and QML-38535 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 information bulletin is superseded by the next dated revision of MIL-HDBK-103 and QML-38535. DSCC maintains an online database of all current sources of supply at <a href="http://www.dscc.dla.mil/Programs/Smcr/">http://www.dscc.dla.mil/Programs/Smcr/</a>.

Standard microcircuit drawing PIN <u>1</u> /	Vendor CAGE number	Vendor similar PIN <u>2</u> /
8551401GA	24355	REF02AJ/883
	<u>3</u> /	REF-02AH/883
8551401GC	<u>3</u> /	REF02AJ/883B
8551401PA	24355	REF02AZ/883
	<u>3</u> /	REF-02AJ8/883
	<u>3</u> /	REF02AZ/883B
85514012A	24355	REF-02ARC/883
8551402GC	<u>3</u> /	REF02J/883B
8551402PA	<u>3</u> /	REF02Z/883B
85514022C	<u>3</u> /	REF02RC/883B
5962-8551401VGA	24355	REF02AJ/QMLV
5962-8551401VHA	24355	REF02AL/QMLV
5962-8551401VPA	24355	REF02AZ/QMLV
5962-8551401V2A	24355	REF02ARC/QMLV
5962R8551401VGA	24355	REF02AJ/QMLR
5962R8551401VHA	24355	REF02AL/QMLR
5962R8551401VPA	24355	REF02AZ/QMLR
5962R8551401V2A	24355	REF02ARC/QMLR
8551403GC	1ES66	REF02AJ/883B
8551403PA	1ES66	REF02AZ/883B

#### STANDARD MICROCIRCUIT DRAWING BULLETIN - Continued

Standard microcircuit drawing PIN <u>1</u> /	Vendor CAGE number	Vendor similar PIN <u>2</u> /
8551404GC	1ES66	REF02J/883B
8551404PA	1ES66	REF02Z/883B
85514042C	1ES66	REF02RC/883B

- 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/ <u>Caution</u>. 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 <u>number</u> Vendor name and address

24355

Analog Devices RT 1 Industrial Park P.O. Box 9106 Norwood, MA 02062 Point of contact: 1500 Space Park Drive P.O. Box 58020 Santa Clara, CA 95050-8020

1ES66

Maxim Integrated Products 120 San Gabriel Drive Sunnyvale, CA 94086-5125

The information contained herein is disseminated for convenience only and the Government assumes no liability whatsoever for any inaccuracies in the information bulletin.

2 of 2