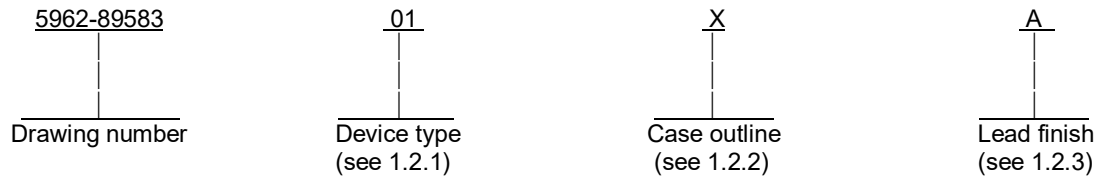


REVISIONS																				
LTR	DESCRIPTION										DATE (YR-MO-DA)				APPROVED					
A	Made technical changes to table I. Corrected figure 1 to change a 28-lead package to a 24-lead package. Editorial changes throughout.										91-05-07				W. Heckman					
B	Added case outline X. Editorial changes throughout.										93-07-30				K. Cottongim					
C	Table I; added footnote 2 for the I _{OS} , S _O , t _{PWH} , and t _{PWL} tests. Made correction to the clock input test in table I. Renumbered the footnotes in table I. Figure 1; Corrected the case outline Y side view. Updated drawing to reflect the latest requirements of MIL-PRF-38534. -sld										03-10-27				Raymond Monnin					
D	Figure 1; Case outline X, changed the dimension L min and max from .175 and .205 inches to .200 and .230 inches. Added dimensions A1 and b1 to the figure 1 for case outline X. Editorial changes throughout. -sld										07-08-29				Robert M. Heber					
E	Update drawing to the latest requirements of MIL-PRF-38534. -sld										15-02-12				Charles F. Saffle					
F	Update drawing to the latest requirements of MIL-PRF-38534. -gc										20-09-09				James R. Eschmeyer					
																				
REV																				
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REV STATUS					REV		F	F	F	F	F	F	F	F	F	F	F	F	F	
OF SHEETS					SHEET		1	2	3	4	5	6	7	8	9	10	11	12	13	14
PMIC N/A					PREPARED BY Steve Duncan					DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990 https://www.dla.mil/LandandMaritime										
STANDARD MICROCIRCUIT DRAWING THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A					CHECKED BY Robert M. Heber															
					APPROVED BY William K. Heckman															
					DRAWING APPROVAL DATE 89-11-21															
					REVISION LEVEL F					SIZE A	CAGE CODE 67268	5962-89583								
					SHEET 1 OF 14															

1. SCOPE

1.1 Scope. This drawing describes device requirements for class H hybrid microcircuits in accordance with MIL-PRF-38534.

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



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

Device type	Generic number	Circuit function
01	MN5200	A/D converter, 12-bit, 0 V to -10 V internal reference
02	MN5203	A/D converter, 12-bit, 0 V to -10 V external reference
03	MN5201	A/D converter, 12-bit, -5 V to +5 V internal reference
04	MN5204	A/D converter, 12-bit, -5 V to +5 V external reference
05	MN5202	A/D converter, 12-bit, -10 V to +10 V internal reference
06	MN5205	A/D converter, 12-bit, -10 V to +10 V external reference
07	MN5206	A/D converter, 12-bit, 0 V to +10 V internal reference

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

Outline letter	Descriptive designator	Terminals	Package style
X	See figure 1	24	Dual-in-line package
Y	See figure 1	24	Dual-in-line package

1.2.3 Lead finish. The lead finish is as specified in MIL-PRF-38534.

1.3 Absolute maximum ratings. 1/

Positive supply voltage (V_{CC})	+18 V dc
Negative supply voltage (V_{EE})	-18 V dc
Logic supply voltage (V_{LOG})	+7 V dc
Analog input voltage	± 25 V dc
Digital input voltage	+5.5 V dc
Digital output voltage	+ V_{LOG}
Reference input voltage (V_{REF})	0 to -15 V dc (Ext. ref. only)
Lead temperature (soldering, 60 seconds)	+300°C
Junction temperature (T_J)	+175°C
Thermal resistance:	
Junction-to-case (θ_{JC})	6°C/W
Junction-to-ambient (θ_{JA})	33°C/W

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

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1.4 Recommended operating conditions.

Positive supply voltage range (V_{CC}).....	+14.55 V dc to +15.45 V dc
Negative supply voltage range (V_{EE})	-14.55 V dc to -15.45 V dc
Logic supply voltage range (V_{LOG}).....	+4.5 V dc to +5.5 V dc
External reference (V_{REF}):	
Device types 02, 04, and 06.....	-10.0 V dc
Ambient operating temperature range (T_A)	-55°C to +125°C

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 cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-38534 - Hybrid Microcircuits, General Specification for.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883 - Test Method Standard Microcircuits.

MIL-STD-1835 - Interface Standard for Electronic Component Case Outlines.

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 <https://quicksearch.dla.mil>)

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.

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3. REQUIREMENTS

3.1 Item requirements. The individual item performance requirements shall be in accordance with MIL-PRF-38534 and as specified herein.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38534 and herein.

3.2.1 Case outline(s). The case outline(s) shall be in accordance with 1.2.2 herein and figure 1.

3.2.2 Terminal connections. The terminal connections shall be as specified on figure 2.

3.2.3 Logic diagram(s). The logic diagram(s) shall be as specified on figure 3.

3.2.4 Timing diagram. The timing table shall be as specified on figure 4.

3.2.5 Digital output codes. The digital output codes shall be as specified on figure 5.

3.3 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in table I and shall apply over the full specified 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 of device(s). Marking of device(s) shall be in accordance with MIL-PRF-38534. The device shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's vendor similar PIN may also be marked.

3.6 Data. In addition to the general performance requirements of MIL-PRF-38534, the manufacturer of the device described herein shall maintain the electrical test data (variables format) from the initial quality conformance inspection group A lot sample, for each device type listed herein. Also, the data should include a summary of all parameters manually tested, and for those which, if any, are guaranteed. This data shall be maintained under document revision level control by the manufacturer and be made available to the preparing activity (DLA Land and Maritime -VA) upon request.

3.7 Certificate of compliance. A certificate of compliance shall be required from a manufacturer in order to supply to this drawing. The certificate of compliance (original copy) submitted to DLA Land and Maritime -VA shall affirm that the manufacturer's product meets the performance requirements of MIL-PRF-38534 and herein.

3.8 Certificate of conformance. A certificate of conformance as required in MIL-PRF-38534 shall be provided with each lot of microcircuits delivered to this drawing.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-38534 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.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions <u>1/</u> -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Power supply current from V _{CC}	I _{CC}	V _{CC} = 15.45 V, V _{IN} (analog) = max positive input voltage +0.5 V, output code = 0000 0000 0000	1,2,3	All	3	28	mA
		V _{CC} = 15.45 V, V _{IN} (analog) = max negative input voltage -0.5 V, output code = 1111 1111 1111			3	28	
Power supply current from V _{EE}	I _{EE}	V _{EE} = -15.45 V, V _{IN} (analog) = max positive input voltage +0.5 V, output code = 0000 0000 0000	1,2,3	01,03, 05,07	-1	-25	mA
		V _{EE} = -15.45 V, V _{IN} (analog) = max negative input voltage -0.5 V, output code = 1111 1111 1111		02,04, 06	-1	-25	
Power supply current from V _{LOG}	I _{LOG}	V _{LOG} = 5.5 V, V _{IN} (analog) = max positive input voltage +0.5 V, output code = 0000 0000 0000	1,2,3	All	1	42	mA
		V _{LOG} = 5.5 V, V _{IN} (analog) = max negative input voltage -0.5 V, output code = 1111 1111 1111			1	42	
Reference input	I _{REF}	V _{REF} = -10 V, V _{IN} (analog) = max positive input voltage +0.5 V	1,2,3	02,04, 06	-0.1	-2	mA
		V _{REF} = -10 V, V _{IN} (analog) = max negative input voltage -0.5 V			-0.1	-2	
Power dissipation	P _D		1,2,3	All		915	mW
Input low current	I _{IL}	V _{IN} (Logic) = 0.3 V	1,2,3	All	-0.05	-0.4	mA
Input high current	I _{IH}	V _{IN} (Logic) = 2.4 V	1,2,3	All	0	40	μA
		V _{IN} (Logic) = 5.5 V			0	1	mA
Output short circuit <u>2/</u>	I _{OS}	V _{IN} (Logic) = max negative input voltage -0.5 V, output code = 1111 1111 1111, (test one output at a time)	1,2,3	All	-4	-35	mA
Output logic voltage levels	V _{OH}	I _L = -80 μA	1,2,3	All	2.4		V
	V _{OL}	I _L = 3.2 mA				0.3	
Serial/parallel <u>2/</u>	S _O	Set V _{IN} for output code = 1000 0000 0000, serial output code exactly equals parallel output code	4,5,6	All	PASS/FAIL		

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions <u>1/</u> -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Bit transition linearity error (end-point) <u>3/</u>	T _{LE}	ΔV _{CC} (max) = ΔV _{EE} (max) = ±0.015, abbreviated test	4,5,6	All	-0.50	+0.50	LSB
Major carry errors	M _{CE}	ΔV _{CC} (max) = ΔV _{EE} (max) = ±0.015, 800-7FF (HEX) to 002-001 (HEX)	4,5,6	All	-0.9	+1.5	LSB
		7FF-&FE (HEX) to 001-000 (HEX)			-0.9	+1.5	
Power supply sensitivity to V _{CC}	+P _{SS1}	V _{CC} = +14.55 V, +15.45 V, output transition = 0000 0000 000* <u>4/</u>	4,5,6	All	-0.02	+0.02	%FSR/% V _s
Power supply sensitivity to V _{EE}	-P _{SS1}	V _{EE} = -14.55 V, -15.45 V, output transition = 0000 0000 000* <u>4/</u>	4,5,6	All	-0.05	+0.05	%FSR/% V _s
Power supply sensitivity to V _{LOG}	+P _{SS2}	V _{LOG} = +4.5 V, +5.5 V, output transition = 0000 0000 000* <u>4/</u>	4,5,6	All	-1	+1	%FSR/% V _s
Bit transition linearity error (end-point)	T _{LE}	ΔV _{CC} (max) = ΔV _{EE} (max) = ±0.015, all codes test	4,5,6	All	-0.75	+0.75	LSB
Conversion time	t _C	<u>5/</u>	9,10,11	All		50	μs
Clock input <u>2/</u>	t _{PWH}	Logic 1 = 2.4 V	9,10,11	All	175		ns
	t _{PWL}	Logic 0 = 0.3 V			125		

1/ Unless otherwise specified V_{CC} = +15 V dc ±5 percent, V_{EE} = -15 V dc ±5 percent, and V_{LOG} = +5 V dc ±10 percent.

2/ Guaranteed by design, but not tested.

3/ The abbreviated bit transition linearity error test shown for subgroups 4, 5, and 6 shall represent the minimum number of tests required. The manufacturer shall add additional tests and/or calculations to assure that the worst positive and negative error values, as determined by the abbreviated test, are within 150 milli LSB, of the worst positive and negative values, as determined by the all codes test for subgroups 7 and 8.

4/ * represents the transition point between two adjacent code-words (i.e.: 0000 0000 0000 and 0000 0000 0001 or 0111 1111 1111 and 1000 0000 0000).

5/ The listed conversion time is for test purposes and is based on a maximum clock frequency of 923 kHz.

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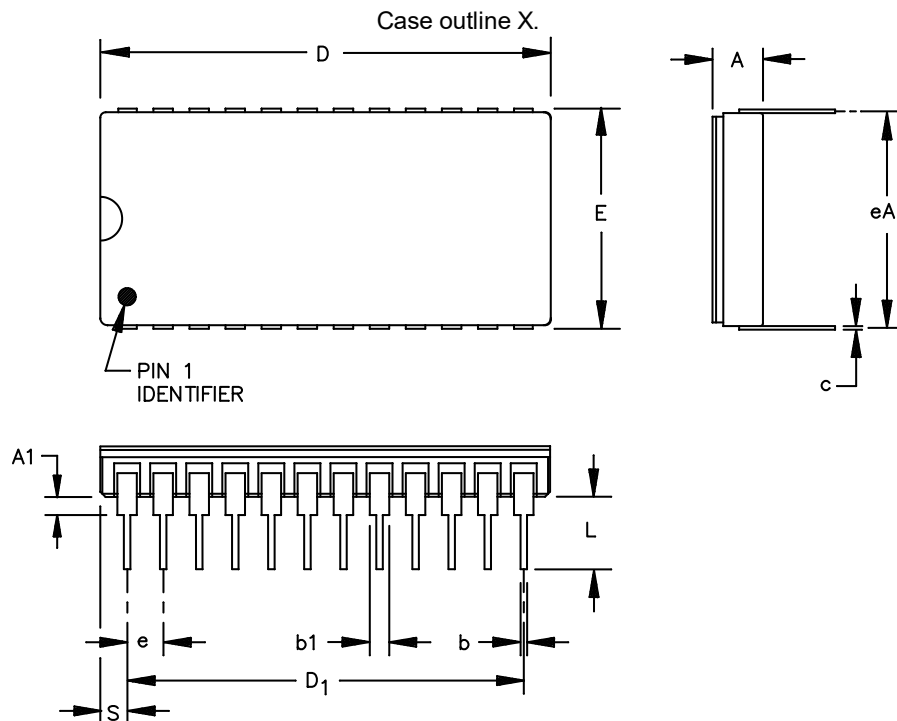
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Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A		4.65		.183
A1	1.22	1.73	.048	.068
b	0.381	0.483	.015	.019
b1	1.22	1.32	.048	.052
c	0.203	0.305	.008	.012
D	31.24	32.26	1.230	1.270
D1	27.81	28.07	1.095	1.105
E		15.75		.620
e	2.54 BSC		.100 BSC	
eA	15.11	15.37	.595	.605
L	5.08	5.84	.200	.230
S	1.65	2.03	.065	.080

NOTES:

1. The U. S. Government preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall take precedence.

FIGURE 1. Case outline(s).

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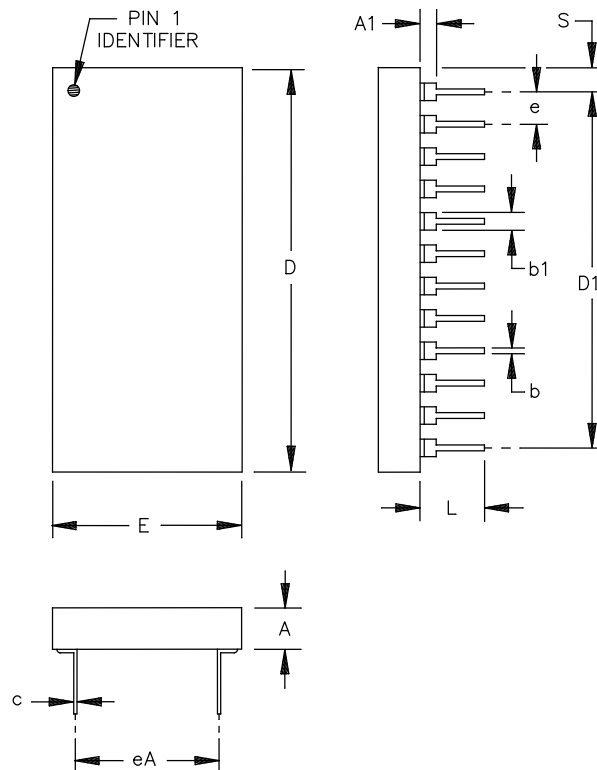
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Case outline Y.



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	3.05	4.32	.120	.170
A1	0.38	0.89	.015	.035
b	0.41	0.51	.016	.020
b1	0.89		.035	
c	0.23	0.30	.009	.012
D	32.38	33.40	1.275	1.315
D1	27.81	28.07	1.095	1.105
E	19.56	20.57	.770	.810
e	2.54 BSC		.100 BSC	
eA	15.11	15.37	.595	.605
L	5.08	5.84	.200	.230
S	2.20	2.92	.087	.115

NOTES:

1. The U. S. Government preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall take precedence.

FIGURE 1. Case outline - Continued.

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Device types	All
Case outlines	X and Y
Terminal number	Terminal symbol
1	Start convert
2	V _{LOG}
3	Serial output
4	Bit 6
5	Bit 5
6	Bit 4
7	Bit 3
8	Bit 2
9	Bit 1 (MSB)
10	No connection
11	Ground (see note 1)
12	V _{REF} (see note 2)
13	V _{EE}
14	Analog input
15	V _{CC}
16	Bit 12 (LSB)
17	Bit 11
18	Bit 10
19	Bit 9
20	Bit 8
21	Bit 7
22	Status (E.O.C)
23	Ground (see note 1)
24	Clock input

NOTES:

1. The units two ground pins (pins 11 and 23) must be connected together as close to the package as possible, and preferably should be connected to a large analog ground plane underneath the package. If these commons must be run separately, a non-polarized 0.01 μ F bypass capacitor should be connected between pins 11 and 23 as close to the unit as possible and wide conductor runs should be employed.
2. For device types 02, 04, 06, a -10 V external reference is applied to pin 12. No other connection shall be made to pin 12. For device types 01, 03, 05, and 07 terminal is reference output of -6.3 V.

FIGURE 2. Terminal connections.

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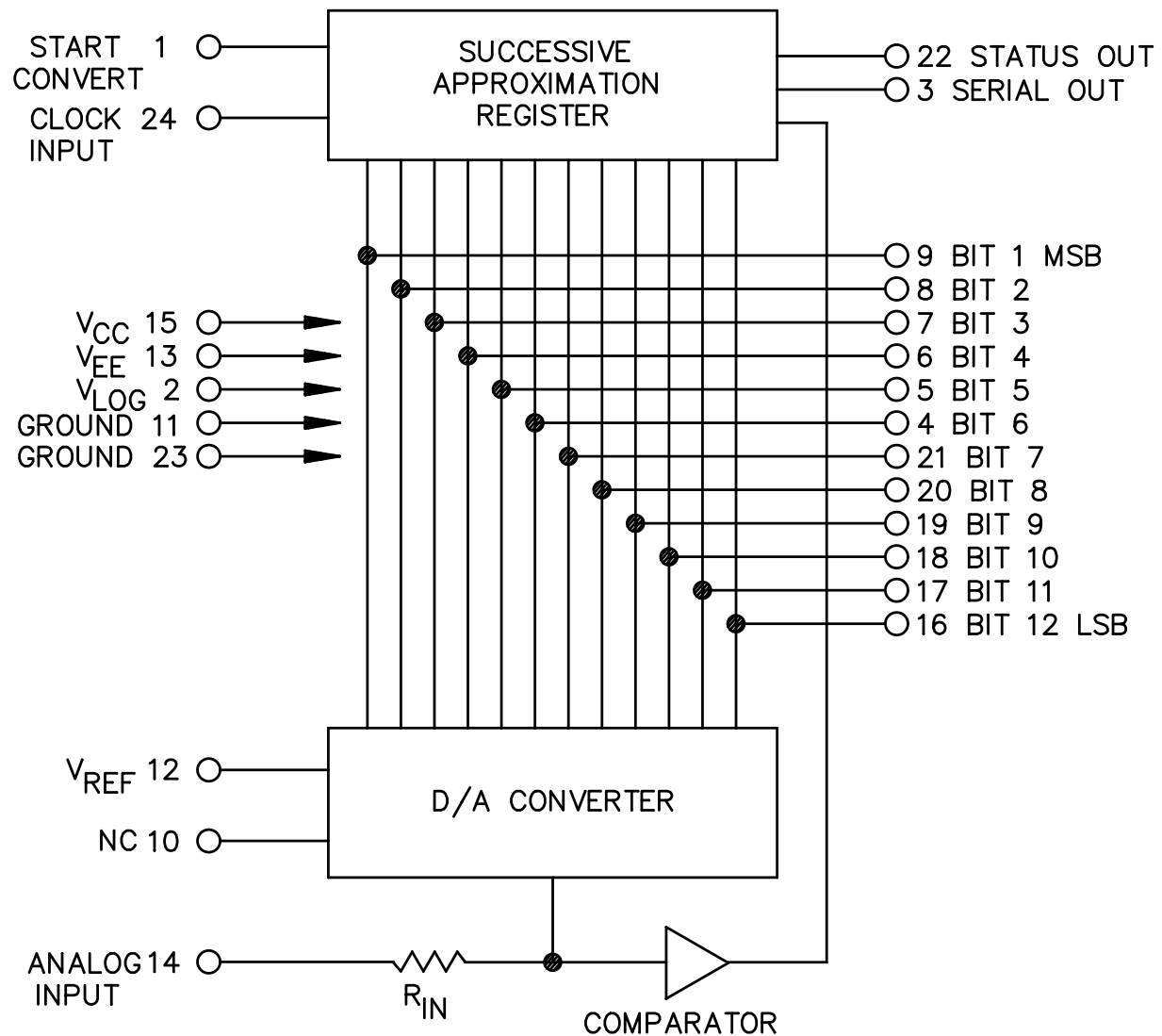


FIGURE 3. Logic diagram.

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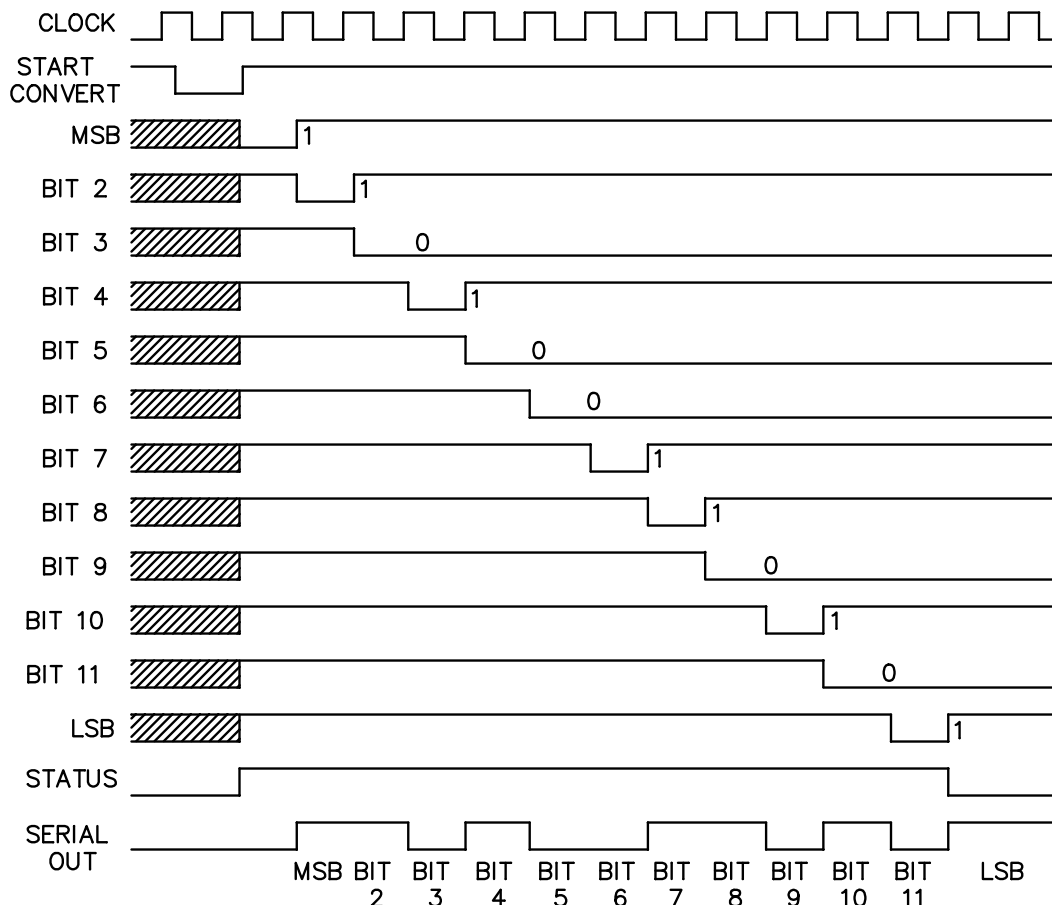
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NOTES:

1. Operation shown is for the digital word 1101 0011 0101 which corresponds to 1.7432 V on the 0 to +10 V input range, Device type 07.
2. Conversion time is defined as the width of the status (E.O.C.) pulse.
3. The converter is reset (MSB = "0", all other bits = "1") by holding the start convert low during a low to high clock transition. The start convert must be low for a minimum of 25 ns prior to the clock transition. Holding the start low will hold the converter in the reset state. Actual conversion will begin on the next rising clock edge after the start has returned high.
4. The delay between the resetting clock edge and status actually rising to a "1" is 160 ns maximum.
5. The start convert may be brought low at any time during a conversion to reset and begin converting again.
6. Both serial and parallel data bits become valid on the same rising clock edges. Serial data is valid on subsequent falling clock edges, and these edges can be used to clock serial data into receiving registers.
7. Output data will be valid 30 ns (maximum) after the status (E.O.C.) output has returned low. Parallel output data will remain valid and the status output low until another conversion is initiated.
8. For continuous conversion, connect the status output (pin 22) to the start convert input (pin 1).
9. When the converter is initially "powered up" it may come on at any point in the conversion cycle.

FIGURE 4. Timing diagram.

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Analog input				Digital output
Device types 01 and 02	Device types 03 and 04	Device types 05 and 06	Device type 07	(MSB) (LSB)
0.0000 V	+5.0000 V	+10.0000 V	+10.0000 V	0000 0000 0000
0.0024 V	+4.9976 V	+9.9951 V	+9.9976 V	0000 0000 000* See Note
-4.9976 V	+0.0024 V	+0.0049 V	+5.0024 V	0111 1111 111* See Note
-5.0000 V	0.0000 V	0.0000 V	+5.0000 V	**** * See Note
-5.0024 V	-0.0024 V	-0.0049 V	+4.9976 V	1000 0000 000* See Note
-9.9976 V	-4.9976 V	-9.9951 V	+0.0024 V	1111 1111 111* See Note
-10.0000 V	-5.0000 V	-10.0000 V	0.0000 V	1111 1111 1111

NOTE: Voltages given are the theoretical values for the transitions indicated. Ideally with the converter continuously converting, the output bits indicated as * will change "1" to "0" or "0" to "1" as the input voltage passes through the level indicated.

FIGURE 5. Digital output codes.

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TABLE II. Electrical test requirements.

MIL-PRF-38534 test requirements	Subgroups (in accordance with MIL-PRF-38534, group A test table)
Interim electrical parameters	1,4
Final electrical parameters	1*,2,3,4,5,6,7,8,9,10,11
Group A test requirements	1,2,3,4,5,6,7,8,9,10,11
Group C end-point electrical parameters	1,2,3
End-point electrical parameters for Radiation Hardness Assurance (RHA) devices	Not applicable

* PDA applies to subgroup 1.

4.2 Screening. Screening shall be in accordance with MIL-PRF-38534. The following additional criteria shall apply:

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

- (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime -VA or the acquiring activity upon request. Also, 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.
- (2) T_A as specified in accordance with table I of method 1015 of MIL-STD-883.

b. Interim and final electrical test parameters shall be as specified in table II herein, except interim electrical parameter tests prior to burn-in are optional at the discretion of the manufacturer.

4.3 Conformance and periodic inspections. Conformance inspection (CI) and periodic inspection (PI) shall be in accordance with MIL-PRF-38534 and as specified herein.

4.3.1 Group A inspection (CI). Group A inspection shall be in accordance with MIL-PRF-38534 and as follows:

a. Tests shall be as specified in table II herein.

4.3.2 Group B inspection (PI). Group B inspection shall be in accordance with MIL-PRF-38534.

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4.3.3 Group C inspection (PI). Group C inspection shall be in accordance with MIL-PRF-38534 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Steady-state life test, method 1005 of MIL-STD-883.
 - (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime -VA or the acquiring activity upon request. Also, 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.
 - (2) T_A as specified in accordance with table I of method 1005 of MIL-STD-883.
 - (3) Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

4.3.4 Group D inspection (PI). Group D inspection shall be in accordance with MIL-PRF-38534.

4.3.5 Radiation Hardness Assurance (RHA) inspection. RHA inspection is not currently applicable to this drawing.

5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38534.

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.

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

6.3 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated as specified in MIL-PRF-38534.

6.4 Record of users. Military and industrial users should inform DLA Land and Maritime when a system application requires configuration control and the applicable SMD to that system. DLA Land and Maritime 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 DLA Land and Maritime-VA, telephone (614) 692-8108.

6.5 Comments. Comments on this drawing should be directed to DLA Land and Maritime-VA, Columbus, Ohio 43218-3990, or telephone (614) 692-1081.

6.6 Sources of supply. Sources of supply are listed in MIL-HDBK-103 and QML-38534. The vendors, listed in MIL-HDBK-103 and QML-38534, have submitted a certificate of compliance (see 3.7 herein) to DLA Land and Maritime-VA and have agreed to this drawing.

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STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 20-09-09

Approved sources of supply for SMD 5962-89583 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38534 during the next revisions. MIL-HDBK-103 and QML-38534 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 DLA Land and Maritime -VA. This information bulletin is superseded by the next dated revisions of MIL-HDBK-103 and QML-38534. DLA Land and Maritime maintains an online database of all current sources of supply <https://landandmaritimeapps.dla.mil/programs/Smcr/>.

Standard microcircuit drawing PIN <u>1</u> /	Vendor CAGE number	Vendor similar PIN <u>2</u> /
5962-8958301XA 5962-8958301YA	<u>3</u> / <u>3</u> /	MN5200H/B MN5200H/B
5962-8958302XA 5962-8958302YA	<u>3</u> / <u>3</u> /	MN5203H/B MN5203H/B
5962-8958303XA 5962-8958303XC 5962-8958303YA 5962-8958303YC	50507 50507 50507 50507	MN5201MXA MN5201MXC MN5201MYA MN5201MYC
5962-8958304XA 5962-8958304XC 5962-8958304YA 5962-8958304YC	50507 50507 50507 50507	MN5204MXA MN5204MXC MN5204MYA MN5204MYC
5962-8958305XA 5962-8958305XC 5962-8958305YA 5962-8958305YC	50507 50507 50507 50507	MN5202MXA MN5202MXC MN5202MYA MN5202MYC
5962-8958306XA 5962-8958306XC 5962-8958306YA 5962-8958306YC	50507 50507 50507 50507	MN5205MXA MN5205MXC MN5205MYA MN5205MYC
5962-8958307XA 5962-8958307XC 5962-8958307YA 5962-8958307YC	50507 50507 50507 50507	MN5206MXA MN5206MXC MN5206MYA MN5206MYC

- 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

50507

Vendor name
and address

Spectrum Microwave, Incorporated
Micro Networks
API Technologies – Spectrum Microwave
400 Nickerson Road
Marlborough , MA 01752-4658

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