

REVISIONS

LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	Changes in accordance with NOR 5962-R011-92.	91-10-24	G. A. Lude
B	Add device types 03, 04, and 05. Add vendor CAGE 09059. Rewrite entire document.	94-09-28	K. A. Cottongim
C	Change device type 05 to a synchro-resolver to digital converter. Make changes to table 1, figures 1 and 2.	95-06-09	K. A. Cottongim

THE ORIGINAL FIRST PAGE OF THIS DRAWING HAS BEEN REPLACED.

REV																				
SHEET																				
REV	C																			
SHEET	15																			

REV STATUS OF SHEETS	REV	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

PMIC N/A	PREPARED BY Donald R. Osborne	DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		
STANDARD MICROCIRCUIT DRAWING THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A	CHECKED BY Steve Duncan	MICROCIRCUIT, LINEAR, 11.8 VOLTS, SYNCHRO-RESOLVER TO DIGITAL CONVERTER, HYBRID		
	APPROVED BY William K. Heckman			
	DRAWING APPROVAL DATE 91-08-15	SIZE A	CAGE CODE 67268	5962-90820
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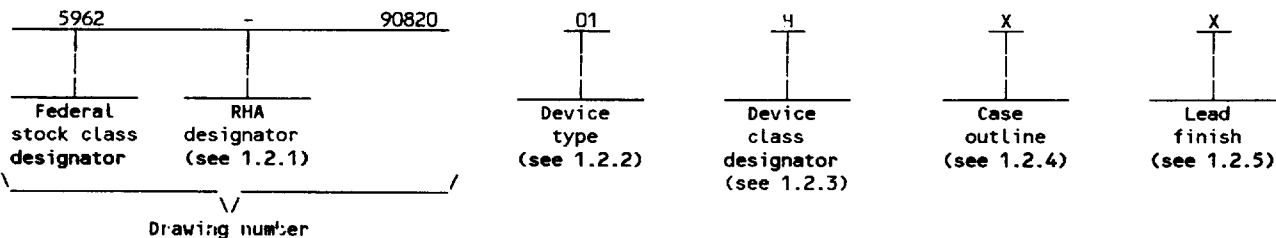
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1. SCOPE

1.1 Scope. This drawing forms a part of a one part - one part number documentation system (see 6.6 herein). This drawing describes device requirements for hybrid microcircuits to be processed in accordance with MIL-H-38534. Two product assurance classes, military high reliability (device class H) and space application (device class K) and 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 levels are reflected in the PIN.

1.2 PIN. The PIN shall be as shown in the following example:



1.2.1 Radiation hardness assurance (RHA) designator. Device classes H and K RHA marked devices shall meet the MIL-H-38534 specified RHA levels and shall be marked with the appropriate RHA designator. A dash (-) indicates a non-RHA device.

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

Device type	Generic number	Circuit function	Accuracy
01	SDC14531-690	11.8 V, 400 Hz, S-R/D converter	±1.3 arc minutes (resolver) ±2.6 arc minutes (synchro)
02	SDC14531-631	11.8 V, 400 Hz, R/D converter	±1.3 arc minutes (resolver)
03	HSRD1006-C148/2	11.8 V, 400 Hz, S-R/D converter	±1.3 arc minutes (resolver) ±2.6 arc minutes (synchro)
04	HRD1006-C148A/2	11.8 V, 400 Hz, R/D converter	±1.3 arc minutes (resolver)
05	HSRD1056-C775B/2	11.8 V, 400 Hz, R/D converter	±1.3 arc minutes (resolver) ±2.6 arc minutes (synchro)

1.2.3 Device class designator. This device class designator shall be a single letter identifying the product assurance level as follows:

Device class	Device requirements documentation
H or K	Certification and qualification to MIL-H-38534

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

Outline letter	Descriptive designator	Terminals	Package style
X	See figure 1	36	Dual-in-line

1.2.5 Lead finish. The lead finish shall be as specified in MIL-H-38534 for classes H and K. Finish letter "X" shall not be marked on the microcircuit or its packaging. The "X" designation is for use in specifications when lead finishes A, B, and C are considered acceptable and interchangeable without preference.

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1.3 Absolute maximum ratings. 1/

Supply voltage (V_S)	+7.0 V dc
Reference input	150 V rms
Digital inputs	-0.3 V dc to +7.0 V dc
Power dissipation (P_D): 2/	
Device types 01 and 02	210 mW
Device types 03 and 04	166 mW
Device type 05	110 mW
Storage temperature range	-65°C to +150°C
Lead temperature (soldering, 10 seconds)	+300°C
Thermal resistance, junction-to-case (θ_{JC})	8.0°C/W
Thermal resistance, junction-to-ambient (θ_{JA})	20°C/W
Junction temperature (T_J)	+150°C

1.4 Recommended operating conditions.

Supply voltage (V_S)	+4.5 V dc to +5.5 V dc
Ambient operating temperature range (T_A)	-55°C to +125°C

2. APPLICABLE DOCUMENTS

2.1 Government specification, standards, and handbook. Unless otherwise specified, the following specification, standards, and handbook of the issue listed in that issue of the Department of Defense Index of Specifications and Standards specified in the solicitation, form a part of this drawing to the extent specified herein.

SPECIFICATION

MILITARY

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

STANDARDS

MILITARY

- MIL-STD-883 - Test Methods and Procedures for Microelectronics.
- MIL-STD-973 - Configuration Management.
- MIL-STD-1835 - Microcircuit Case Outlines.

HANDBOOK

MILITARY

MIL-HDBK-780 - Standardized Military Drawings.

(Copies of the specification, standards, and handbook required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

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 shall take precedence.

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/ Power dissipation applies up to $T_C = +125^\circ\text{C}$.

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3. REQUIREMENTS

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

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

3.2.1 Case outline(s). The case outline(s) shall be in accordance with 1.2.4 herein and figure 1.

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

3.2.3 Output accuracy test angles. The output accuracy test angles shall be as specified on figure 3.

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 described in table I.

3.5 Marking. Marking shall be in accordance with MIL-H-38534. 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 QML-38534.

3.6 Manufacturer eligibility. In addition to the general requirements of MIL-H-38534, the manufacturer of the part described herein shall maintain the electrical test data (variables format) from the initial quality conformance inspection group A lot sample, produced on the certified line, for each device type listed herein. The data should also 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 (DESC-EC) 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 submitted to DESC-EC shall affirm that the manufacturer's product meets the requirements of MIL-H-38534 and the requirements herein.

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

4. QUALITY ASSURANCE PROVISIONS

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

4.2 Screening. Screening shall be in accordance with MIL-H-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 DESC-EC 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.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions ^{1/} -55°C ≤ T _A ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Resolution control	RC	14B = logic "1"	7,8	All	14	14	Bits
		14B = logic "0"			16	16	
Accuracy repeatability ^{2/}	AR		7,8	01,02	-1.0	+1.0	LSB
Output accuracy ^{3/}	AOUT	16-bit resolution ^{4/} (resolver mode)	7,8	All		±1.3	ARC-MIN
		16-bit resolution ^{4/} (synchro mode)				±2.6	
		14-bit resolution ^{5/}				±2.6	
Reference synthesizer ^{2/}	RS	Reference phase shift between the converter signal and reference inputs	4,5,6	All	-45	+45	degree
Reference input							
Input voltage range ^{2/}	V _{IN}		4,5,6	01,02	4	130	V rms
				03,04, 05	20	130	
Carrier frequency ^{2/}			4,5,6	All	360	1000	Hertz
Input impedance ^{2/}	Z _{IN1}	Single ended	4,5,6	01,02, 05	250		kΩ
				03, 04	200		
		Differential		01,20, 05	500		
				03,04	400		
Common mode range ^{2/}	CMR ₁		4,5,6	All	-250	+250	V (pk)

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C ≤ T _A ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Signal input							
Input impedance <u>2/</u>	Z _{IN2}	Line to line	4,5,6	ALL	60		kΩ
		Line to ground			30		
Common mode range <u>2/</u>	CMR ₂		4,5,6	01,02	-30	+30	V (pk)
				03,04 05	-25	+25	
Line to line input <u>2/</u> voltage	V _{INL-L}		4,5,6	01,02, 03,04	10.62	12.98	V rms
				05	8.26	15.34	
Digital outputs (Bits 1-16, CB and BIT)							
Drive capability	V _{OL}	Logic 0 at -1.6 mA	4,5,6	ALL		0.4	V dc
	V _{OH}	Logic 1 at 40 μA		01,02,	2.8		
		Logic 1 at 1.6 mA		03,04	2.4		
	I _Z	High impedance load		05	2.8		μA
		01,02	-1.0	+10			
			03,04, 05	-10	+10		
Converter busy	CB	Positive pulse	9,10,11	01,02	0.8	3.0	μs
				03,04	0.5	3.0	
				05	1.1	4.0	
BIT <u>2/</u>	BIT	Logic 1 indicates fault, minimum error for BIT condition	7,8	ALL	0.5	2.0	degree

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C ≤ T _A ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Analog output							
AC error ^{2/}	e	14 bit mode	4,5,6	01,02	3.15	3.85	mV rms /LSB
		16 bit mode			1.55	1.93	
		14 or 16 bit mode	4,5,6	03,04, 05	2.66	4.94	
DC velocity voltage	VEL	At 2.5 rps in 16-bit resolution, positive rotation	7,8	ALL		-1.32	V dc
Velocity return voltage	V	V _L = 5.0 V	7,8	01,02	3.44	5.16	V dc
				03,04, 05	1.7	2.6	
Dynamic performance							
Tracking rate	TR	16 bit mode	7,8	03,04, 05	900		deg/sec
Acceleration	ACC	16 bit mode, T _A = +25°C	7	03,04, 05	120		deg/sec
Setting time		179° step - 16 bit mode	7,8	03,04, 05		300	m sec
		0.25° step - 16 bit mode				50	
Phase response		16 bit mode, 20 Hz modulation, .044° p-p amplitude, T _A = +25°C	7	04,05		45	Degrees
Gain response		16 bit mode, -3 dB bandwidth, .044° p-p amplitude, T _A = +25°C	7	04,05	40		Hz

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C ≤ T _A ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	

Dynamic performance - Continued.

Phase response		14 bit mode, 40 Hz modulation, 1.0° p-p amplitude, T _A = +25°C	7	03,04,05		25	Degrees
Gain response		14 bit mode, -3 dB bandwidth, 1.0° p-p amplitude, T _A = +25°C	7	03,04,05	150		Hz

Digital inputs ($\overline{\text{INH}}$, $\overline{\text{LBE}}$, $\overline{\text{HBE}}$ and 14B)

Voltage inputs	V _{IL}	Logic 0, V _S = 5.0 V	1,2,3	01,02,05		0.8	V dc
				03,04		1.0	
Voltage inputs	V _{IH}	Logic 1, V _S = 5.0 V	1,2,3	01,02	2.0		V dc
				03,04	2.85		
				05	2.4		
Input current, $\overline{\text{INH}}$, 14B	I _{IL}	Internal pull up	4,5,6	01,02		-10	μA
				03,04		-50	
				05		-30	
Input current, $\overline{\text{LBE}}$, $\overline{\text{HBE}}$	I _{IH}	Internal pull down	4,5,6	01,02		25	μA
				03,04		50	
				05		30	
Inhibit	$\overline{\text{INH}}$	Logic 0 inhibits converter	7,8 <u>6/</u>	ALL			

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C ≤ T _A ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Digital inputs ($\overline{\text{INH}}$, $\overline{\text{LBE}}$, $\overline{\text{HBE}}$ and 14B) - Continued.							
Enables bit 1 to 8	$\overline{\text{HBE}}$	Logic 0 enables $\overline{\text{HBE}}$	7,8 <u>7/</u>	ALL			
Enables bit 9 to 16	$\overline{\text{LBE}}$	Logic 0 enables $\overline{\text{LBE}}$	7,8 <u>7/</u>	ALL			
Power supply							
Current	I _S		4,5,6	ALL		30	mA

1/ V_S = 4.5 V dc to 5.5 V dc.

2/ Parameters guaranteed by design. Parameters shall be guaranteed to limits specified in table 1 for all lots not specifically tested.

3/ Accuracy applies on resolver mode. Device types 01, 03, and 05 are ±2.6 arc minutes in synchro mode. Accuracy applies at 400 Hz ±10%.

4/ Output accuracy for 16-bit resolution, for device types 01, 03, and 05 may be measured at angles for 0° to 180°, in 15° increments, and at 225°, 270°, and 315° or at the angles on figure 3. For device type 02, 04, and 05 output accuracy for resolver only is measured at angles as specified on figure 3.

5/ Output accuracy, for 14-bit resolution for all device types are performed on a go/no-go basis at 0° and 45°.

6/ Test should verify no digital angles change while $\overline{\text{INH}}$ is logic 0 and analog input is rotating.

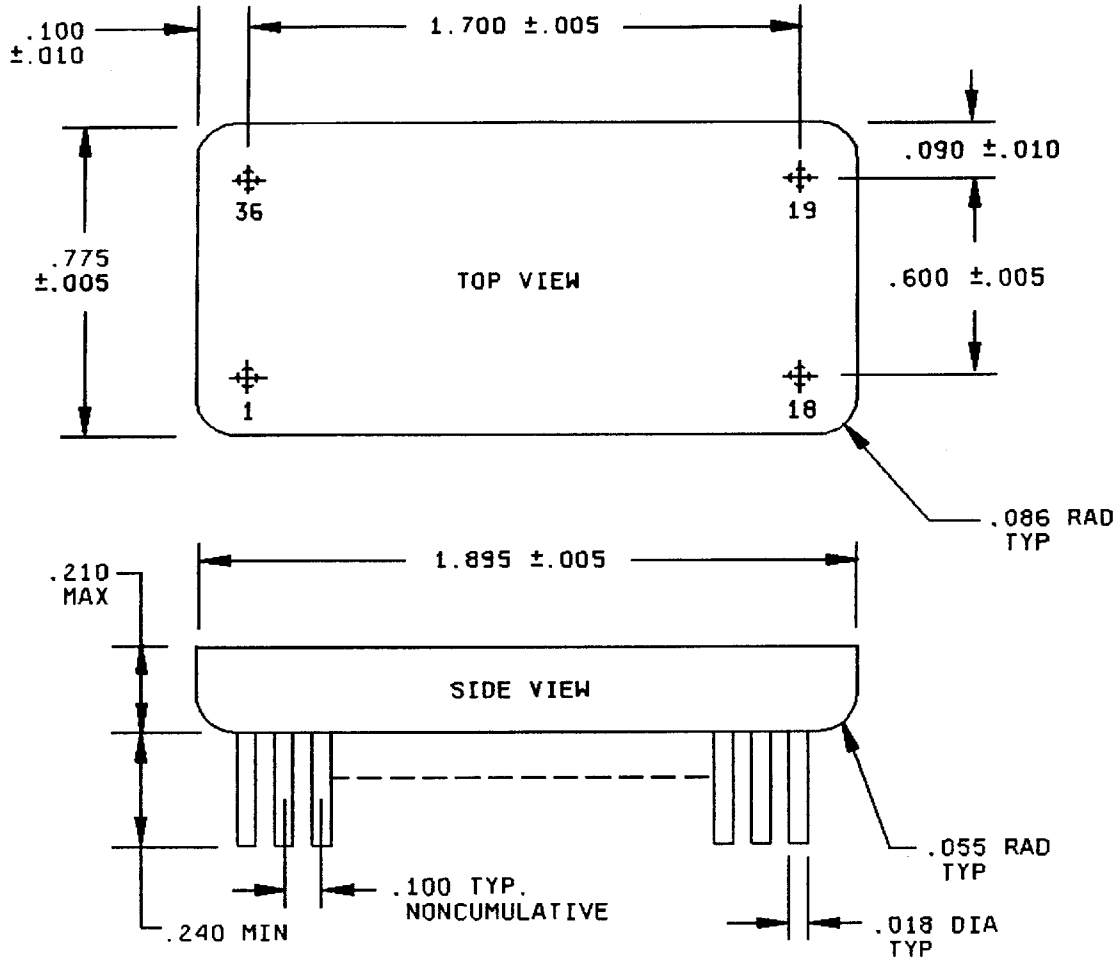
7/ Test should verify logic 0 enables, logic 1 high impedance.

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Case outline X



Inches	mm	Inches	mm
.005	0.13	.100	2.54
.010	0.25	.210	5.33
.018	0.46	.240	6.10
.055	1.40	.600	15.24
.086	2.18	.775	19.69
.090	2.29	1.700	43.18
		1.895	48.13

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Lead spacing dimensions apply only at seating plane.
4. Pin 1 designator may be either the ESDS triangle or a solid dot.

FIGURE 1. Case outline.

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Device types	All	Device types	All
Case outline	X	Case outline	X
Terminal number	Function	Terminal number	Function
1	S1	19	B16 (LSB)
2	S2	20	B15
3	S3	21	B14
4	S4	22	B13
5*	S	23	B12
6*	SR	24	B11
7*	R	25	B10
8	RL	26	B9
9	RH	27	B8
10	VEL	28	B7
11	V	29	B6
12	e	30	B5
13	$\overline{\text{INH}}$	31	B4
14	CB	32	B3
15	BIT	33	B2
16	14B	34	B1 (MSB)
17	$\overline{\text{LBE}}$	35	$\overline{\text{HBE}}$
18	GND	36	VS (+5 v)

* For device types 02 and 04 terminal number 5, 6, and 7 are no connections.

FIGURE 2. Terminal connections.

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TEST ANGLE (DEGREES)	DIGITAL OUTPUT WORD		
	DECIMAL CONVERSION	MSB (1)	LSB (16)
0.00	0	L L L L L L L L L L L L L L L L	
0.01	2	L L L L L L L L L L L L L L H L	
0.02	4	L L L L L L L L L L L L L L H L	
0.04	8	L L L L L L L L L L L L L L H L	
0.09	16	L L L L L L L L L L L L L L H L	
0.18	32	L L L L L L L L L L L L L L H L	
0.35	64	L L L L L L L L L L L L L L H L	
0.70	128	L L L L L L L L L L L L L L H L	
1.41	256	L L L L L L L L L L L L L L H L	
2.81	512	L L L L L L L L L L L L L L H L	
5.63	1024	L L L L L L L L L L L L L L H L	
11.25	2048	L L L L L L L L L L L L L L H L	
22.50	4096	L L L L L L L L L L L L L L H L	
45.00	8192	L L L L L L L L L L L L L L H L	
90.00	16384	L L L L L L L L L L L L L L H L	
180.00	32768	H L L L L L L L L L L L L L L L	
270.00 (-90.00)	-16384	H H L L L L L L L L L L L L L L	
315.00 (-45.00)	-8192	H H H L L L L L L L L L L L L L	
337.50 (-22.50)	-4096	H H H H L L L L L L L L L L L L	
348.75 (-11.25)	-2048	H H H H H L L L L L L L L L L L	
354.37 (-5.63)	-1024	H H H H H H L L L L L L L L L L	
357.19 (-2.81)	-512	H H H H H H H L L L L L L L L L	
358.59 (-1.41)	-256	H H H H H H H H L L L L L L L L	
359.30 (-0.70)	-128	H H H H H H H H H L L L L L L L	
359.65 (-0.35)	-64	H H H H H H H H H H L L L L L L	
359.82 (-0.18)	-32	H H H H H H H H H H H L L L L L	
359.91 (-0.09)	-16	H H H H H H H H H H H H L L L L	
359.96 (-0.04)	-8	H H H H H H H H H H H H H L L L	
359.98 (-0.02)	-4	H H H H H H H H H H H H H H L L	
359.99 (-0.01)	-2	H H H H H H H H H H H H H H H L	

NOTES:

1. L = logic "0" = V_{IL} and H = logic "H" = V_{IH} .
Accuracy requirement = 4 LSB's (1.3 ARC-MIN in resolver mode) .
2. Cycle through bit pattern.
3. Output must look like input within ± 1.3 ARC-MIN in resolver mode.

FIGURE 3. Output accuracy test angle table.

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TABLE II. Electrical test requirements.

MIL-H-38534 test requirements	Subgroups (in accordance with MIL-H-38534, group A test table)
Interim electrical parameters	1,4,7,9
Final electrical test 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	1,2,3,4,7,9
MIL-STD-883, group E end-point electrical parameters for RHA devices	Subgroups ** (in accordance with method 5005, group A test table)

- * PDA applies to subgroup 1.
- ** When applicable to this standardized military drawing, the subgroups shall be defined.

4.3 Quality conformance inspection. Quality conformance inspection shall be in accordance with MIL-H-38534 and as specified herein.

4.3.1 Group A inspection. Group A inspection shall be in accordance with MIL-H-38534 and as specified in table II herein.

4.3.2 Group B inspection. Group B inspection shall be in accordance with MIL-H-38534.

4.3.3 Group C inspection. Group C inspection shall be in accordance with MIL-H-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 DESC-EC 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.

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4.3.4 Group D inspection. Group D inspection shall be in accordance with MIL-H-38534.

4.3.5 Group E inspection. 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 H and K shall be M, D, R, and H. RHA quality conformance inspection sample tests shall be performed at the RHA level specified in the acquisition document.

- a. RHA tests for device classes H and K for levels M, D, R, and H shall be performed through each level to determine at what levels the devices meet the RHA requirements. These RHA tests shall be performed for initial qualification and after design or process changes which may affect the RHA performance of the device.
- b. End-point electrical parameters shall be as specified in table II herein.
- c. Prior to total dose irradiation, each selected sample shall be assembled in its qualified package. It shall pass the specified group A electrical parameters in table I for subgroups specified in table II herein.
- d. For device classes H and K, the devices shall be subjected to radiation hardness assured tests as specified in MIL-H-38534 for RHA level being tested, and meet the postirradiation end-point electrical parameter limits as defined in table I at $T_A = +25^\circ\text{C} \pm 5$ percent, after exposure.
- e. Prior to and during total dose irradiation testing, the devices shall be biased to establish a worst case condition as specified in the radiation exposure circuit.
- f. For device classes H and K, subgroups 1 and 2 in table V, method 5005 of MIL-STD-883 shall be tested as appropriate for device construction.
- g. 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-H-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 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.

6.4 Record of users. Military and industrial users shall inform Defense Electronics Supply Center when a system application requires configuration control and the applicable SMD. DESC 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 DESC-EC, telephone (513) 296-6047.

6.5 Comments. Comments on this drawing should be directed to DESC-EC, Dayton, Ohio 45444, or telephone (513) 296-5373.

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6.6 One part - one part number system. The one part - one part number system described below has been developed to allow for transitions between identical generic devices covered by the three major microcircuit requirements documents (MIL-H-38534, MIL-I-38535, and 1.2.1 of MIL-STD-883) without the necessity for the generation of unique PIN's. The three military requirements documents represent different class levels, and previously when a device manufacturer upgraded military product from one class level to another, the benefits of the upgraded product were unavailable to the Original Equipment Manufacturer (OEM), that was contractually locked into the original unique PIN. By establishing a one part number system covering all three documents, the OEM can acquire to the highest class level available for a given generic device to meet system needs without modifying the original contract parts selection criteria.

<u>Military documentation format</u>	<u>Example PIN under new system</u>	<u>Manufacturing source listing</u>	<u>Document Listing</u>
New MIL-H-38534 Standardized Military Drawings	5962-XXXXXZZ(H or K)YY	QML-38534	MIL-BUL-103
New MIL-I-38535 Standardized Military Drawings	5962-XXXXXZZ(Q or V)YY	QML-38535	MIL-BUL-103
New 1.2.1 of MIL-STD-883 Standardized Military Drawings	5962-XXXXXZZ(M)YY	MIL-BUL-103	MIL-BUL-103

6.7 Sources of supply for device classes H and K. Sources of supply for device classes H and K are listed in QML-38534. The vendors listed in QML-38534 have submitted a certificate of compliance (see 3.7 herein) to DESC-EC and have agreed to this drawing.

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