REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED

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SHEET																			
REV																			
SHEET	15	16	17	18	19	20	21												

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

PMIC N/A

STANDARDIZED MILITARY DRAWING

THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

AMSC N/A

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DRAWING APPROVAL DATE
92-07-16

REVISION LEVEL

DEFENSE ELECTRONICS SUPPLY CENTER
DAYTON, OHIO 45444

MICROCIRCUIT, DIGITAL, LOW POWER, SINGLE CHANNEL, DRIVER-RECEIVER, HYBRID

SIZE	CAGE CODE	5962-91749
A	67268	

SHEET 1 OF 21

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5962-E378

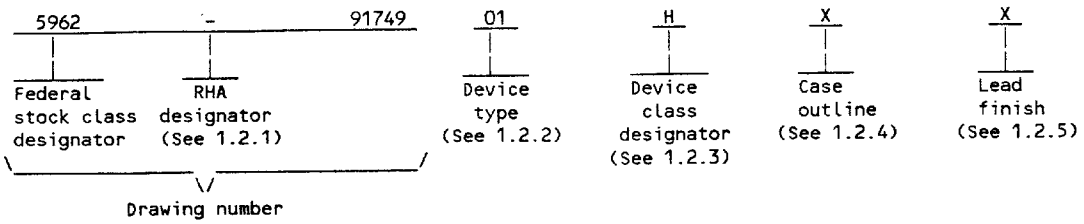
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

9004708 0004446 9T9

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
01	NHI-1514	Single channel, driver-receiver (MIL-STD-1553 A and B) low power, receiver standby high
02	NHI-1513	Single channel, driver-receiver (universal transceiver) low power, receiver standby high
03	BUS631021I	Single channel, driver-receiver (universal transceiver) low power, receiver standby high
04	BUS63104II	Single channel, driver-receiver (MIL-STD-1553 A and B) low power, receiver standby high
05	3231	Single channel, driver-receiver (MIL-STD-1553 A and B) low power, receiver standby high
06 and 07	3232	Single channel, driver-receiver (universal transceiver) low power, receiver standby high
08	4407	Single channel, driver-receiver (MIL-STD-1553 A and B) low power, receiver standby high
09	4404	Single channel, driver-receiver (universal transceiver) low power, receiver standby high

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 appendix C of MIL-M-38510, and as follows:

Outline letter	Case outline
T	See figure 1 (24-lead, 1.27" x 1.27" x .167"), hybrid package
U	See figure 1 (24-lead, 1.27" x 1.27" x .167"), flat package
X	See figure 1 (24-lead, 1.27" x 1.27" x .175"), hybrid package
Y	See figure 1 (24-lead, 1.27" x 1.27" x .200"), flat package
Z	See figure 1 (24-lead, 1.27" x 1.27" x .167"), hybrid package

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.

1.3 Absolute maximum ratings. 1/

Supply voltage ranges:	
V_{CC}	-0.3 V dc to +18 V dc
V_{EE}	+0.3 V dc to -18 V dc
V_{CCL}	-0.3 V dc to +7 V dc
Logic input voltage range	-0.3 V dc to +5.5 V dc
Receiver differential input voltage	40 Vp-p
Receiver common mode input voltage range	-10 V to +10 V
Driver peak output current	±300 mA
Storage temperature range	-65°C to +150°C
Lead temperature (soldering, 10 seconds)	+300°C
Junction temperature (T_J)	+160°C
Power dissipation (P_D) total hybrid:	
100 percent duty cycle (T_C = +25°C):	
Device types 01, 05, 06, and 08	3.0 W
Device types 02, 07, and 09	3.24 W
Device types 03 and 04	3.28 W
Power dissipation (P_D) hottest die:	
100 percent duty cycle:	
Device types 01, 04, 08, and 09	484 mW
Device types 02 and 03	545 mW
Device types 05, 06, and 07	2.2 W
Standby mode:	
Device types 01, 02, 03, 04, 08, and 09	Derates to zero
Device types 05, 06, and 07	750 mW
Thermal resistance:	
Junction-to-case (Θ_{JC}) hottest die:	
Device types 01 and 02	38°C/W
Device types 03, 04, 08, and 09	58°C/W
Device types 05, 06, and 07	6.5°C/W
Case-to-ambient:	
Device types 01, 02, 03, 04, 08, and 09	21°C/W
Device types 05, 06, and 07	20°C/W
Maximum junction-to-case temperature rise for the hottest die at 100 percent duty cycle:	
Device type 01	19°C
Device type 02	21°C
Device type 03	47.9°C
Device type 04	42.6°C
Device types 05, 06, and 07	14.3°C
Device type 08	28°C
Device type 09	31.6°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.

1.4 Recommended operating conditions.

Supply voltage range:	
V_{CC}	+11.4 V dc to +15.75 V dc
V_{EE}:	
Device types 01-05, 07-09	-11.4 V dc to -15.75 V dc
Device type 06	-11.75 V dc to -12.75 V dc
V_{CCL}	+4.5 V dc to +5.5 V dc
Logic input voltage range	0 V to +5.0 V
Receiver differential voltage	40 Vp-p
Receiver common mode voltage range	-10 V to +10 V
Driver peak output current:	
Device types 01, 02, 08, and 09	±180 mA
Device types 03 and 04	±200 mA
Device types 05, 06, and 07	±100 mA
Maximum serial data rate	1.0 MHz
Case operating temperature range	-55°C to +125°C

2. APPLICABLE DOCUMENTS

2.1 Government specifications, standards, and handbook. Unless otherwise specified, the following specifications, 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.

SPECIFICATIONS

MILITARY

MIL-M-38510 - Microcircuits, General Specification for.
MIL-H-38534 - Hybrid Microcircuits, General Specification for.

STANDARDS

MILITARY

MIL-STD-480 - Configuration Control-Engineering Changes, Deviations and Waivers.
MIL-STD-883 - Test Methods and Procedures for Microelectronics.

HANDBOOK

MILITARY

MIL-HDBK-780 - Standardized Military Drawings.

(Copies of the specifications, 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.

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 Test circuit. The test circuit shall be as specified on figure 3.

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

TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions 1/ $-55°C \le T_C \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits Min	Limits Max	Unit
RECEIVER							
Output low voltage	V_{OL}	I_{OL} = 10 mA	1,2,3	All		0.5	V
Output high voltage	V_{OH}	I_{OH} = -0.4 mA	1,2,3	All	2.5		V
Differential input voltage level	V_I		4,5,6	All		40	Vp-p
Differential input impedance	Z_{IN}	1 MHz sinewave 2/	4,5,6	01,02, 08,09	10		kΩ
				03,04, 05,06, 07	4		
Common mode input voltage range	V_{ICR}	1 MHz sinewave, see figure 3	4,5,6	All	10		Vp-p
Input capacitance	C_{IN}	1 MHz sinewave 2/	4	All		5	pF
Threshold voltage	V_{TH}	3/ 4/ 5/	4,5,6	01,02, 08,09	0.6	1.05	Vp-p
				03,04	0.5	1.2	
				05,06, 07	0.4	1.1	
Receiver delay	t_{DR}	Input zero crossing to DATA or DATA, see figure 3 2/	4,5,6	All		450	ns
RECEIVER STROBE							
Input low voltage	V_{SIL}		1,2,3	All		0.7	V
Input high voltage	V_{SIH}		1,2,3	All	2.0		V
Input low current	I_{SIL}	V_{SIL} = 0.4 V	1,2,3	01,02, 08,09	-0.4		mA
				03,04	-0.720		
				05,06, 07	-4.0		

See footnotes at end of table.

TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_C \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits Min	Limits Max	Unit
RECEIVER STROBE - Continued							
Input high current	I_{SIH}	V_{SIH} =2.7 V	1,2,3	01,02, 03,04, 08,09		80	µA
				05,06, 07		400	
Strobe delay	t_{DS}	Turn-on or turn-off, 2/ see figure 4	9,10,11	01,02, 03,04		200	ns
				05,06, 07,08, 09		150	
TRANSMITTER							
Input low voltage	V_{IL}		1,2,3	All		0.7	V
Input high voltage	V_{IH}		1,2,3	All	2.0		V
Input low current	I_{IL}	V_{IL} = 0.4 V	1,2,3	01,02	-0.4		mA
				03,04, 08,09	-0.720		
				05,06, 07	-1.1		
Input high current	I_{IH}	V_{IH} = 2.7 V	1,2,3	01,02, 03,04, 08,09		40	µA
				05,06, 07		100	
Differential output	V_O	35Ω load 4/	1,2,3	All	6.0	9.0	Vp-p
		140Ω load 2/ 6/		All	24	36	
Differential output noise	V_{ON}	Inhibited, 35Ω load 4/	4,5,6	All		10	mV rms
		140Ω load 2/ 6/				40	
Differential output impedance	Z_{OUT}	1 MHz sinewave, 2/ (transmitter off)	4,5,6	All	10		kΩ

See footnotes at end of table.

TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_C \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits Min	Limits Max	Unit
TRANSMITTER - Continued							
Output capacitance	C_{OUT}	1 MHz sinewave 2/	4	All		5	pF
Differential output offset voltage	V_{OS}	35Ω load	4,5,6	All	-90	+90	mV pk
		140Ω load 2/ 6/ 7/			-360	+360	
Receiver filter response	FILTER	f = 2 MHz 2/	4,5,6	All	-4.0		dB
		f = 4 MHz 2/			-13.0		
Rise time	t_r	35Ω load, see figure 4	9,10,11	01,04,08	100	300	ns
				02,03,05,06,07,09	220	300	
Fall time	t_f	35Ω load, see figure 4	9,10,11	01,04,08	100	300	
				02,03,05,06,07,09	220	300	
Transmitter delay	t_{dt}	Transmitter-in to transmitter-out, see figure 4 2/	9,10,11	All		550	
TRANSMITTER INHIBIT							
Input low voltage	V_{IIL}		1,2,3	All		0.7	V
Input high voltage	V_{IIH}		1,2,3	All	2.0		V
Input low current	I_{IIL}	V_{SIL} = 0.4 V	1,2,3	01,02,08,09	-0.4		mA
				03,04	-0.720		
				05,06,07	-0.8		

See footnotes at end of table.

TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_C \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits Min	Limits Max	Unit
TRANSMITTER INHIBIT - Continued							
Input high current	I_{IIH}	V_{SIH} = 2.7 V	1,2,3	01,02, 03,04, 08,09		40	µA
				05,06, 07		50	
Transmitter inhibit delay (high)	t_{DI-H}	0-1 inhibited output, 2/ see figure 4	9,10,11	01,02, 04,05, 06,07, 08,09		450	ns
				03		700	
Transmitter inhibit delay (low)	t_{DI-L}	1-0 active output, 2/ see figure 4	9,10,11	01,02, 04,05, 06,07, 08,09		450	
				03		700	
POWER SUPPLY							
+Supply (V_{CC})	I_{CC-SB}	Standby mode	1,2,3	01,02, 08,09		50	mA
				03,04		30	
				05,06, 07		65	
-Supply (V_{EE})	I_{EE-SB}			01,02		40	
				03,04, 05,06, 07,08, 09		65	
+5 V supply (V_{CCL})	I_{CC1-SB}			01,02, 05,06, 07		20	
				03,04, 08,09		45	

See footnotes at end of table.

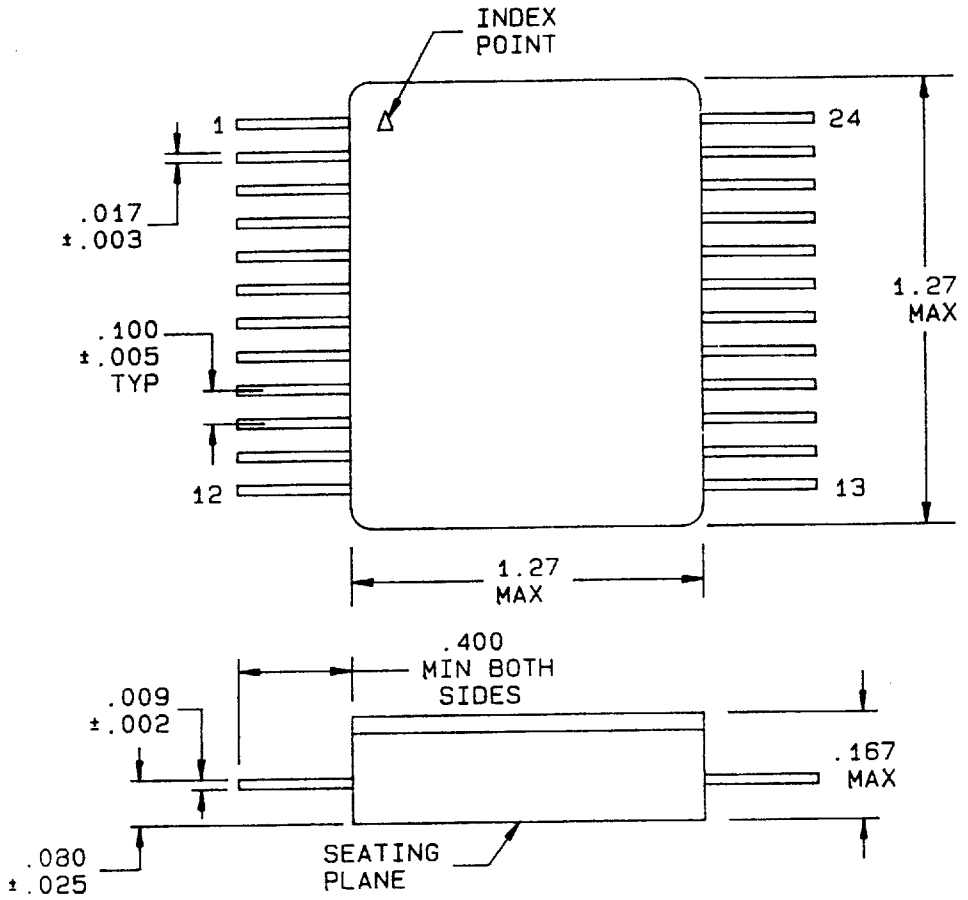
TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_C \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits Min	Limits Max	Unit
POWER SUPPLY - Continued							
+Supply (V_{CC})	I_{CC-50}	50 percent duty cycle	4,5,6	01,02, 08,09		110	mA
				03,04		114	
				05,06, 07		150	
-Supply (V_{EE})	I_{EE-50}			01,02, 08,09		110	
				03,04		135	
				05,06, 07		150	
+Supply (V_{CC})	I_{CC-100}	100 percent duty cycle		01,02, 08,09		165	
				03,04		180	
				05,06, 07		250	
-Supply (V_{EE})	I_{EE-100}	100 percent duty cycle		01,02, 08,09		165	
				03,04		195	
				05,06, 07		250	

1/ Unless otherwise specified, supply voltage ranges are as follows: (+14.9 V dc $\le V_{CC} \le$ +15.1 V dc), (-14.9 V dc $\le V_{EE} \le$ -15.1 V dc), and (+4.9 V dc $\le V_{CCL} \le$ 5.1 V dc).
2/ Parameter shall be tested as part of initial characterization and after design and process changes. Parameters shall be guaranteed to the limits specified in table I.
3/ Threshold determined by first missing word of a 33 word transmission to a Harris HD-15530 CMOS Manchester encoder-decoder.
4/ Measured at point AA' of figure 5.
5/ Assumes the internal threshold option is used.
6/ Measured at point BB' of figure 5.
7/ Offset is measured 2.5 μs after the mid-bit zero crossing of the last parity bit of a 600 μs transmission cycle of contiguous words (no dead time in between words).

Device types 08 and 09

Case T

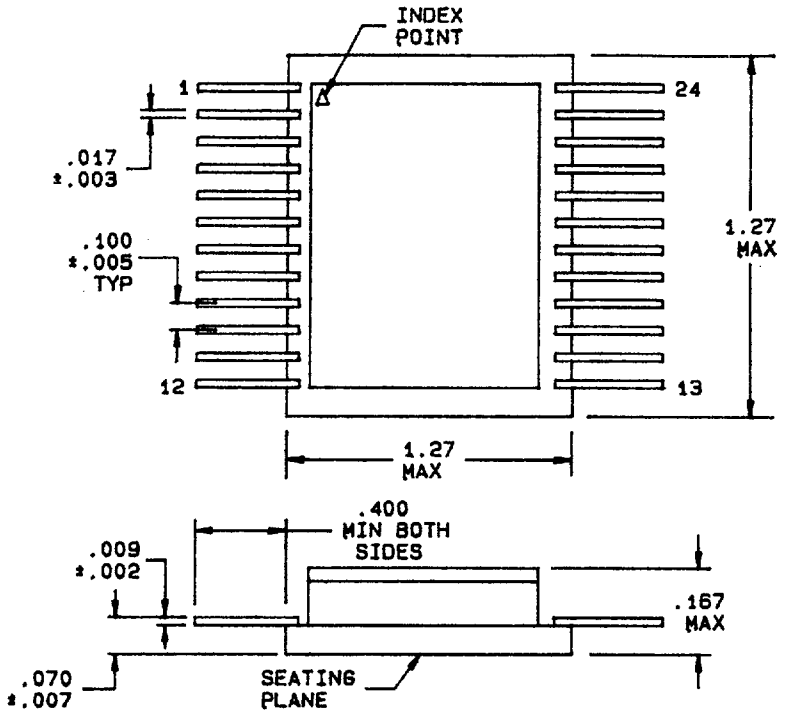


Inches	mm	Inches	mm
.002	0.05	.080	2.03
.003	0.08	.100	2.54
.005	0.13	.167	4.24
.009	0.23	.400	10.16
.017	0.43	1.27	32.3
.025	0.64		

FIGURE 1. Case outlines.

Device types 05, 06, and 07

Case U

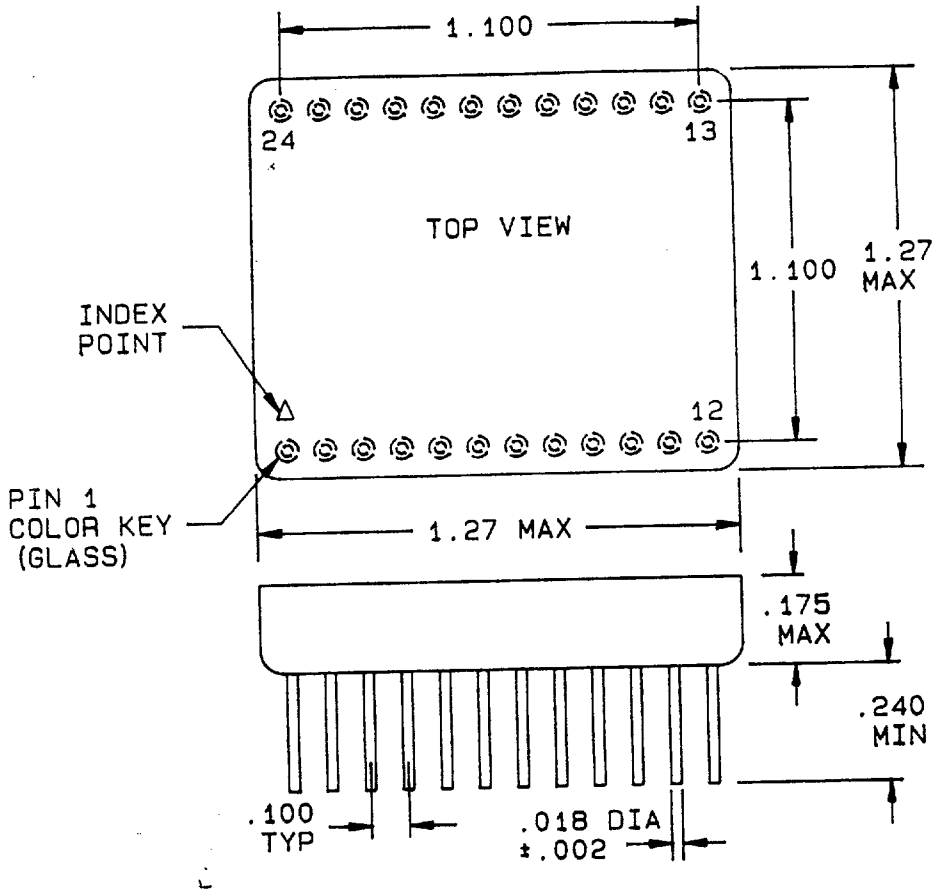


Inches	mm	Inches	mm
.002	0.05	.070	1.78
.003	0.08	.100	2.54
.005	0.13	.167	4.24
.007	0.18	.400	10.16
.009	0.23	1.27	32.3
.017	0.43		

FIGURE 1. Case outlines - Continued.

Device types 01, 02, 03, 04, 08, and 09

Case X

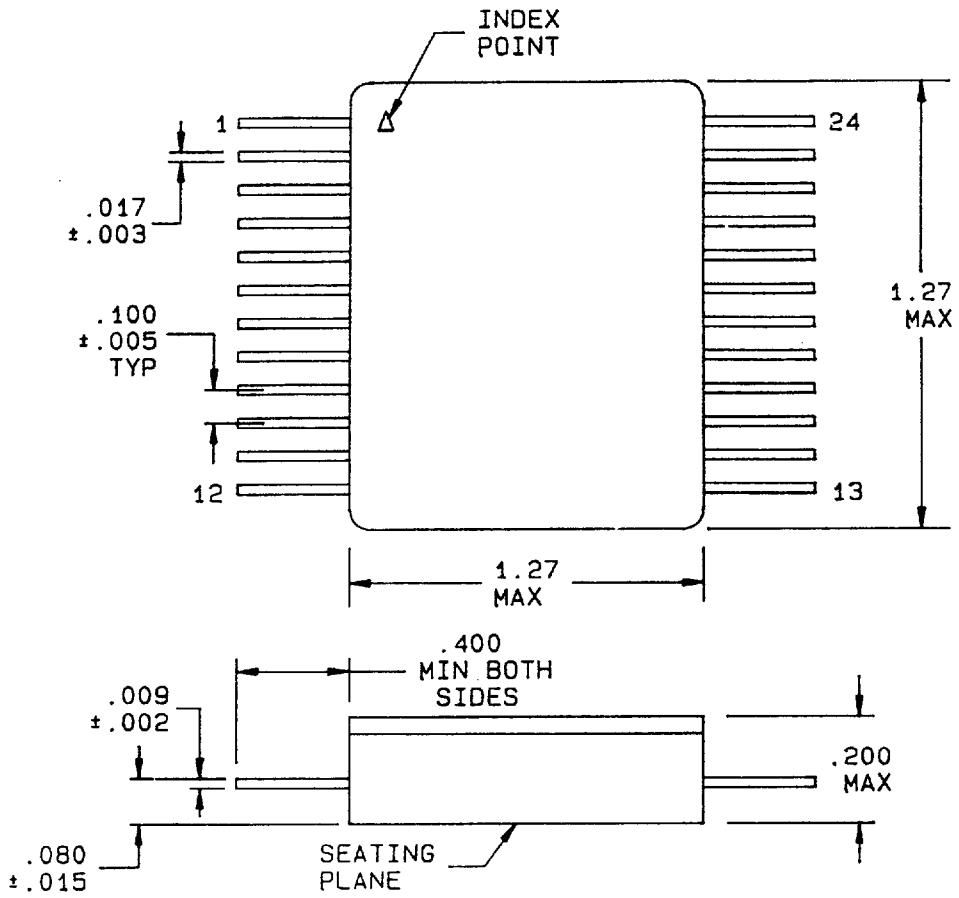


Inches	mm
.002	0.05
.018	0.46
.100	2.54
.175	4.44
.240	6.10
1.100	27.94
1.27	32.3

FIGURE 1. Case outlines - Continued.

Device types 01, 02, 03, 04, 08, and 09

Case Y

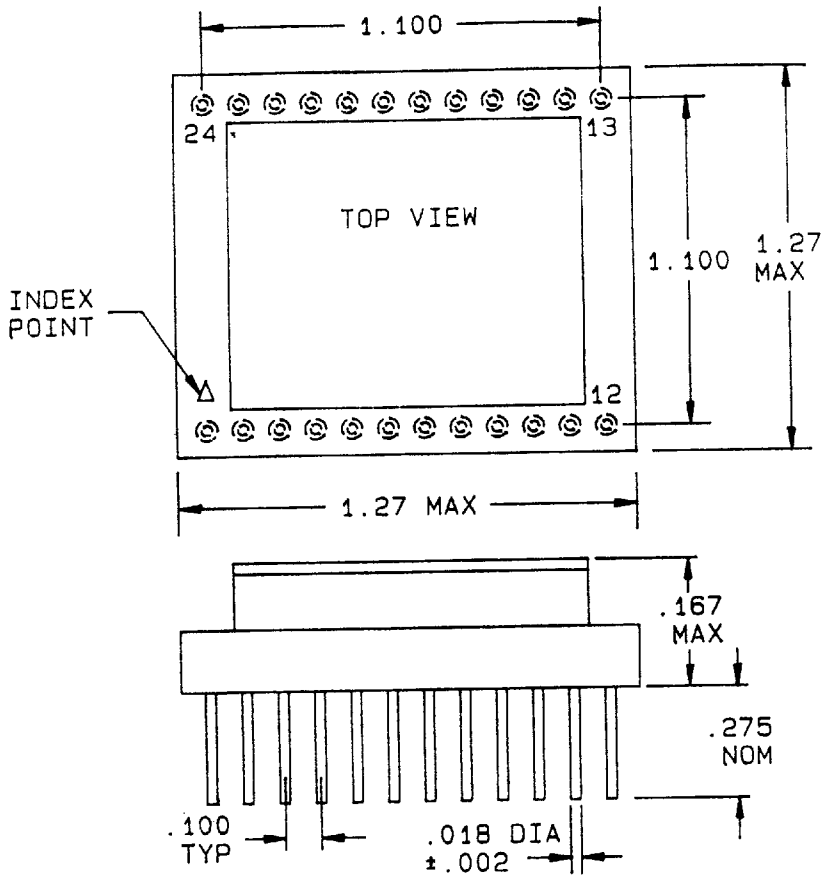


Inches	mm	Inches	mm
.002	0.05	.080	2.03
.003	0.08	.100	2.54
.005	0.13	.200	5.08
.009	0.23	.400	10.16
.015	0.41	1.27	32.3
.017	0.43		

FIGURE 1. Case outlines - Continued.

Device types 05, 06, and 07

Case Z



Inches	mm
.002	0.05
.018	0.46
.100	2.54
.167	4.24
.275	6.98
1.100	27.94
1.27	32.3

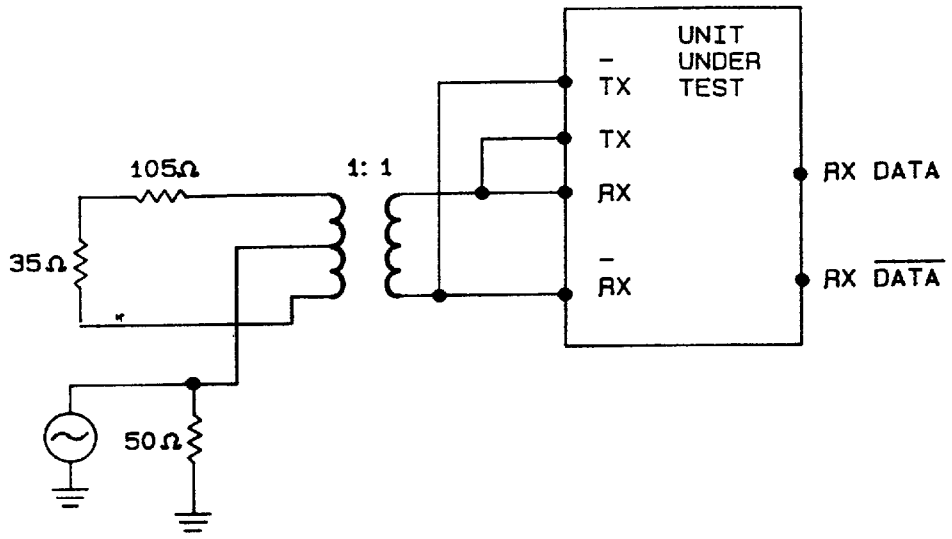
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance for three place decimals shall be .005 (0.13 mm).

Figure 1. Case outlines - Continued.

Pin	Function	Pin	Function
1	TX DATA OUT	13	V_{CC} RX
2	TX $\overline{\text{DATA}}$ OUT	14	NC
3	GND C	15	RX DATA IN
4	V_{CC} TX	16	RX $\overline{\text{DATA}}$ IN
5	EXTERNAL DATA THRESHOLD	17	GND A
6	INTERNAL DATA THRESHOLD	18	CASE GND
7	RX DATA OUT	19	V_{EE} RX
8	STROBE	20	V_{CCL}
9	GND B	21	TX INHIBIT
10	RX $\overline{\text{DATA}}$ OUT	22	TX DATA IN
11	INTERNAL $\overline{\text{DATA}}$ THRESHOLD	23	TX $\overline{\text{DATA}}$ IN
12	EXTERNAL $\overline{\text{DATA}}$ THRESHOLD	24	V_{EE} TX

FIGURE 2. Terminal connections.

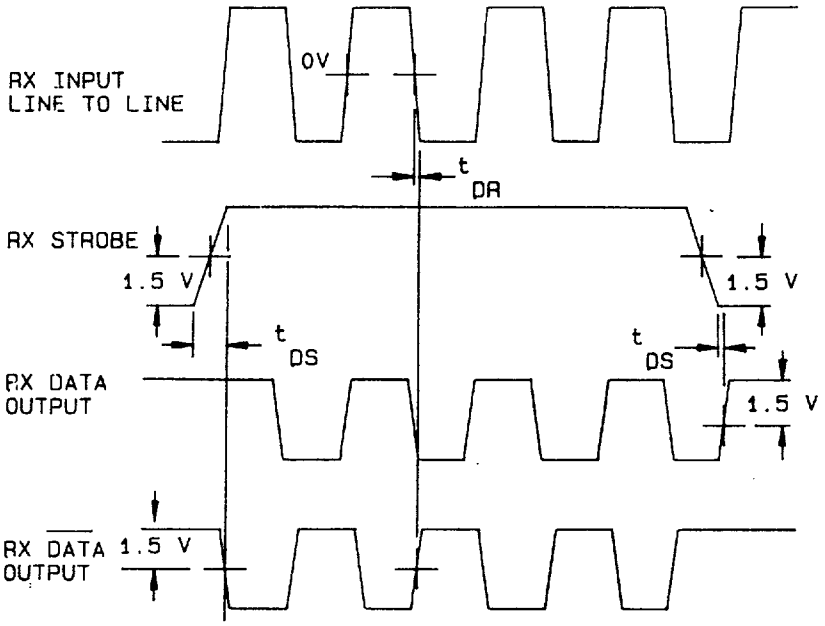
COMMON - MODE TEST



NOTE: Observe no transmission of data at RX DATA and RX $\overline{\text{DATA}}$.

FIGURE 3. Test circuit.

RECEIVER TIMING



TRANSMITTER TIMING

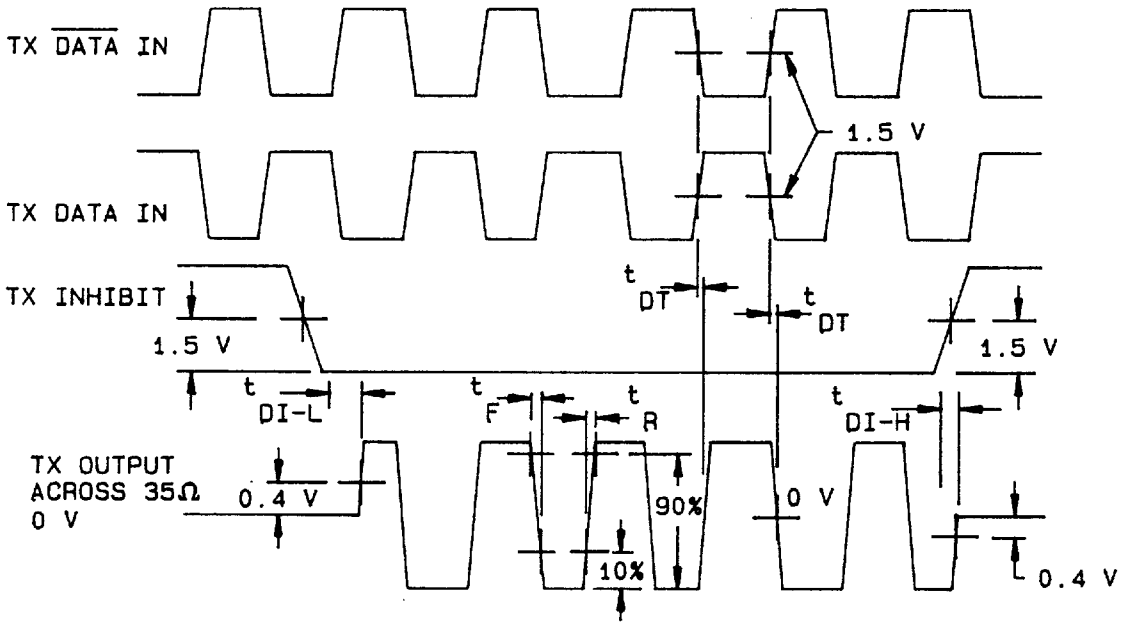


FIGURE 4. Timing waveforms.

STANDARDIZED MILITARY DRAWING DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444	SIZE A		5962-91749
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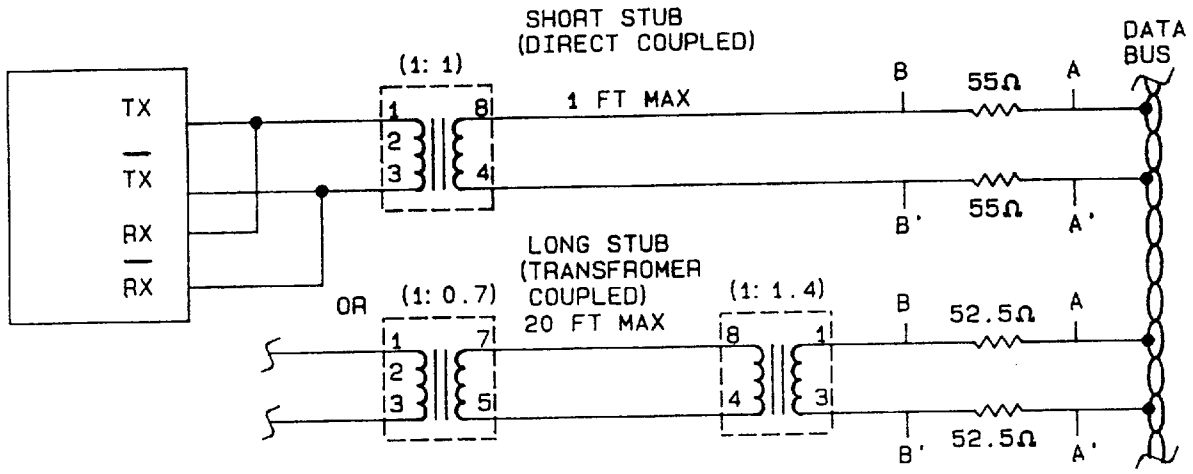

FIGURE 5. Coupling diagram.

STANDARDIZED MILITARY DRAWING DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444	**SIZE A**		5962-91749
		REVISION LEVEL	SHEET 18

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3.2.5 Coupling diagram. The coupling diagram 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 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 submit for DESC-ECT review and approval electrical test data (variables format) on 22 devices 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.

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-ECT 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.

TABLE II. Electrical test requirements.

MIL-STD-883 test requirements	Subgroups (per method 5008, group A test table)
Interim electrical parameters	1
Final electrical test parameters	1*, 2, 3, 4, 5, 6, 9, 10, 11
Group A test requirements	1, 2, 3, 4, 5, 6, 9, 10, 11
Group C end-point electrical parameters	1, 2, 3
Group E end-point electrical parameters for RHA devices	Subgroups ** (per method 5005, group A test table)

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

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 using the circuit submitted with the certificate of compliance (see 3.7 herein).

(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 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 follows:

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

b. Subgroups 7 and 8 shall be omitted.

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 conditions, method 1005 of MIL-STD-883.

(1) Test condition A, B, C, or D using the circuit submitted with the certificate of compliance (see 3.7 herein).

(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. 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°C ±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-481 using DD Form 1693, Engineering Change Proposal (Short Form).

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-ECT, telephone (513) 296-6047.

6.5 Comments. Comments on this drawing should be directed to DESC-ECT, Dayton, Ohio 45444, or telephone (513) 296-5374.

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 four major microcircuit requirements documents (MIL-M-38510, 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 four 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 four 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.

Military documentation format	Example PIN under new system	Manufacturing source listing	Document listing
New MIL-M-38510 Military Detail Specifications (in the SMD format)	5962-XXXXXZZ(B or S)YY	QPL-38510 (Part 1 or 2)	MIL-BUL-103
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-ECT and have agreed to this drawing.