

REVISIONS

LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	Made change to paragraph 1.2.4. Corrected figure 3, timing waveform. Editorial changes throughout.	92-03-10	A. Barone
B	Figure 1 case outline X, correct ".170 min pin length" to ".220 min pin length". Update drawing to current requirements.	07-03-20	Joseph Rodenbeck
C	Table I: For Total current test, symbols I_{CC1}^{-SB} , I_{CC1}^{-25} , I_{CC1}^{-50} , and I_{CC1}^{-100} for device types 05 and 06. Change max value from 25 mA to 60 mA. gc	07-05-02	Robert M. Heber

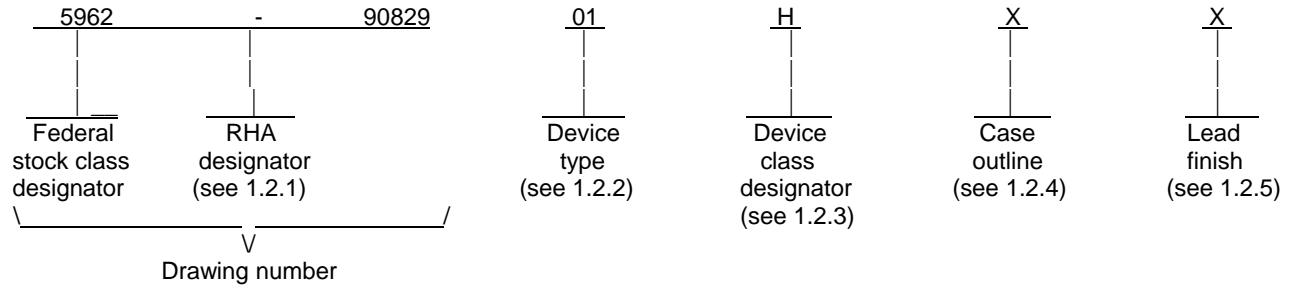
The original first sheet of this drawing has been replaced.

REV																				
SHEET																				
REV	C	C	C	C	C															
SHEET	15	16	17	18	19															
REV STATUS OF SHEETS	REV			C	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					<p align="center">DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43218-3990 http://www.dsc.dla.mil</p>														
<p align="center">STANDARD MICROCIRCUIT DRAWING</p> <p align="center">THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE</p> <p align="center">AMSC N/A</p>	CHECKED BY Robert M. Heber																			
	APPROVED BY William K. Heckman					<p align="center">MICROCIRCUIT, HYBRID, DIGITAL, MIL-STD-1553, SINGLE CHANNEL, 12 VOLT DRIVER-RECEIVER</p>														
	DRAWING APPROVAL DATE 91-02-06																			
	REVISION LEVEL C					SIZE A	CAGE CODE 67268	5962-90829												
					SHEET 1 OF 19															

1. SCOPE

1.1 Scope. This drawing documents five product assurance classes as defined in paragraph 1.2.3 and MIL-PRF-38534. A choice of case outlines and lead finishes which 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. RHA marked devices shall meet the MIL-PRF-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) identify the circuit function as follows:

<u>Device type</u>	<u>Generic number</u>	<u>Circuit function</u>	<u>Transformer</u>	<u>Direct</u>
			Coupling transformer turns ratio	
01	FC155371	Single channel driver-receiver (receiver idle normally low)	1.66:1	1.2:1
02	FC155372	(receiver idle normally high)	1.66:1	1.2:1
03	ARX3420	(receiver idle normally low)	1.41:1	1:1
04	ARX3424	(receiver idle normally high)	1.41:1	1:1
05	NHI-1531	(receiver idle normally low)	1.77:1	1.25:1
06	NHI-1545	(receiver idle normally high)	1.77:1	1.25:1
07	CT1589M	(receiver idle normally low)	1.2:1	1:1
08	CT1589I	(receiver idle normally high)	1.2:1	1:1

1.2.3 Device class designator. This device class designator shall be a single letter identifying the product assurance level. All levels are defined by the requirements of MIL-PRF-38534 and require QML Certification as well as qualification (Class H, K, and E) or QML Listing (Class G and D). The product assurance levels are as follows:

<u>Device class</u>	<u>Device performance documentation</u>
K	Highest reliability class available. This level is intended for use in space applications.
H	Standard military quality class level. This level is intended for use in applications where non-space high reliability devices are required.
G	Reduced testing version of the standard military quality class. This level uses the Class H screening and In-Process Inspections with a possible limited temperature range, manufacturer specified incoming flow, and the manufacturer guarantees (but may not test) periodic and conformance inspections (Group A, B, C and D).

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- E Designates devices which are based upon one of the other classes (K, H, or G) with exception(s) taken to the requirements of that class. These exception(s) must be specified in the device acquisition document; therefore the acquisition document should be reviewed to ensure that the exception(s) taken will not adversely affect system performance.
- D Manufacturer specified quality class. Quality level is defined by the manufacturers internal, QML certified flow. This product may have a limited temperature range.

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

<u>Outline letter</u>	<u>Descriptive designator</u>	<u>Terminals</u>	<u>Package style</u>
T	See figure 1	24	Flat package
U	See figure 1	24	Dual-in-line package
X	See figure 1	24	Dual-in-line package
Y	See figure 1	24	Dual-in-line package

1.2.5 Lead finish. The lead finish shall be as specified in MIL-PRF-38534.

1.3 Absolute maximum ratings. 1/

Supply voltage range:	
V _{CC}	-0.3 V dc to +18 V dc
V _{EE} (device types 01, 02, 03, 04, 07, and 08)	+0.3 V dc to -18 V dc
V _{CC1}	-0.3 V dc to +7 V dc
Logic input voltage range	-0.3 V dc to V _{CC1}
Receiver differential voltage	40 Vp-p
Receiver common mode voltage range	-10 V dc to +10 V dc
Driver peak output current:	
Device types 01, 02, 05, 06, 07, and 08.....	200 mA
Device types 03 and 04	350 mA
Power dissipation (P _D) at T _C = +125°C:	
Device types 01, 02, 07, and 08	3.816 W
Device type 03 and 04	1.591 W
Device type 05 and 06	0.70 W
Storage temperature range.....	-65°C to +150°C
Lead temperature (soldering, 10 seconds)	+300°C
Junction temperature (T _J):	
Device types 01, 02, 05, 06, 07, and 08.....	+160°C
Device types 03 and 04	+167°C 2/
Thermal resistance, junction-to-case (θ _{JC}):	
Device types 01, 02, 05, and 06	18°C/W
Device type 03 and 04	88°C/W
Device type 07 and 08	60°C/W
Thermal resistance, junction to ambient (θ _{JA}):	
Device types 01, 02, 05, 06, 07, and 08	-35°C/W
Device type 03 and 04	118°C/W

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/ Maximum junction temperature rise above case temperature for the hottest die at 100 percent transmitting duty cycle shall be 42°C.

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1.4 Recommended operating conditions.

Supply voltage:

V _{CC} (device types 01, 02, 05, and 06).....	+11.2 V dc to +12.6 V dc
V _{CC} (device types 03, 04, 07, and 08).....	+11.4 V dc to +12.6 V dc
V _{EE} (device types 01 and 02).....	-11.2 V dc to -12.6 V dc
V _{EE} (device types 03, 04, 07, and 08).....	-11.4 V dc to -12.6 V dc
V _{CC1}	+4.5 V dc to +5.5 V dc
Logic input voltage range.....	0 V dc to +5.0 V dc
Receiver differential voltage.....	30 Vp-p
Receiver common mode voltage.....	-10.0 V dc to +10.0 V dc
Driver peak output current:	
Device types 01, 02, 05, and 06.....	220 mA
Device type 03 and 04.....	350 mA
Serial data rate.....	1.0 MHz maximum
Junction temperature (T _J)	
Devices types 01, 02, 05, 06, 07 and 08.....	+150°C maximum
Device types 03 and 04.....	+167°C ^{1/}
Case operating temperature range (T _C).....	-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 SPECIFICATION

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 <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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

^{1/} Maximum junction temperature rise above case temperature for the hottest die at 100 percent transmitting duty cycle shall be 42°C.

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3. REQUIREMENTS

3.1 Item requirements. The individual item performance requirements for device class H shall be in accordance with MIL-PRF-38534. Compliance with MIL-PRF-38534 may include the performance of all tests herein or as designated in the device manufacturer's Quality Management (QM) plan or as designated for the applicable device class. The manufacturer may eliminate, modify or optimize the tests and inspections herein, however the performance requirements as defined in MIL-PRF-38534 shall be met for the applicable device class. In addition, the modification in the QM plan shall not affect the form, fit, or function of the device for the applicable device class.

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 Waveforms. The waveforms 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 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 (DSCC-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 DSCC-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.

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 DSCC-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 method 1015 of MIL-STD-883.
 - (2) T_A or T_C as specified in the approved manufacturer's QM plan.
- 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 -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Receiver							
Input level	V _L	Differential input, pin 15 to pin 16	4,5,6	All	40		Vp-p
Input common mode voltage range	V _{ICM}	Independent of xfmr or in accordance with MIL-HDBK-1553, section 5.1.2.2	4,5,6	01, 02, 05, 06, 07, 08	-10	+10	V(pk)
				03, 04	-5	+5	
Output low voltage	V _{OL}	I _{OL} = 8 mA	1,2,3	01,02, 03 04, 05, 06		0.5	V
		I _{OL} = 4 mA		07, 08		0.5	
Output high voltage	V _{OH}	I _{OH} = -0.4 mA	1,2,3	All	2.5		V
Transmitter							
Input low voltage	V _{IL}		1,2,3	All		0.7	V
Input high voltage	V _{IH}		1,2,3	All	2		V
Input low current	I _{IL}	V _{IL} = 0.4 V	1,2,3	01,02,05, 06,07,08		-1.6	mA
				03, 04		-0.4	
Input high current	I _{IH}	V _{IH} = 2.7 V	1,2,3	All		0.04	mA
Output voltage	V _O	Across 35Ω load	1,2,3	All	6	9	V(pk)
Output noise voltage	V _{ON}	Across 35Ω load	4,5,6	All		10	mVp-p

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Receiver strobe							
Input low voltage	V _{SIL}		1,2,3	All		0.7	V
Input high voltage	V _{SIH}		1,2,3	All	2		V
Input low current	I _{SIL}	V _{IL} = 0.4 V	1,2,3	01,02,05, 06,07,08		-1.6	mA
				03,04		-0.04	
Input high current	I _{SIH}	V _{SIH} = 2.7 V	1,2,3	All		0.04	mA
Transmitter inhibit							
Input low voltage	V _{IIL}		1,2,3	All		0.7	V
Input high voltage	V _{IIH}		1,2,3	All	2		V
Input low current	I _{IIL}	V _{SIL} = 0.4 V	1,2,3	01,03,05, 06,07,08		-1.6	mA
				03,04		-0.04	
Input high current	I _{IIH}	V _{SIH} = 2.7 V	1,2,3	01,02,03, 04,05,06	0.04		mA
				07,08	0.08		
Power supply							
Total current	I _{EE} ^{-SB}	(Standby mode)	1,2,3	01,02		30	mA
				03,04		16.5	
				07,08		35	

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit	
					Min	Max		
Power supply								
Total current	I _{CC1} ^{-SB}	(Standby mode)	1,2,3	01,02,03, 04		30	mA	
				05,06		60		
				07,08		45		
	I _{CC} ^{-SB}			1,2,3	01,02		35	mA
					03,04		1	
					05,06		20	
					07,08		22	
	I _{EE} ⁻²⁵	(25% duty cycle into 35Ω load)	4,5,6		01,02,07, 08		30	mA
					03,04		20.5	
	I _{CC1} ⁻²⁵				01,02,03, 04,07,08		30	
					05,06		60	
	I _{CC} ⁻²⁵				01,02,03, 04		80	
					05,06		75	
					07,08		95	
	I _{EE} ⁻⁵⁰	(50% duty cycle into 35Ω load)	4,5,6		01,02		30	
					03,04		25	
	I _{CC1} ⁻⁵⁰				01,02,03, 04		30	
					05,06		60	
	I _{CC} ⁻⁵⁰				01,02		140	
					03,04		160	
05,06						130		
I _{EE} ⁻¹⁰⁰	(100% duty cycle into 35Ω load)	1,2,3		01,02,03, 04,07,08		30		
				01,02,03, 04,07,08		30		
I _{CC1} ⁻¹⁰⁰				05,06		60		
				01,02		250		
				03,04		320		
I _{CC} ⁻¹⁰⁰				05,06		230		
				07,08		290		

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Receiver							
Input resistance	R _{IN}	1 MHz sine wave	4,5,6	All	8		kΩ
Input capacitance	C _{IN}	1 MHz sine wave <u>2/</u>	4	All		7	pF
Threshold voltage	V _{TH}	<u>3/</u>	1,2,3,	01,02,03, 04,05,06	0.56	1.0	Vp-p
				07,08	0.80	1.0	
		Group C end point electricals <u>3/</u>	1,2,3	01,02,03	0.56		
				04,05,06	0.56	1.1	
				07,08	0.8	1.1	
Transmitter							
Output resistance (transmitter off)	R _{OUT}	1 MHz sine wave <u>2/</u>	4,5,6	01,02,03, 04,05,06	10		kΩ
				07,08	8		
Output capacitance (transmitter off)	C _{OUT}	1 MHz sine wave <u>2/</u>	4	All		5	pF
Output offset voltage	V _{OS}	<u>2/</u> <u>4/</u>	4,5,6	All	-90	+90	mV pk
Peak amplitude variation	A _V	<u>5/</u>			-15	+15	%
Receiver							
Delay time, input to output	t _{DR}	Delay time from differential input zero crossing to DATA or DATA* <u>2/</u> (see figure 3)	9,10,11	01,02,05, 06		300	ns
				03,04		400	
				07,08		450	
Strobe delay	t _{DS}	Delay time from strobe rising or falling edge to DATA or DATA* <u>2/</u> (see figure 3)	9,10,11	01,02,04, 05,06,07, 08		40	ns
				03		400	
See footnotes at end of table.							
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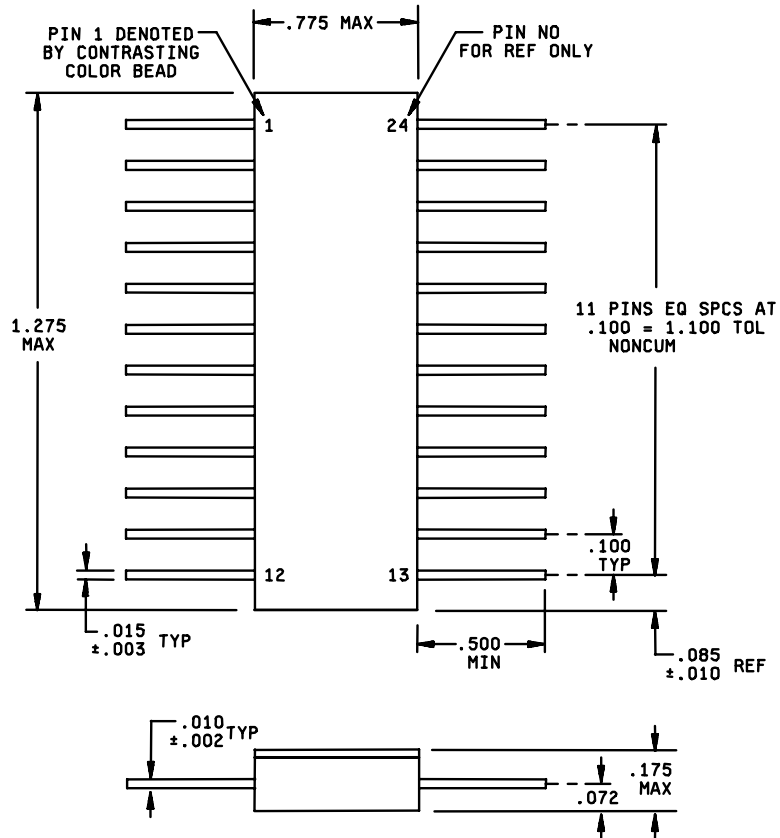
TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Transmitter							
Rise time	t _R	Output load = 35Ω (see figure 3)	9,10,11	All	100	300	ns
Fall time	t _F			All	100	300	
Delay time	t _{DT}	2/	9,10,11	01,02,05, 06,07,08		200	ns
				03,04		350	
Inhibit delay inhibiting	t _{di-h}	2/	9,10,11	01,02,05, 06		500	ns
				03,04		350	
				07,08		225	
Inhibit delay	t _{di-l}	2/	9,10,11	01,02,05, 06		100	ns
				03,04		350	
				07,08		150	

- 1/ V_{CC} = 12 V, V_{EE} = -12 V for device types 01, 02, 03, 04, 07 and, 08 only.
 2/ This parameter is tested initially and after any process or design change which might affect this parameter.
 3/ Threshold is measured in direct coupled mode including the transformer. Threshold is the maximum level on the BUS at which there are no pulses on either receiver output. Divide by 1.4 to obtain threshold in transformer coupled mode. For device types 01, 03, 05, and 07 add 0.14 V in direct coupled mode or 0.10 V in transformer coupled mode to obtain threshold at which no errors are observed when receiver is used with 15530 CMOS Manchester encoder-decoder.
 4/ Measured across 35Ω load, 2.5 μs after parity bit mid-bit zero crossing of a 660 microseconds message.
 5/ Measured across 35Ω load, variation of average peak amplitude.

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Case outline T.



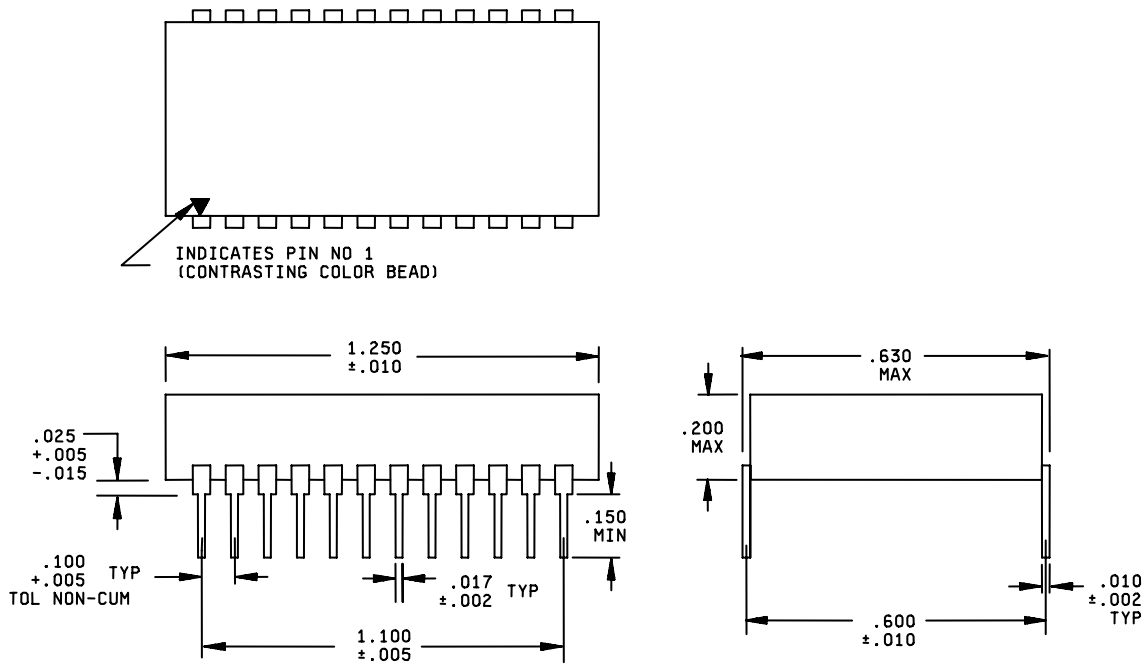
NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Lead identification numbers are for reference only.
4. Lead spacing dimensions apply only at seating plane.
5. The total number of terminals are 24.
6. For case outline U, the case is non-conductive and the lid is conductive.

FIGURE 1. Case outline(s)

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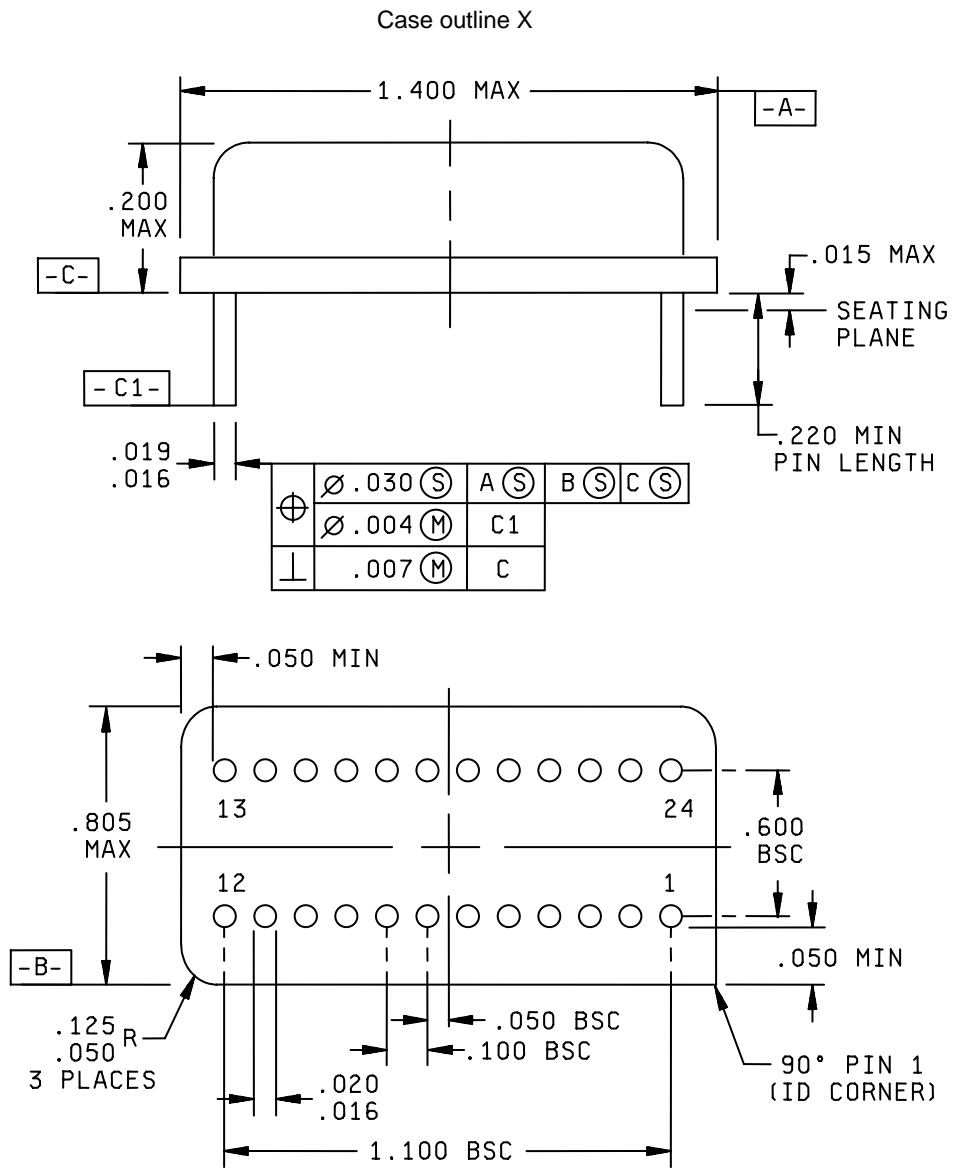
Case outline U.



Inches	mm
.002	0.05
.005	0.13
.010	0.25
.015	0.38
.017	0.43
.025	0.64
.100	2.54
.150	3.81
.200	5.08
.600	15.24
.630	16.00
1.100	27.94
1.250	31.75

FIGURE 1. Case outline(s) - Continued.

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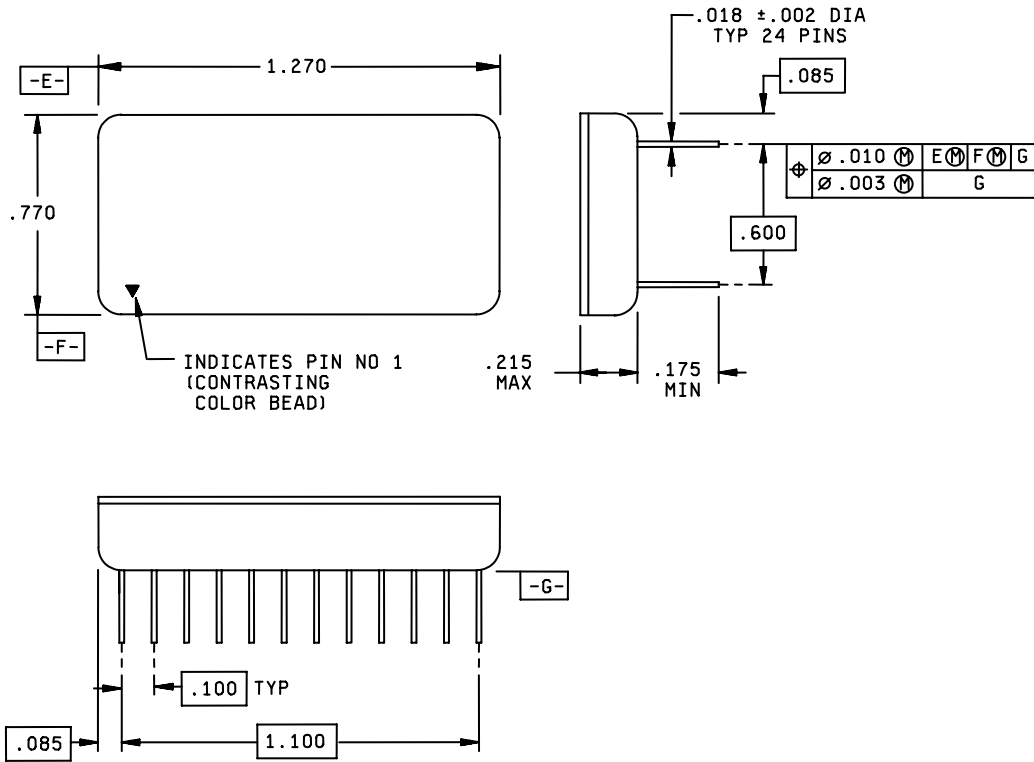


Inches	mm	Inches	mm
.004	0.10	.100	2.54
.007	0.18	.125	3.18
.015	0.38	.200	5.08
.016	0.41	.220	5.59
.019	0.48	.600	15.24
.020	0.50	.805	20.45
.030	0.76	1.100	27.94
.050	1.27	1.400	35.56

FIGURE 1. Case outline(s) - Continued.

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Case outline Y.



Inches	mm
.002	0.05
.003	0.07
.010	0.25
.018	0.45
.085	2.15
.100	2.54
.175	4.44
.215	5.45
.600	15.24
.770	19.56
1.100	27.94
1.270	32.26

FIGURE 1. Case outline(s) - Continued.

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Terminal number	Device types 05, 06, 07, and 08	Device types 03 and 04	Device types 01, 02, 07, and 08	Device types 05, 06, 07, and 08
	CASES			
	T	U	X	Y
1	TX DATA OUT	TX DATA OUT	TX DATA OUT	TX DATA OUT
2	TX $\overline{\text{DATA}}$ OUT	TX $\overline{\text{DATA}}$ OUT	TX $\overline{\text{DATA}}$ OUT	TX $\overline{\text{DATA}}$ OUT
3	GND <u>1/</u>	GND <u>1/</u>	GND <u>1/</u>	GND <u>1/</u>
4	No connection	No connection	No connection	No connection
5	No connection	No connection	No connection	No connection
6	No connection	No connection	No connection	No connection
7	RX DATA OUT	RX DATA OUT	RX DATA OUT	RX DATA OUT
8	STROBE	STROBE	STROBE	STROBE
9	GND	GND	GND	GND
10	RX DATA OUT	RX DATA OUT	RX DATA OUT	RX DATA OUT
11	No connection	No connection	No connection	No connection
12	No connection	No connection	No connection	No connection
13	V _{CC}	V _{CC}	V _{CC}	V _{CC}
14	No connection	No connection	No connection	No connection
15	RX DATA IN	RX DATA IN	RX DATA IN	RX DATA IN
16	RX $\overline{\text{DATA}}$ IN	RX $\overline{\text{DATA}}$ IN	RX $\overline{\text{DATA}}$ IN	RX $\overline{\text{DATA}}$ IN
17	No connection	No connection	No connection	No connection
18	GND <u>1/</u>	GND <u>1/</u>	GND <u>1/</u>	GND <u>1/</u>
19	V _{EE} <u>2/</u>	V _{EE} <u>2/</u>	V _{EE} <u>2/</u>	V _{EE} <u>2/</u>
20	V _{CC1}	V _{CC1}	V _{CC1}	V _{CC1}
21	TX INHIBIT	TX INHIBIT	TX INHIBIT	TX INHIBIT
22	TX DATA IN	TX DATA IN	TX DATA IN	TX DATA IN
23	TX $\overline{\text{DATA}}$ IN	TX $\overline{\text{DATA}}$ IN	TX $\overline{\text{DATA}}$ IN	TX $\overline{\text{DATA}}$ IN
24	No connection	No connection	No connection	No connection

1/ GND pins should all be connected externally.

2/ Pin 19 no connect (NC), for device types 05 and 06 only.

FIGURE 2. Terminal connections.

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Device type 02, 04, 06, and 08.

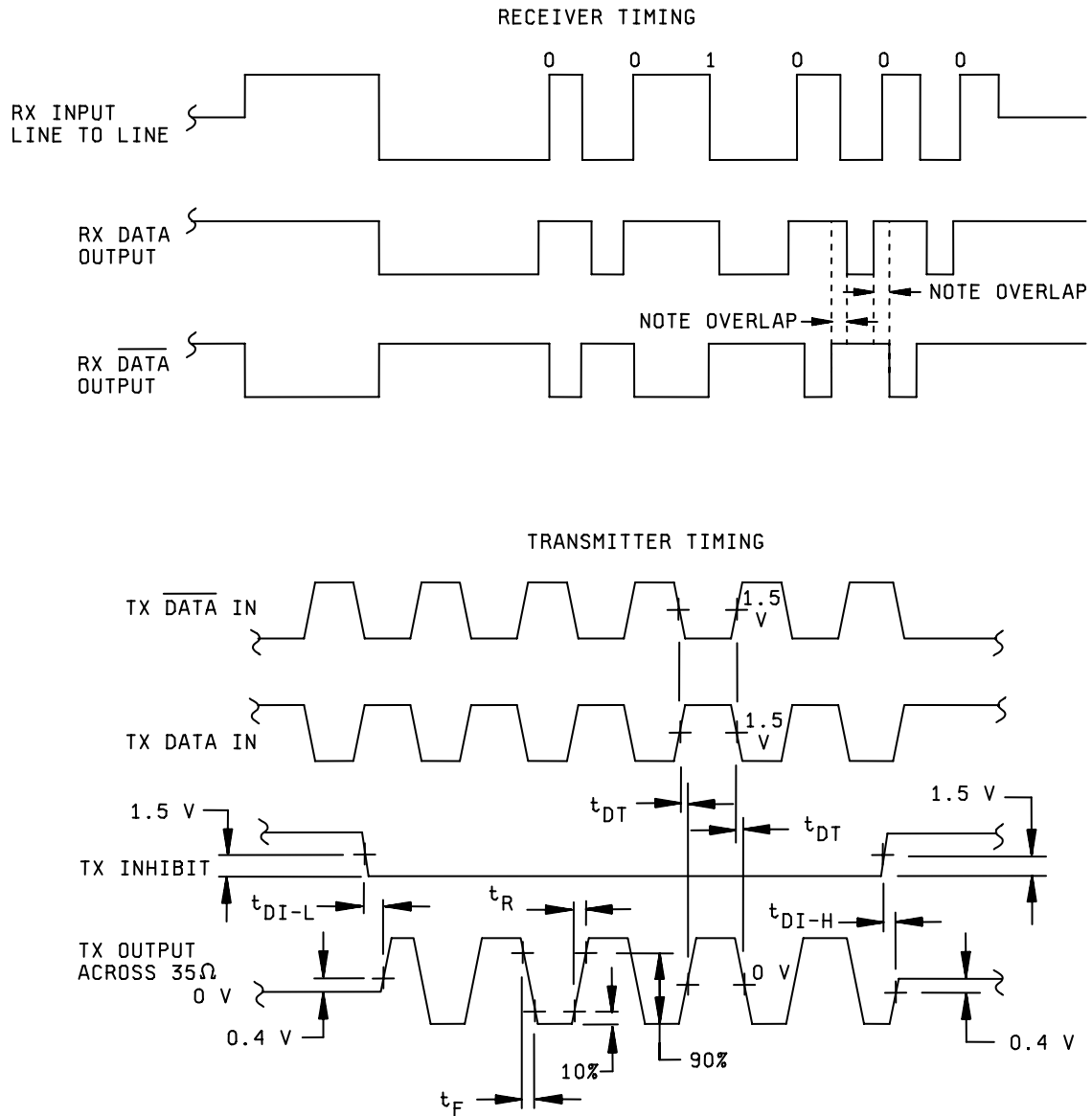


FIGURE 3. Timing waveforms - Continued.

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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	---
Final electrical 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
End-point electrical parameters for radiation hardness assurance (RHA) devices	Not applicable

* PDA applies to subgroup 1.

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.
- b. Subgroups 7 and 8 shall be omitted.

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

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 DSCC-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 method 1005 of MIL-STD-883.
 - (2) T_A as specified in accordance with table I of method 1005 or 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.

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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 shall inform Defense Supply Center Columbus (DSCC) when a system application requires configuration control and the applicable SMD. 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) 692-0544.

6.5 Comments. Comments on this drawing should be directed to DSCC-VA, Post Office Box 3990, 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 DSCC-VA and have agreed to this drawing.

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DATE: 07-05-02

Approved sources of supply for SMD 5962-90829 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 DSCC-VA. This information bulletin is superseded by the next dated revisions of MIL-HDBK-103 and QML-38534. DSCC maintains an online database of all current sources of supply at <http://www.dscclia.mil/Programs/Smcr/>.

Standard microcircuit drawing PIN <u>1/</u>	Vendor CAGE number	Vendor similar PIN <u>2/</u>
5962-9082901HTA 5962-9082901HTC 5962-9082901HXA 5962-9082901HXC 5962-9082901HYA 5962-9082901HYC	U4388 U4388 U4388 U4388 U4388 U4388	FC155371FP FC155371FP FC155371 FC155371 FC155371SSW FC155371SSW
5962-9082902HXA 5962-9082902HXC	U4388 U4388	FC155372 FC155372
5962-9082903HUA 5962-9082903HUC	88379 88379	ARX3420 ARX3420
5962-9082904HUA 5962-9082904HUC	88379 88379	ARX3424 ARX3424
5962-9082905HTA 5962-9082905HTC 5962-9082905HYA 5962-9082905HYC	57363 57363 57363 57363	NHI-1531FP NHI-1531FP NHI-1531 NHI-1531
5962-9082906HTA 5962-9082906HTC 5962-9082906HYA 5962-9082906HYC	57363 57363 57363 57363	NHI-1545FP NHI-1545FP NHI-1545 NHI-1545
5962-9082907HXX 5962-9082907HYX 5962-9082907HTX	<u>3/</u> <u>3/</u> <u>3/</u>	CT1589M CT1589MP CT1589MFP
5962-9082908HXX 5962-9082908HYX 5962-9082908HTX	<u>3/</u> <u>3/</u> <u>3/</u>	CT1589MI CT1589MIP CT1589MIFP

- 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.

Vendor CAGE number

Vendor name and address

U4388

C-MAC Microcircuits, Ltd
South Denes
Great Yarmouth
Norfolk NR30 3PX
England

57363

National Hybrid Incorporated
2200 Smithtown Avenue
Ronkonkoma, NY 11779-7329

STANDARD MICROCIRCUIT DRAWING BULLETIN – Continued.

DATE: 07-05-02

Vendor CAGE
number

88379

Vendor name
and address

Aeroflex Plainview Incorporated
35 South Service Road
Plainview, NY 11803-4101

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