

MSK DWG. NO.	REV.	SHEET 2 OF 12	SCALE NTS	SIZE A
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1.0 SCOPE:

1.1 SCOPE:

THIS DRAWING DESCRIBES DEVICE REQUIREMENTS FOR CLASS H MICROCIRCUITS TO BE PROCESSED IAW MIL-PRF-38534.

1.1.1 EXCEPTIONS TO MIL-PRF-38534 INCLUDE:

- A. ELEMENT EVALUATION OPTIMIZATION ALLOWED
- B. QML TESTING IS NOT REQUIRED
- C. ESD TESTING IS NOT REQUIRED (RATED CLASS I)
- D. WCA IS NOT REQUIRED

1.2 PART NUMBER:

THE PART NUMBER SHALL BE:

1.2.1 DEVICE TYPE:

1.2.2 CASE OUTLINE:

THE CASE OUTLINE SHALL BE AS DESIGNATED IN FIGURE 1.

1.3 ABSOLUTE MAXIMUM RATINGS:

1.4 RECOMMENDED OPERATING CONDITIONS:

1.5 DESIGN INFORMATION:

1.6 SPECIAL PROCESSES:


THIS DEVICE DOES NOT CONTAIN SPECIAL PROCESSES.

1.7 KEY CHARACTERISTICS:

THIS DEVICE DOES NOT CONTAIN KEY CHARACTERISTICS

1.8 NEW TECHNOLOGY:

THIS DEVICE DOES NOT CONTAIN NEW TECHNOLOGY

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCHES TOLERANCES ARE	DRAFTER	DATE	5 1 6 5 1				
FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE					
MATERIAL N/A	ENGINEERING CHECK	DATE					
FINISH N/A	QUALITY ASSURANCE	DATE					
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2.0 APPLICABLE DOCUMENTS:

2.1 GOVERNMENT SPECIFICATIONS, STANDARDS AND HANDBOOKS:

UNLESS OTHERWISE SPECIFIED, THE FOLLOWING SPECIFICATIONS, STANDARDS AND HANDBOOKS IN ISSUE AT THE DATE OF DEVICE PROCUREMENT FORM A PART OF THIS DRAWING TO THE EXTENT SPECIFIED HEREIN.

SPECIFICATIONS:

MILITARY:

MIL-PRF-38534 - PERFORMANCE SPECIFICATION HYBRID MICROCIRCUITS, GENERAL SPECIFICATION FOR

STANDARDS:

MILITARY:

MIL-STD-883 - TEST METHODS AND PROCEDURES FOR MICROELECTRONICS

MIL-STD-1686 - ELECTROSTATIC DISCHARGE CONTROL PROGRAM

HANDBOOKS:

MILITARY:

MIL-HNDBK-263 - ELECTROSTATIC DISCHARGE CONTROL HANDBOOK


COPIES OF THE MILITARY SPECIFICATIONS AND STANDARDS ARE AVAILABLE FROM:
STANDARDIZATION DOCUMENTS ORDER DESK
700 ROBBINS AVE, BLDG 4D
PHILADELPHIA, PA 19111-5094

2.2 ORDER OF PRECEDENCE:

IN THE EVENT OF CONFLICT BETWEEN THE SOURCE CONTROL DRAWING, THE CONTRACT/PURCHASE ORDER AND ANY APPLICABLE AND/OR SUBSIDIARY SPECIFICATIONS, THE FOLLOWING ORDER OF PRECEDENCE SHALL APPLY:

2.2.1 CONTRACT/PURCHASE ORDER

2.2.2 SOURCE CONTROL DRAWING

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FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE					
MATERIAL N/A	ENGINEERING CHECK	DATE					
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3.0 REQUIREMENTS:

3.1 ITEM REQUIREMENTS:

THE INDIVIDUAL ITEM REQUIREMENTS SHALL BE IAW MIL-PRF-38534 AND AS SPECIFIED HEREIN.

3.2 DESIGN, CONSTRUCTION AND PHYSICAL DIMENSION:

THE DESIGN, CONSTRUCTION AND PHYSICAL DIMENSIONS SHALL BE IAW MIL-PRF-38534 AND HEREIN.

3.2.1 CASE OUTLINE:

THE CASE OUTLINE SHALL BE IAW FIGURE 1.

3.2.2 TERMINAL CONNECTIONS/ELECTRICAL SCHEMATIC:

THE TERMINAL CONNECTIONS SHALL BE AS SPECIFIED IN FIGURE 2.

THE ELECTRICAL SCHEMATIC SHALL BE AS SPECIFIED IN FIGURE 3.

3.3 ELECTRICAL PERFORMANCE CHARACTERISTICS:

UNLESS OTHERWISE SPECIFIED, THE ELECTRICAL PERFORMANCE CHARACTERISTICS ARE AS SPECIFIED IN TABLE I AND APPLY OVER THE FULL CASE OPERATING TEMPERATURE RANGE.

3.4 ELECTRICAL TEST REQUIREMENTS:

THE ELECTRICAL TEST REQUIREMENTS SHALL BE THE SUBGROUPS SPECIFIED IN TABLE II. THE ELECTRICAL TEST FOR EACH SUBGROUP ARE DESCRIBED IN TABLE I.

3.5 MARKING:

PART MARKING SHALL BE IAW MIL-PRF-38534 AND SHALL INCLUDE THE FOLLOWING AND COMMENSURATE WITH DEVICE SIZE IN THE ORDER OF PRECEDENCE SHOWN:

3.5.1 INDEX POINT OR PIN 1 IDENTIFICATION AND ESD IDENTIFIER.

3.5.2 PART IDENTIFICATION NUMBER.

3.5.3 MANUFACTURER'S CAGE CODE, LOGO.

3.5.4 INSPECTION LOT CODE.

3.5.5 COUNTRY OF ORIGIN.

3.5.6 MANUFACTURER'S PART NUMBER IF DIFFERENT THAN PART ID NUMBER.

3.5.7 ANY OTHER INFORMATION AT THE MANUFACTURER'S OPTION.


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	DRAFTING CHECK	DATE				
MATERIAL N/A	ENGINEERING CHECK	DATE				
FINISH N/A	QUALITY ASSURANCE	DATE				
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TABLE II

MIL-PRF-38534 TEST REQUIREMENTS	SUBGROUPS
INTERIM ELECTRICAL PARAMETERS	1
FINAL ELECTRICAL TEST PARAMETERS	1, 2, 3, 4 <u>1/</u> <u>2/</u>
GROUP A TEST REQUIREMENTS	1, 2, 3, 4
GROUP C END-POINT ELECTRICAL PARAMETERS	1, 4

NOTES: 1/ PERCENT DEFECTIVE ALLOWABLE APPLIES TO SUBGROUP 1.
2/ INDUSTRIAL GRADE DEVICES (P/N MSK) SHALL BE TESTED TO SUBGROUPS 1 AND 4 ONLY.
 ANY REFERENCE TO MILITARY DOCUMENTS DOES NOT APPLY TO THE INDUSTRIAL DEVICE.

3.6 NOTIFICATION OF CHANGE:

NOTIFICATION OF CHANGE SHALL BE PROVIDED TO THE PROCURING ACTIVITY FOR WRITTEN APPROVAL PRIOR TO IMPLEMENTATION OF CLASS I DESIGN AND/OR MANUFACTURING CHANGES AFFECTING THE ITEM AS DEFINED IN MIL-PRF-38534. BASELINE FOR CHANGES SHALL BE REFERENCED TO THE FIRST LOT OF ITEMS SUCCESSFULLY COMPLETING THE QUALITY CONFORMANCE/PERIODIC INSPECTION REQUIRED BY THIS DOCUMENT.

3.7 CERTIFICATION OF CONFORMANCE AND ACQUISITION TRACEABILITY:

CERTIFICATION OF CONFORMANCE AND ACQUISITION TRACEABILITY SHALL BE PER MIL-PRF-38534 AND THIS DRAWING.

4.0 QUALITY ASSURANCE PROVISIONS:

4.1 SAMPLING AND INSPECTION:


SAMPLING AND INSPECTION PROCEDURES SHALL BE IAW MIL-PRF-38534 CLASS H.

4.2 ELEMENT EVALUATION:

ELEMENT EVALUATION SHALL BE IAW MIL-PRF-38534 WITH ALLOWANCE OF OPTIMIZATION.

4.3 SCREENING:

SCREENING SHALL BE IAW MIL-PRF-38534 CLASS H AND SHALL BE CONDUCTED ON ALL DEVICES PRIOR TO PERIODIC INSPECTION.

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	DRAFTING CHECK	DATE				
MATERIAL N/A	ENGINEERING CHECK	DATE				
FINISH N/A	QUALITY ASSURANCE	DATE				
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THE FOLLOWING ADDITIONAL CRITERIA SHALL APPLY:

- a. BURN-IN TEST, MIL-STD-883, METHOD 1030 (OPTIONAL) 1015 AND FIGURE 4.
- 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.

4.4 CONFORMANCE INSPECTION:

CONFORMANCE INSPECTION SHALL BE IAW MIL-PRF-38534 CLASS H AND AS SPECIFIED HEREIN.

4.4.1 GROUP A INSPECTION:

GROUP A INSPECTION SHALL BE IAW MIL-PRF-38534 AND AS FOLLOWS:

- a. TEST SHALL BE AS SPECIFIED IN TABLE II HEREIN.

4.5 PERIODIC INSPECTION:

4.5.1 GROUP B INSPECTION:

GROUP B INSPECTION SHALL BE IAW MIL-PRF-38534.

4.5.2 GROUP C INSPECTION:

GROUP C INSPECTION SHALL BE IAW MIL-PRF-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 USING THE CIRCUIT SHOWN ON FIGURE 4.
 2. $T_c = +125=C$ MINIMUM.
 3. TEST DURATION, 1000 HOURS, EXCEPT AS PERMITTED BY METHOD 1005 OF MIL-STD-883.

4.5.3 GROUP D INSPECTION:

GROUP D INSPECTION SHALL BE IAW MIL-PRF-38534.

4.6 QUALIFICATION:

- 4.6.1 QUALIFICATION (QML) TESTING IS NOT REQUIRED.


5.0 PACKAGING:

5.1 PREPARATION FOR DELIVERY:

- 5.1.1 THE PARTS SHALL BE SUITABLY PROTECTED FROM ELECTROSTATIC DAMAGE IAW MIL-PRF-38534.

5.2 DATA PACKAGE:

- 5.2.1 FOR EACH SHIPMENT, THE DATA PACKAGE SHALL INCLUDE A C OF C AND PACKING SLIP.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCHES TOLERANCES ARE	DRAFTER	DATE	5 1 6 5 1		SOURCE CONTROL DRAWING		
FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE					
MATERIAL N/A	ENGINEERING CHECK	DATE					
FINISH N/A	QUALITY ASSURANCE	DATE		MSK DWG. NO.			REV.

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6.0 NOTES:

6.1 APPLICATION(S):

N/A

6.2 ELECTROSTATIC DISCHARGE SENSITIVITY (ESDS):

ELECTROSTATIC DISCHARGE CONTROL PROGRAM FOR PROTECTION OF ELECTRICAL AND ELECTRONIC PARTS. ASSEMBLIES AND EQUIPMENT SHALL BE IAW MIL-STD-1686, CLASS I AND MIL-HDBK-263.

6.3 APPROVED SOURCES OF SUPPLY:

IDENTIFICATION OF THE APPROVED SOURCE(S) OF SUPPLY HEREIN IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM(S).

6.3.1 APPROVAL CRITERIA:

THE FOLLOWING CRITERIA SHALL BE COMPLIED WITH TO BECOME AN APPROVED SUPPLIER TO THIS DRAWING.


- a. PRODUCT ASSURANCE PROGRAM AND LINE CERTIFICATION REQUIREMENTS PROCEDURES CONFORM TO MIL-PRF-38534, CLASS H AND AS STATED HEREIN.

6.3.2 APPROVED SUPPLIERS:

ADDITIONAL SOURCES WILL BE ADDED AS THEY BECOME AVAILABLE. THE SUPPLIERS LISTED HEREIN HAVE AGREED TO THIS DRAWING.


VENDOR CAGE CODE	VENDOR PART NUMBER	SCREENING
51651		INDUSTRIAL GRADE
51651		MIL-PRF-38534

VENDOR CAGE CODE	VENDOR NAME AND ADDRESS
51651	M.S. KENNEDY CORPORATION 4707 DEY ROAD LIVERPOOL, NY 13088

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	DRAFTING CHECK	DATE					
MATERIAL N/A	ENGINEERING CHECK	DATE					
FINISH N/A	QUALITY ASSURANCE	DATE					
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FIGURE 1 CASE OUTLINE

DO NOT SCALE DRAWING	APPROVALS		FSCM NO.	 M.S. KENNEDY CORPORATION LIVERPOOL, NEW YORK 13088 TITLE SOURCE CONTROL DRAWING	DOCUMENT CONTROL STAMP		
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FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE					
MATERIAL N/A	ENGINEERING CHECK	DATE					
FINISH N/A	QUALITY ASSURANCE	DATE					
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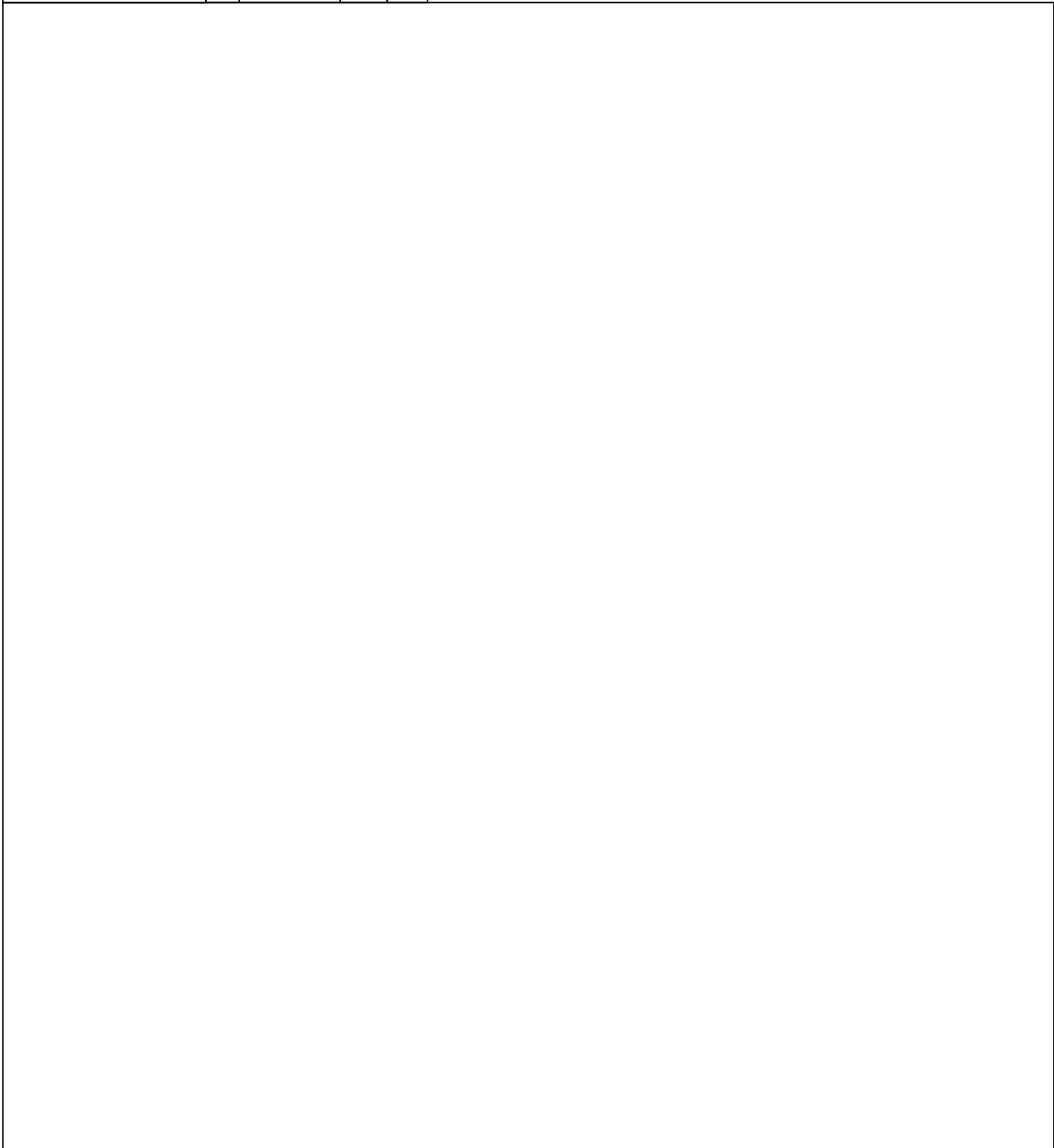



FIGURE 2 TERMINAL CONNECTIONS

DO NOT SCALE DRAWING	APPROVALS		FSCM NO.		M.S. KENNEDY CORPORATION LIVERPOOL, NEW YORK 13088	DOCUMENT CONTROL STAMP
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCHES TOLERANCES ARE	DRAFTER	DATE	5 1 6 5 1		TITLE	
FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE		SOURCE CONTROL DRAWING		
MATERIAL N/A	ENGINEERING CHECK	DATE				
FINISH N/A	QUALITY ASSURANCE	DATE		MSK DWG. NO.	REV.	

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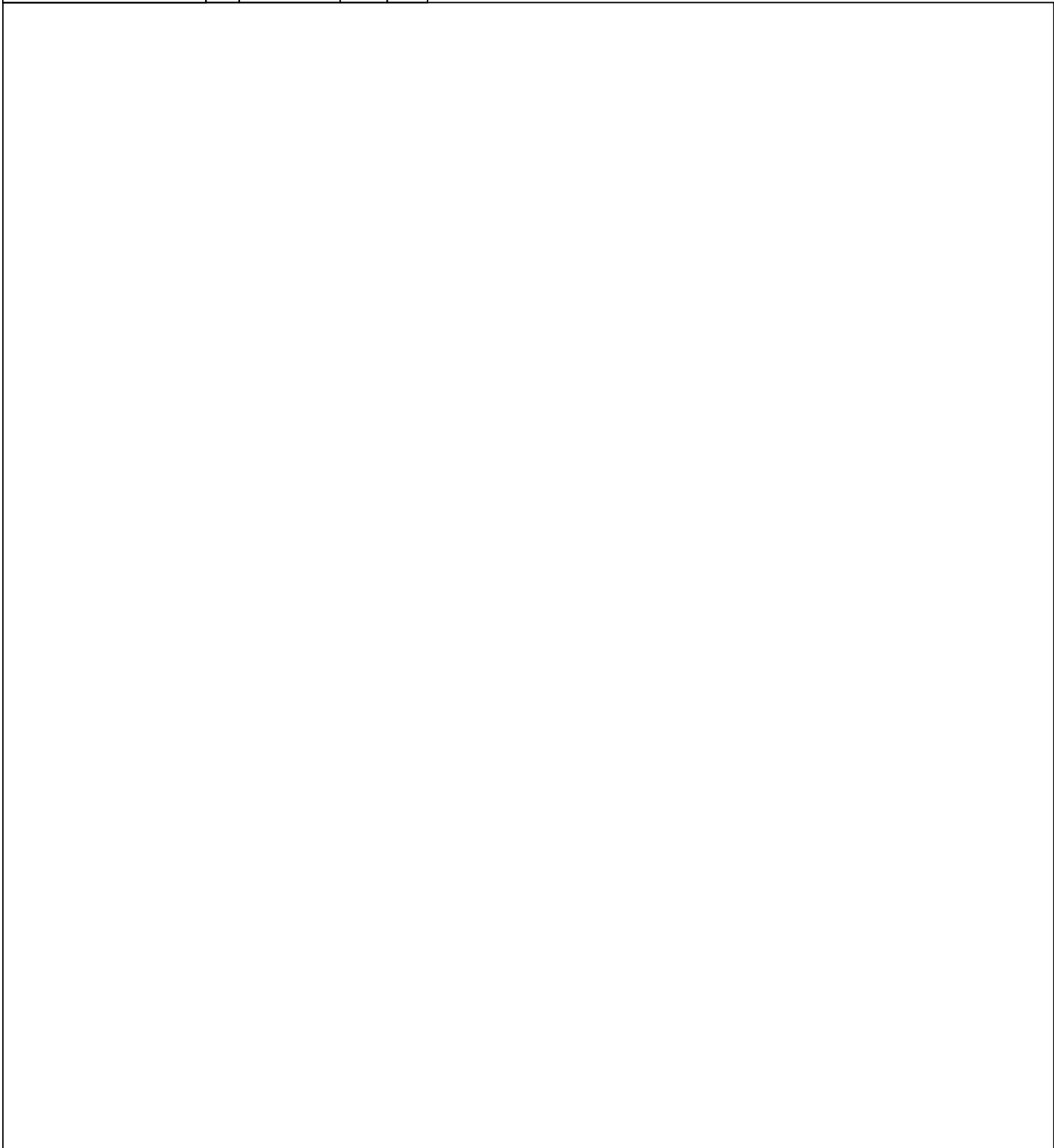




FIGURE 3 ELECTRICAL SCHEMATIC (FOR REFERENCE ONLY)

DO NOT SCALE DRAWING	APPROVALS		FSCM NO.	 M.S. KENNEDY CORPORATION LIVERPOOL, NEW YORK 13088 TITLE SOURCE CONTROL DRAWING	DOCUMENT CONTROL STAMP		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCHES TOLERANCES ARE	DRAFTER	DATE	5				
FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE	1				
MATERIAL N/A	ENGINEERING CHECK	DATE	6				
FINISH N/A	QUALITY ASSURANCE	DATE	5				
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FIGURE 4 BURN-IN SCHEMATIC

DO NOT SCALE DRAWING	APPROVALS		FSCM NO.		M.S. KENNEDY CORPORATION LIVERPOOL, NEW YORK 13088	DOCUMENT CONTROL STAMP
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCHES TOLERANCES ARE	DRAFTER	DATE	5 1 6 5 1		TITLE	
FRACTIONS DECIMALS ANGLE ± - ± - ± -	DRAFTING CHECK	DATE		SOURCE CONTROL DRAWING		
MATERIAL N/A	ENGINEERING CHECK	DATE				
FINISH N/A	QUALITY ASSURANCE	DATE		MSK DWG. NO.	REV.	