CONFIGURATION ITEM VERIFICATION

REVIEW (CIVR) VALIDATION REPORT

I GENERAL INFORMATION

a) CONTRACTOR - - - - - - - - - - - TECHNICAL MATERIEL CORPORATION
700 FENIMORE ROAD
MAMARONECK, NEW YORK 10543

b) CONTRACT ORDER NUMBER - - - - DAAB07-81C-1108
ITEM NO. 0006AB for item 0004

c) NOMENCLATURE - - - - - - - - - SIF CHALLENGE VIDEO ASSEMBLY
P/O AN/TPX-46
DRAWING NO. SM-D-586748
NSN 5895-00-199-7060

(EQUIPMENTS OF ESTABLISHED DESIGN)

d) FIRST ARTICLE - - - - - - - - - STOCK NO. REPRESENTED BY 001 & 002.

e) FIRST ARTICLE FABRICATED AT:
TECHNICAL MATERIEL CORPORATION
700 FENIMORE ROAD
MAMARONECK, NEW YORK 10543

II REFERENCE DATA:

a) MIL-P-11268K (ARMY)
MIL-STD-252B PAGES 15, 16, 17 (PRINTED WIRING BOARD)
MIL-STD-105D
MIL-M-13231A
MIL-STD-454

b) LIST OF PROPOSED SOURCES OF STANDARD ITEMS

c) STATEMENT OF COMPLIANCE

d) GOVERNMENT FURNISHED DRAWINGS

e) AMP SPECIAL INDUSTRIES BULLETIN 703-3

f) TMC SPECIFICATION S1394

g) SMA 595922 REQUIREMENTS FOR CIRCUIT CARD ASSEMBLIES

1. PURPOSE:

TO ASSURE THAT THE PARTS, MATERIALS AND PROCESSES USED IN SM-D-586748 ASSEMBLY ARE THOSE SPECIFIED ON THE GOVERNMENT FURNISHED DRAWINGS OR SPECIFICATIONS.

2. COMPLIANCE

ALL COMPONENTS USED IN THE MANUFACTURE OF SM-D-586748 (SIF CHALLENGE VIDEO ASSEMBLY) MEET THE REQUIREMENTS STATED ON DRAWING PL SM-B-586748. FOR EACH COMPONENT USED A CERTIFICATE OF COMPLIANCE IS AVAILABLE ALONG WITH TMC'S PURCHASE ORDER ON ALL MATERIALS.

3. INCOMING MATERIAL CONTROL PROCEDURES

ALL MATERIAL IS COMPARED WITH THE RECEIVING REPORT. VERIFICATION OF VENDOR, QUANTITIES, PART NUMBERS AND ACCURACY OF CERTIFICATES OF COMPLIANCE IS REVIEWED.

BEFORE MATERIALS ARE ISSUED ON THE PRODUCTION FLOOR A SAMPLING TEST OF MATERIALS IS PERFORMED.

3. a. PRINTED WIRING BOARD SM-D-586648 WAS INSPECTED IN ACCORDANCE WITH GOVERNMENT SUPPLIED DRAWINGS (SM-D-586648) SHEETS 1, 2 AND 3) ALSO MIL-STD-252B PAGES 15, 16 AND 17.

RESISTORS R1 AND 2 HAVE BEEN INSPECTED USING THE INSPECTION METHOD (REF MIL-STD-105) TMC STANDARD QA 3008.

CAPACITORS C1, C2 AND C3 HAVE BEEN INSPECTED, EMPLOYING THE SAME METHOD AS STATED ABOVE.

M21097/15-13 (P1) CONNECTOR WAS INSPECTED, USING AS A GUIDE AMP SPECIAL INDUSTRIES PRODUCT BULLETIN 703-3 PRINTED CIRCUIT & ELECTRONIC PACKAGING PRODUCTS.

CONNECTOR SM-D-586472 WAS INSPECTED IN ACCORDANCE WITH THE GOVERNMENT SUPPLIED DRAWING SM-D-586472.

ALL THE INTERGRATED CIRCUITS U1 THROUGH U15 WERE EXAMINED, USING THE INSPECTION METHOD REF. (MIL STANDARD 105) TMC STANDARD QA 3008, AND MIL STANDARD 454 REQUIRMENT 64.

4. ASSEMBLING PROCEDURE

ALL COMPONENT PARTS FOR THE (SIF CHALLENGE VIDEO ASSEMBLY) ASSEMBLED AS PER DRAWING SM-D-586748. ALL COMPONENTS ARE HAND SOLDERED IN ACCORDANCE WITH MIL STD 454 REQUIREMENT 5, AND THE METHOD OF ASSEMBLY CONFORMS WITH "GENERAL REQUIREMENTS FOR CIRCUIT CARD ASSEMBLIES" SM-A-595922.

5. MARKING PROCESS

MARKING PROCESS CONFORMS TO MIL-M-13231A, AS NOTED ON ASSEMBLY DRAWING SM-D-586748, NOTE 4.

6. CONFORMAL COATING

CONFORMAL COATING PROCESS CONFORMS TO SM-A-587204 AND TMC SPECIFICATION S1394.

CONFIGURATION ITEM VERIFICATION REVIEW (CIVR)

TOOK PLACE AT:

THE TECHNICAL MATERIEL CORPORATION
700 FENIMORE ROAD
MAMARONECK, NEW YORK 10543

DATE _____

WITNESSED BY:
TMC REPRESENTATIVE

_____

WITNESSED BY:
GOVERNMENT REPRESENTATIVE

_____

7. CONTRACTOR TESTING

FIRST ARTICLE APPROVAL CONTRACTOR TESTING WAS PERFORMED JANUARY 13, 1983 FOR THE SIF CHALLENGE VIDEO ASSEMBLY SMD586748. TEST SPECIFICATION SMA635376 WAS USED AS A GUIDE FOR TESTING. NO DISCREPANCIES WERE FOUND IN PERFORMING THE REQUIRED TESTS. THE FOLLOWING ARE SPECIFIC REPLIES OR ANSWERS TO THE QUESTIONS ASKED IN THE TEST SPECIFICATION. OUTLINED IN THE FOLLOWING PARAGRAPHS ARE THE SMA635376 PARAGRAPH NUMBERS WHERE AN ANSWER IS NECESSARY.

SMA635376

3.2.2.1 OUTPUT PIN 15 MEASURES A HIGH LEVEL

3.2.3 SPARE FOUR-INPUT GATE TEST

3.2.3.2 OUTPUT PIN 5 MEASURES A LOW LEVEL

3.2.3.4 OUTPUT PIN 5 MEASURES A HIGH LEVEL

3.2.3.6 OUTPUT PIN 5 MEASURES A HIGH LEVEL

3.2.3.8 OUTPUT PIN 5 MEASURES A HIGH LEVEL

3.2.3.10 OUTPUT PIN 5 MEASURES A HIGH LEVEL

3.2.4 A GATE, $\overline{\text{A GATE}}$ TEST

3.2.4.2 OUTPUT PIN 6 MEASURES A WAVE FORM WHICH GOES HIGH AT THE (LE) OF THE PULSE AT INPUT PIN 17 AND GOES LOW AT THE (LE) OF THE PULSE AT INPUT 16

3.2.4.3 OUTPUT PIN 8 MEASURES A WAVE FORM WHICH IS THE INVERSE OF THE WAVE FORM AT OUTPUT PIN 6

3.2.5 SIF INTERLACE, MODE C INTERLACE

3.2.5.2 OUTPUT PIN 14 MEASURES A SQUARE WAVE WHICH TOGGLES AT THE (LE) OF THE PULSE AT INPUT PIN 18

3.2.5.3 OUTPUT PIN 7 MEASURES A SQUARE WAVE WHICH IS THE INVERSE OF THE WAVE FORM AT OUTPUT PIN 14

3.2.5.5 OUTPUT PIN 14 MEASURES A HIGH LEVEL
OUTPUT PIN 7 MEASURES A LOW LEVEL

3.2.6 REHAPED SIF CHAL VIDEO, $\overline{\text{RESHAPED SIF CHAL VIDEO}}$, SIR P1

3.2.6.2 OUTPUT PIN 4 MEASURES A PULSE PAIR WITH THE FOLLOWING CHARACTERISTICS

POLARITY IS POSITIVE
PULSE SPACING IS 8.0uS
PULSE WIDTH ADJUSTABLE BY R1 IS 0.72uS TO 0.82uS
FINAL ADJUSTMENT IS 0.88uS
POSITION OF SECOND PULSE IS 23± 0.5uS AFTER
THE (LE) OF THE PULSE AT INPUT PIN 28.

3.2.6.3 OUTPUT PIN 3 MEASURES A PULSE PAIR WHICH IS THE SAME AS OUTPUT PIN 4, EXCEPT THAT THE PULSE PAIR IS INVERTED

3.2.6.4 OUTPUT PIN 25 MEASURES A PULSE WITH THE FOLLOWING CHARACTERISTICS

POLARITY IS NEGATIVE
POSITIONED WITHIN 0.1uS OF THE FIRST PULSE
AT OUTPUT PIN 3.
PULSE WIDTH IS 0.7uS TO 1.3uS

3.2.6.5 OUTPUT PIN 22 MEASURES A PULSE WITH THE FOLLOWING CHARACTERISICS

POLARITY IS NEGATIVE
POSITIONED WITHIN 0.1uS OF THE SECOND
PULSE AT OUTPUT PIN 3
PULSE WIDTH IS 0.7uS TO 1.3uS

3.2.6.7 OUTPUT PIN 4 PULSE PAIR SPACING IS 5uS
OUTPUT PIN 3 PULSE PAIR SPACING IS 5uS

3.2.6.8 OUTPUT PIN 25 MEASURES A PULSE WITH THE FOLLOWING CHARACTERISTICS

POLARITY IS NEGATIVE
POSITIONED WITHIN 0.1uS OF THE FIRST
PULSE AT OUTPUT PIN 3
PULSE WIDTH IS 0.7uS TO 1.3uS

3.2.6.10 OUTPUT PIN 4 PULSE PAIR SPACING IS 3uS
OUTPUT PIN 3 PULSE PAIR SPACING IS 3uS

3.2.6.11 OUTPUT PIN 25 MEASURES A PULSE WITH THE FOLLOWING CHARACTERISTICS

POLARITY IS NEGATIVE
POSITIONED WITHIN 0.1uS OF THE FIRST PULSE
AT OUTPUT PIN 3
PULSE WIDTH IS 0.7uS TO 1.3uS

3.2.6.13 OUTPUT PIN 4 MEASURES A PULSE PAIR WITH 3uS SPACING WHEN OUTPUT PIN 14 IS A HIGH LEVEL

OUTPUT PIN 4 MEASURES A PULSE PAIR WITH 21uS SPACING WHEN OUTPUT PIN 14 IS A LOW LEVEL

END OF TEST RESULTS