

HAL COMMUNICATIONS CORP.

March 19, 1991

USE and PREPARATION of

SOURCE CONTROL DRAWINGS
and
SPECIFICATION CONTROL DRAWINGS

870-99050 REV: A

1.0 DEFINITIONS

Specification Control Drawings and Source Control Drawings are drawings used to describe specifications and identify qualified manufacturers and vendors of parts supplied to HAL Communications.

1.1 Source Control Drawings are used to describe commercially designed and manufactured parts used by HAL Communications Corp. Most HAL parts (resistors, semiconductors, capacitors, etc.) will be specified on Source Control Drawings. Only the indicated manufacturers and manufacturer's part numbers shown on the Source Control Drawing are approved for purchase by HAL Communications.

1.2 Specification Control Drawings are used to specify parts which are custom manufactured to HAL Communications Corp. specifications. Mechanical parts, Circuit Boards, and Power Transformers are examples of parts to be specified using a Specification Control Drawing. Only parts manufactured to the specifications indicated and supplied by the referenced manufacturer are approved for purchase by HAL Communications.

1.3 Source and Specification Control Drawings are similar in appearance and function. Drawings to one of the two formats will replace current HAL "Parts Specification Forms" ("Picture Book").

These "SCD's" all require use of an "A" size (8.5 x 11) title block drawing. A sample of Source and Specification Control Drawings are attached.

1.4 Source and Specification Control Drawings are created by Configuration Management or the HAL design engineering staff and must be approved by the design engineer and the Configuration Manager. New part numbers shall not be added to HAL inventory control records nor purchased

for production use prior to issuance of an approved SCD.

2.0 NOTES APPLICABLE TO BOTH FORMS:

2.1 The SCD Drawing Number shall be the HAL part number, complete with dash. For example:

HAL P/N	Device	SCD DWG No.	DWG Type
111-22220	2200 pF, CK06 Ceramic Capacitor	111-22220	Source
050-12340	ST-6100 Input Circuit Board	050-12340	Spec.

2.2 The title block name shall be related to the group and then specific part. For the above examples:

"CAPACITOR, 2200 pF CK06"
"PWB, ST-6100 INPUT"

Note: "PWB" = Printed Wiring Board = "Circuit Board"

2.3 The "CAGE Code" block is the number for HAL Communications. It is **63256** for all drawings originated by HAL Communications. This number is also known as the "FSCM" number (Federal Supply Code for Manufacturers). "FSCM" and "CAGE Code" appear to be interchangeable with "CAGE Code" being the currently preferred DOD version. "FSCM" or CAGE codes are presently listed in the ST-8000 Technical Manual and on the ST-8000A parts list. Others may be determined from Micro-fiche files.

2.4 As a SCD is revised, the "REV" title block will be used. Revisions are indicated by upper-case letters, A through Z, except "I", "O", "Q", "S", "X", and "Z". Original and non-revised drawings should have a dash (-) in the REV block.

HAL exception to MIL numbering scheme: At present, HAL codes the final digit of the part number of mechanical parts, circuit boards, and custom transformers to indicate the revision level of the part. DOD-STD-100C does not support this. However, HAL shall continue to use this scheme when setting our part numbers and when preparing SCD's. In addition, the HAL SCD will also include the REV letter in the appropriate block.

2.5 The title block includes several blocks that will not be presently used. These blocks may be required in the future but should be left blank for the present.

3.0 SPECIAL REQUIREMENTS FOR SOURCE CONTROL DRAWINGS:

3.1 The words "SOURCE CONTROL DRAWING" shall be included above the title block on all Source Control Drawings.

3.2 Required Vendor Notes:

DOD-STD-100C requires the following notes be included on each SCD:

NOTE 1:

ONLY THE ITEM DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE VENDOR(S) LISTED HEREON IS APPROVED BY HAL COMMUNICATIONS CORP. FOR THE APPLICATION(S) SPECIFIED HEREON. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR APPROVAL BY HAL COMMUNICATIONS CORP. OR BY _____.

NOTE 2:

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

3.3 Required ESD Note

If the Source Control Drawing is for an "Electrostatic Sensitive Device" (ESD), the attached ESD symbol and notes shall be included. The ESD symbol and "CAUTION", "SENSITIVE ELECTRONIC DEVICES" shall be included on all HAL semiconductor SCD's. The symbol and note should be placed above "SOURCE CONTROL DRAWING". The "ESD Class" of the device may be determined from the "ESD Handbook".

3.4 Approved Sources of Supply

This block area shall be in the upper left corner of the Source Control Drawing. The required format is:

APPROVED SOURCES OF SUPPLY

SUPPLIER DATA
PART
CAGE NUMBER NAME AND ADDRESS

1. The CAGE Code is determined as noted above.
2. The "Part Number" is the full Manufacturer's Part Number
3. The "Address" need only be the City and State (see Mfgr's data sheet).

NOTE: "Supplier" means manufacturer, not distributor (Motorola, not Hamilton-Avnet or Hall-Mark).

3.5 The balance of the drawing area should show the same pictorial and specification data included on our present Parts Specification Forms.

4.0 SPECIAL REQUIREMENTS FOR SPECIFICATION CONTROL DRAWINGS

4.1 The words "SPECIFICATION CONTROL DRAWING" appear immediately above the title block.

4.2 Required note:

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

4.3 If the specified device is ESD, the ESD notes above apply.

4.4 The same "APPROVED SOURCES OF SUPPLY" box used for Source Control Drawings should be used for Specification C.D.'s.

Here, HAL must depart from DOD-STD-100C for in-house SCD's. HAL should list our normal sources of supply (Schumacher, for transformers, for example). HOWEVER, if the Specification

HAL COMMUNICATIONS CORP. SOURCE/SPECIFICATION CONTROL DRAWINGS
PAGE 6

Control Drawing becomes a deliverable data item to the government to DOD-STD-100C specifications, this block should be revised to show HAL Communications Corp. as the only source of supply - the device is designed by and proprietary to HAL Communications.

4.5 Specification Control Drawings will generally be used for HAL-designed parts, for which there are schematic and mechanical drawings. These related drawing numbers must be referenced in the notes on the SCD. The "Master Picture Book" in receiving should have a copy of all related drawings attached to the SCD. The SCD itself should be marked "Sheet 1 of x" ("X" = total number of drawings).

EXCEPTION: Reference, but do not attach printed circuit art-work to the SCD. Configuration Management and Quality Assurance will have current copies of the art-work.

5.0 SPECIAL PURCHASING REQUIREMENTS

5.1 Each purchase order for Specification Controlled items, (Mechanical Parts, Transformers, and Circuit boards) must include a copy of the Specification Control Drawing and copies of all applicable drawings, negatives, and art-work under the following conditions:

1. ALL orders for mechanical parts.
2. ALL orders for newly specified devices.
3. ALL orders to a supplier who has not previously manufactured the part for HAL Communications Corp. within the previous 12 months.
4. All orders for parts with a new revision or whose revision has changed since the last delivery by the selected manufacturer.

A copy of the Specification Control Drawing and related documents is not required to be furnished with the purchase order under the following conditions:

1. The P.O. is not for a mechanical part

AND

2. The selected supplier has satisfactorily delivered to HAL within the previous 12 month period the same part of the same revision level.

5.2 A copy of the Source Control Drawing is not required to be included with a purchase order unless such procedure is specifically required of HAL by its customer(s).

Each Purchase Order shall, however, include the following note:

ALL SUPPLIED MATERIALS MUST MATCH THE LISTED MANUFACTURER AND MANUFACTURER'S PART NUMBER. ALTERNATE MANUFACTURERS or ALTERNATE PART NUMBERS ARE NOT APPROVED AND WILL BE REJECTED IF DELIVERED TO HAL COMMUNICATIONS CORP.

5.3 When contracts to HAL require inclusion of a Source Control or Specification Control Drawing with all purchase orders, the following note shall be included on the Purchase Order:

ALL SUPPLIED MATERIALS MUST MEET ALL REQUIREMENTS OF THE ATTACHED HAL SOURCE (SPECIFICATION) CONTROL DRAWING NO. _____. ALTERNATE MANUFACTURERS OR ALTERNATE PART NUMBERS ARE NOT APPROVED AND WILL BE REJECTED IF DELIVERED TO HAL COMMUNICATIONS.

5.4 When Military Specification Devices are ordered, the following note must be included:

1. MIL-type and commercial devices cannot be mixed on the same purchase order; the P.O. must be for all MIL or all commercial devices.
2. Include the following note on the P.O.:

THE HEREIN ORDERED MATERIALS MUST CONFORM TO ALL STATED U.S. MILITARY SPECIFICATIONS. ALTERNATE PARTS ARE NOT ACCEPTABLE AND WILL BE REJECTED IF SHIPPED.

HAL COMMUNICATIONS REQUIRES THAT THE VENDOR OR MANUFACTURER INCLUDE A SIGNED CERTIFICATION THAT ALL SUPPLIED PARTS FULLY CONFORM WITH THE REFERENCED MILITARY REQUIREMENTS. PARTS RECEIVED WITHOUT A SIGNED CERTIFICATION WILL BE REJECTED.