A-A-55463A
August 12, 1994
SUPERSEDING
A-A-55463
October 1, 1993

COMMERCIAL ITEM DESCRIPTION

CONNECTORS, ELECTRICAL, POWER, RECEPTACLE HOUSINGS, POLARIZED

The General Services Administration has authorized the use of this commercial item description (CID).

Abstract. This commercial item description covers the general requirements for connector, power, electrical receptacle housing. This connector can be used in applications that require crimp to discrete stranded wires, size 14 AWG through 24 AWG. Connectors covered by this CID are intended for commercial/industrial applications and shall not be used in military systems needing stringent environmental and electrical requirements.

Part or Identifying Number (PIN). The PIN for the CID shall be as shown in the following example:

A-A-55463	-	01
CID number		Dash number

Salient characteristics.

CID sheet. The electrical connectors shall be in accordance with the requirements specified herein.

Design, construction, and dimensions. Design, construction, and dimensions shall be as specified on figure 1 and table I.

Operating temperature. The operating temperature range shall be from -55°C to +105°C.

Current/voltage. Current/voltage shall be 600 V ac at 15 amperes maximum. Maximum rated current that can be carried is limited by the maximum operating temperature of housings, which is +105°C and maximum temperature rise of contacts, which is +30°C. Variables which shall be considered for each application are wire size, connector size, contact material, and ambient temperature.

Connector housings. Connector housings shall be molded from a nylon material UL 94V-0 brick red for high impact and dielectric strength.

Dielectric withstanding voltage. There shall be no breakdown of the insulating material when subjected to 5000 V ac for 1 minute between adjacent contacts of the mated connector assemblies.

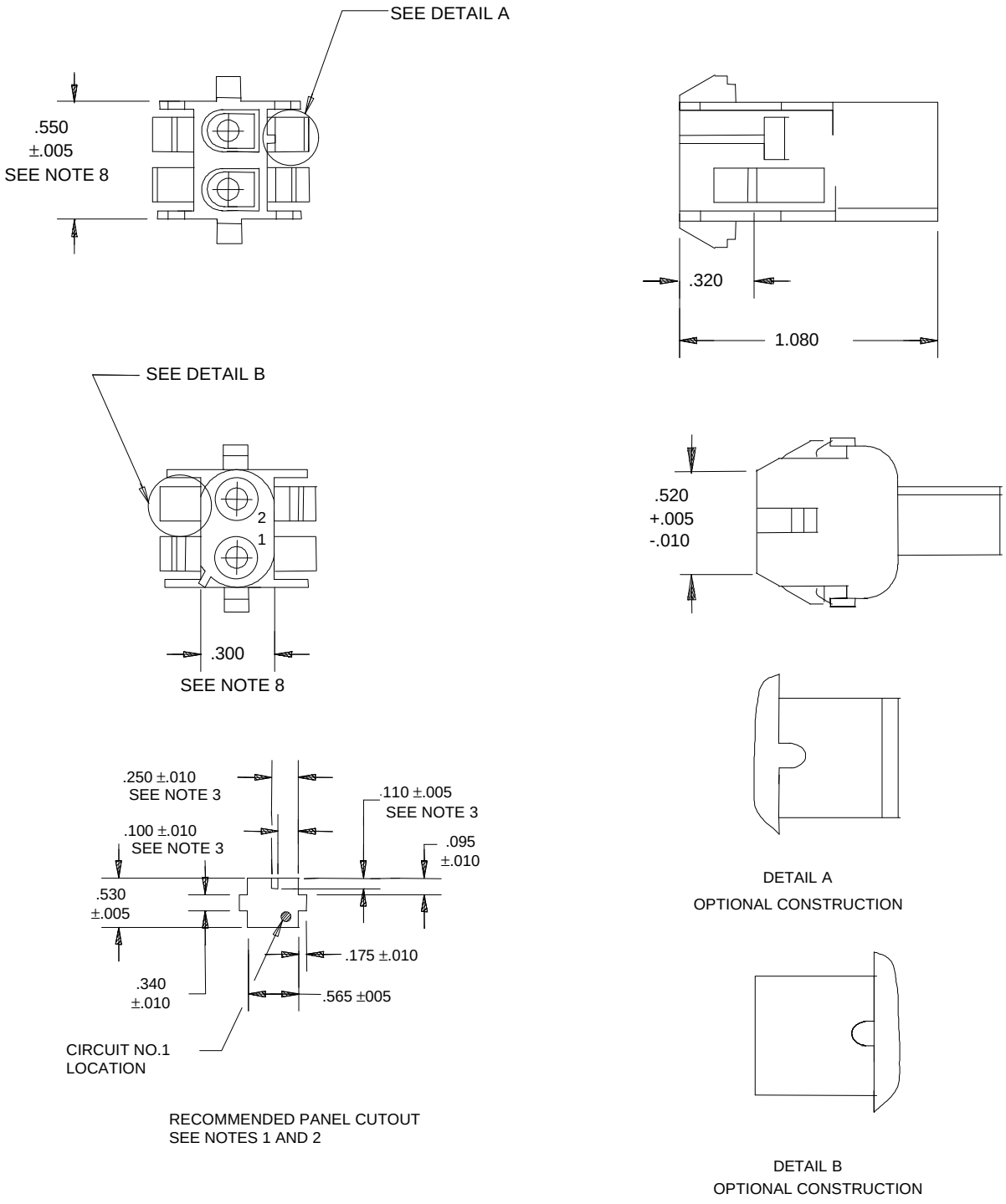
Insulation resistance. Insulation resistance shall be 1000 megohms minimum between adjacent contacts of mated connector assemblies, initially.

Mating force. Connector mating force shall not exceed 13.34 newtons (3 pounds) solid pin styles and 6.67 newtons (1.5 pounds) for split pin styles, per contact.

Unmating force. Connector unmating force shall not exceed 3.11 newtons (0.7 pound) minimum for solid pin styles and 2.22 newtons (0.5 pound) minimum for split pins per contact.

Contact retention. When an axial load is applied to the contact at the rate of 12.70 millimeters (.5 inch) per minute, the contact retention force shall be 66.72 newtons (15 pounds) minimum.

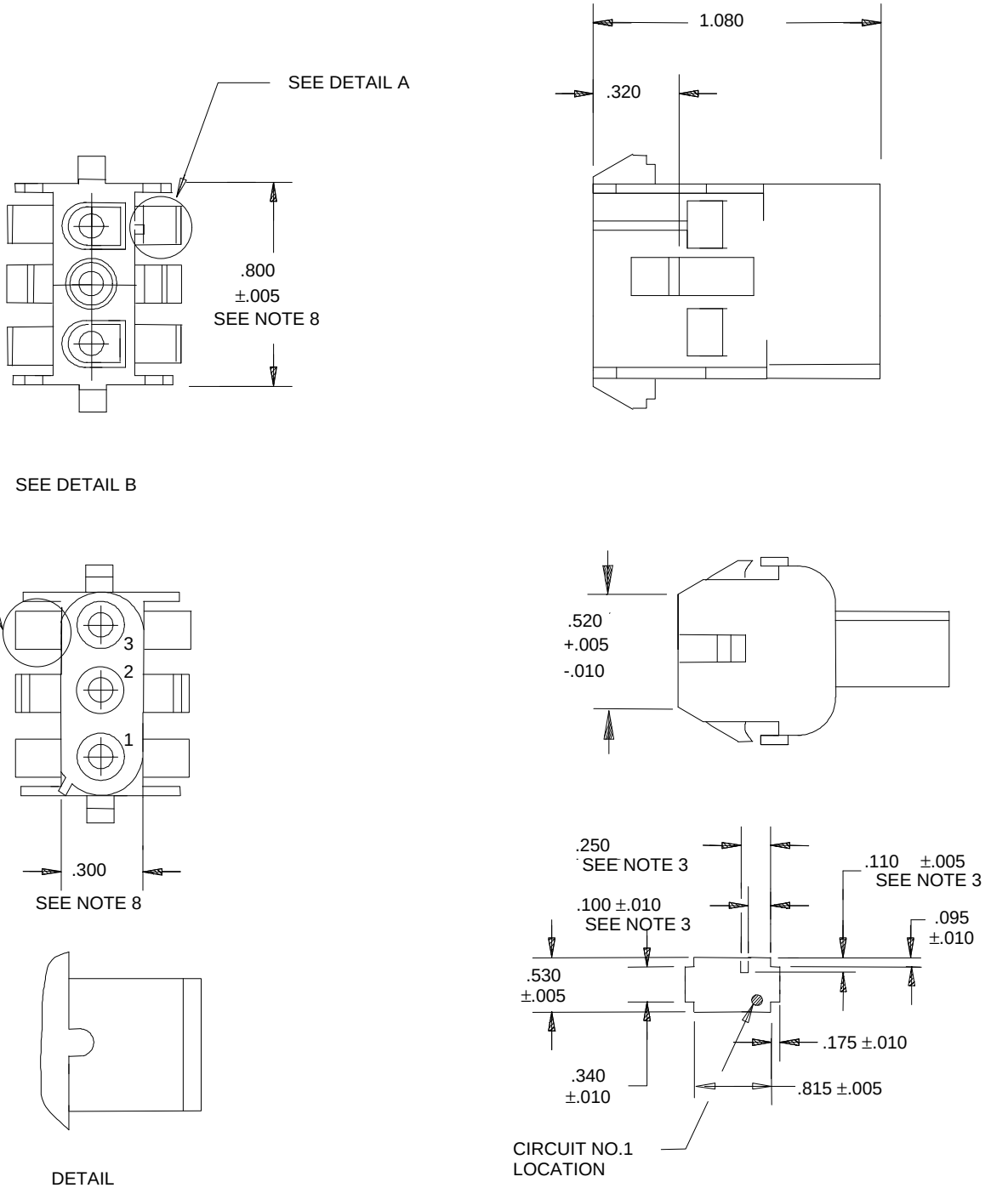
Durability. Durability shall consist of 50 cycles of mating and unmating and upon completion the termination resistance, dry circuit shall not exceed 3.6 milliohms. There shall be no indication of physical damage.



RECOMMENDED PANEL CUTOUT
SEE NOTES 1 AND 2

Configuration A

Figure 1. Dimensions and configurations.

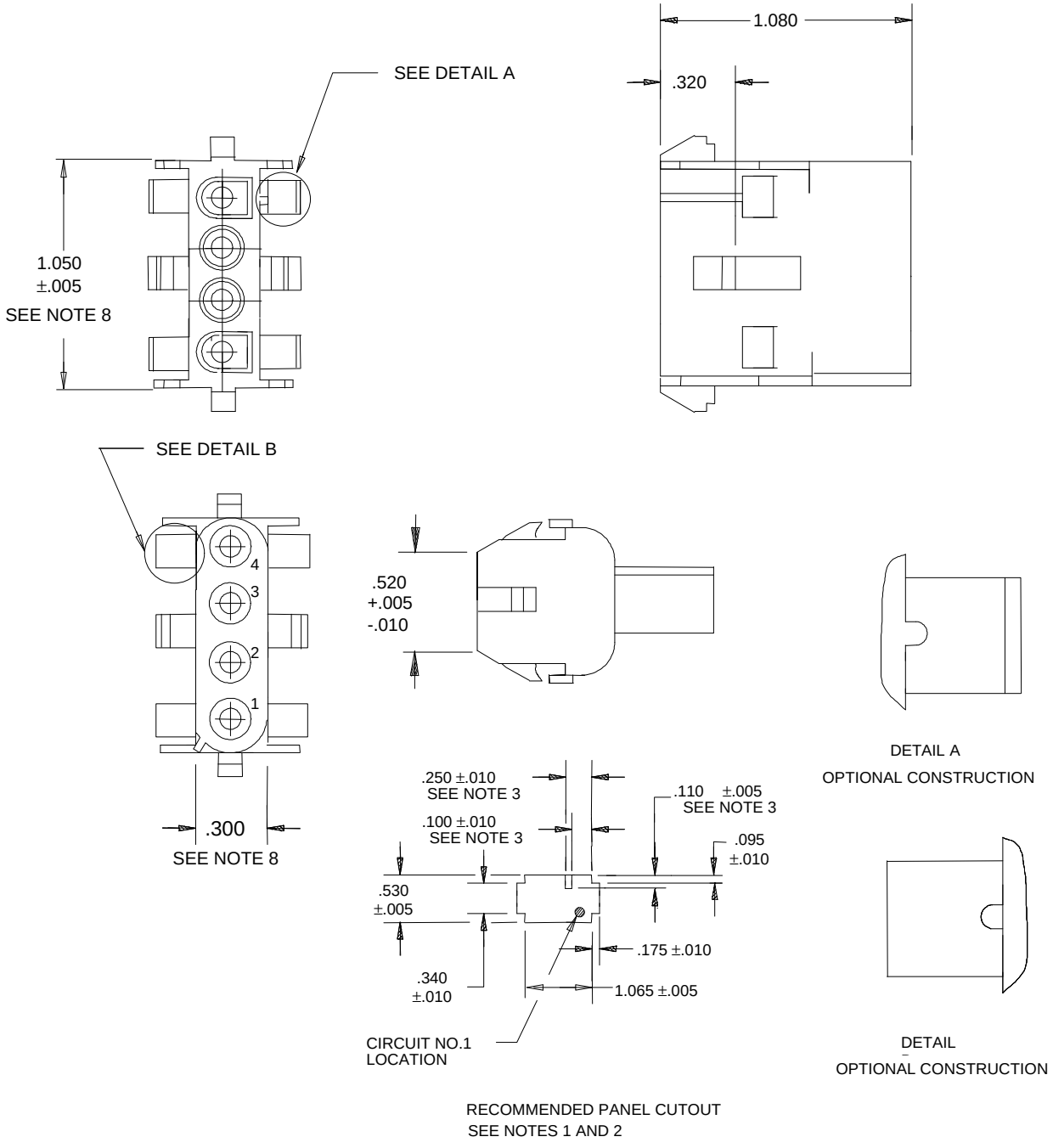


DETAIL
OPTIONAL CONSTRUCTION

RECOMMENDED PANEL CUTOUT
SEE NOTES 1 AND 2

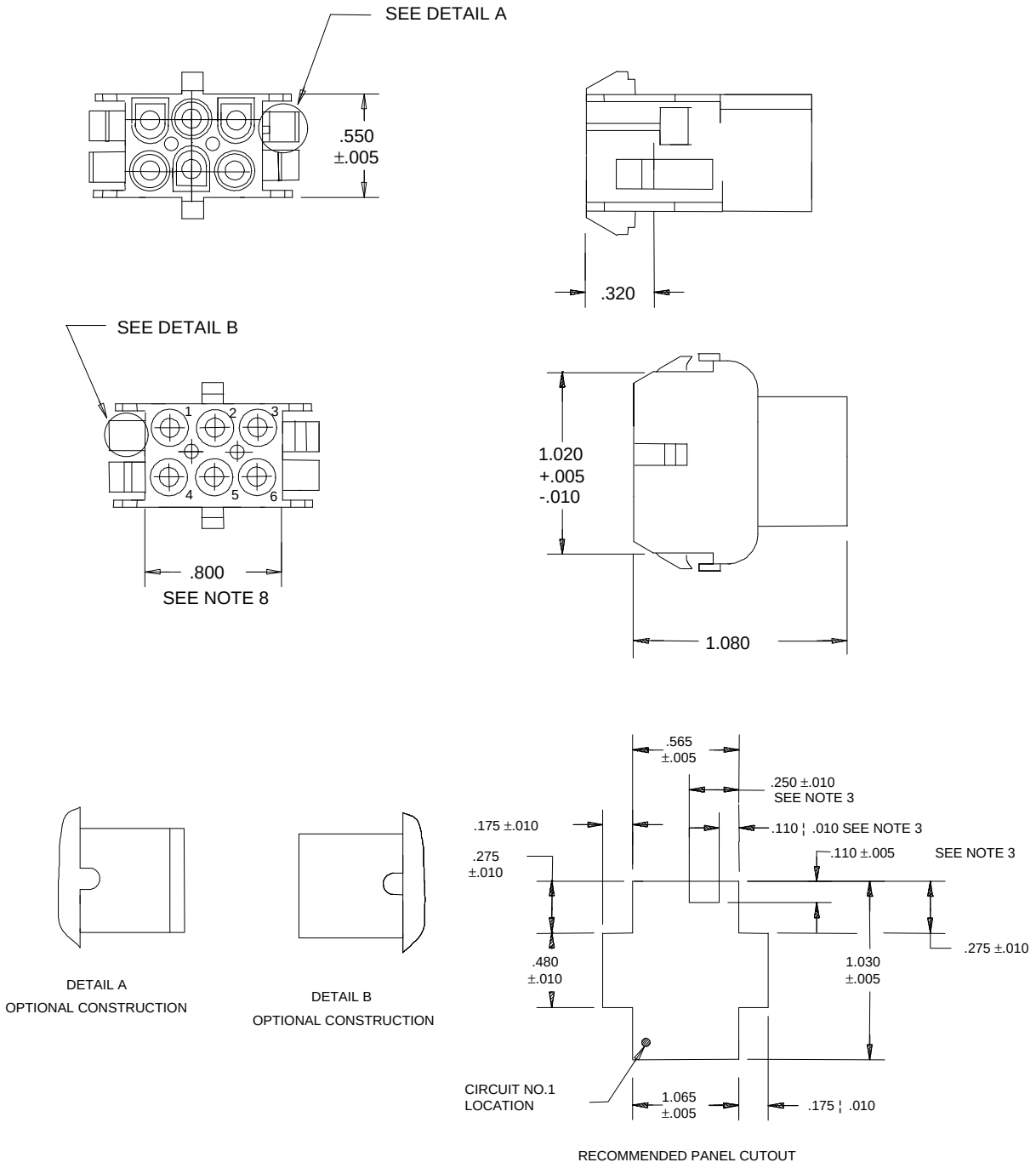
Configuration B

Figure 1. Dimensions and configurations - Continued.



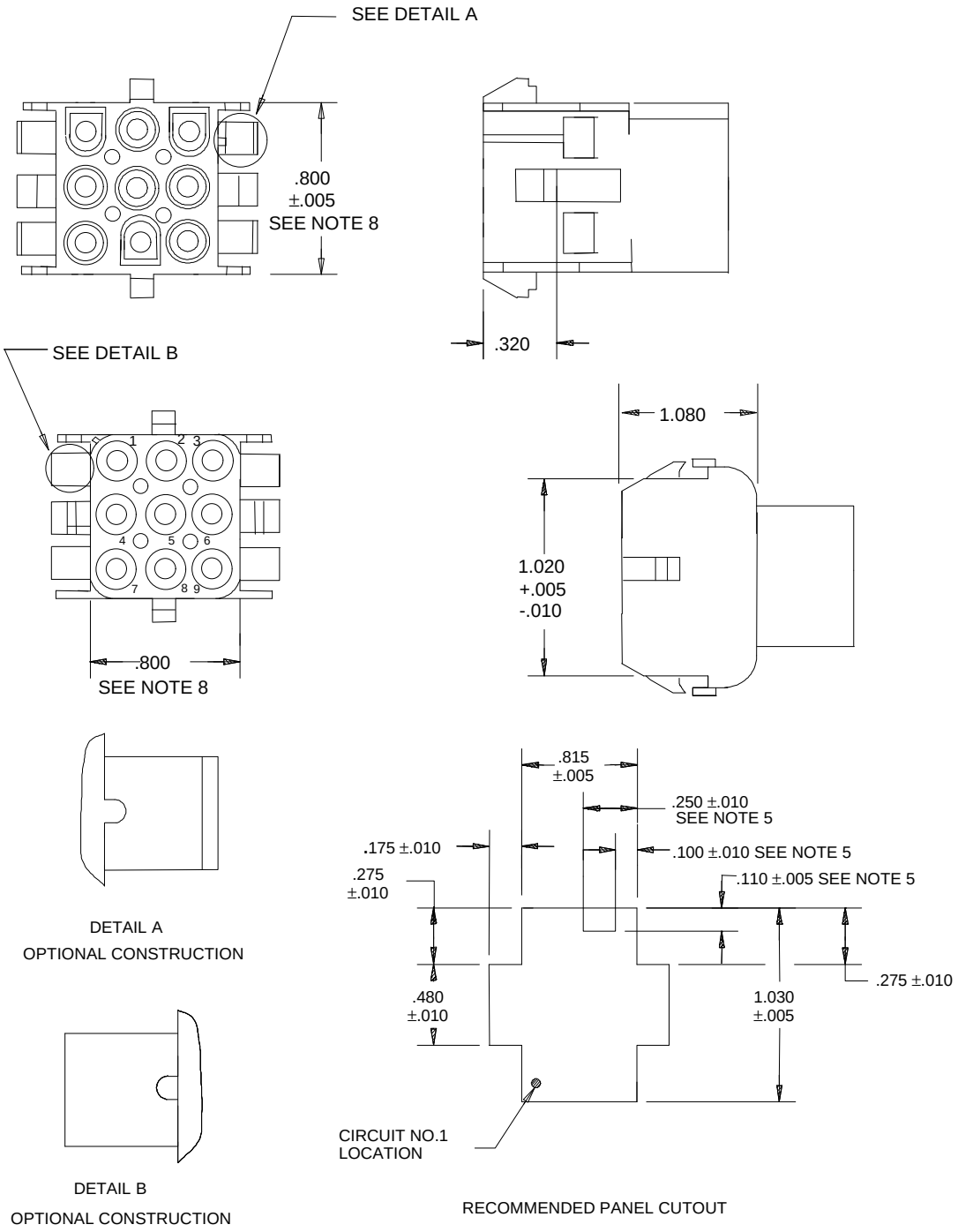
Configuration C

Figure 1. Dimensions and configurations - Continued.



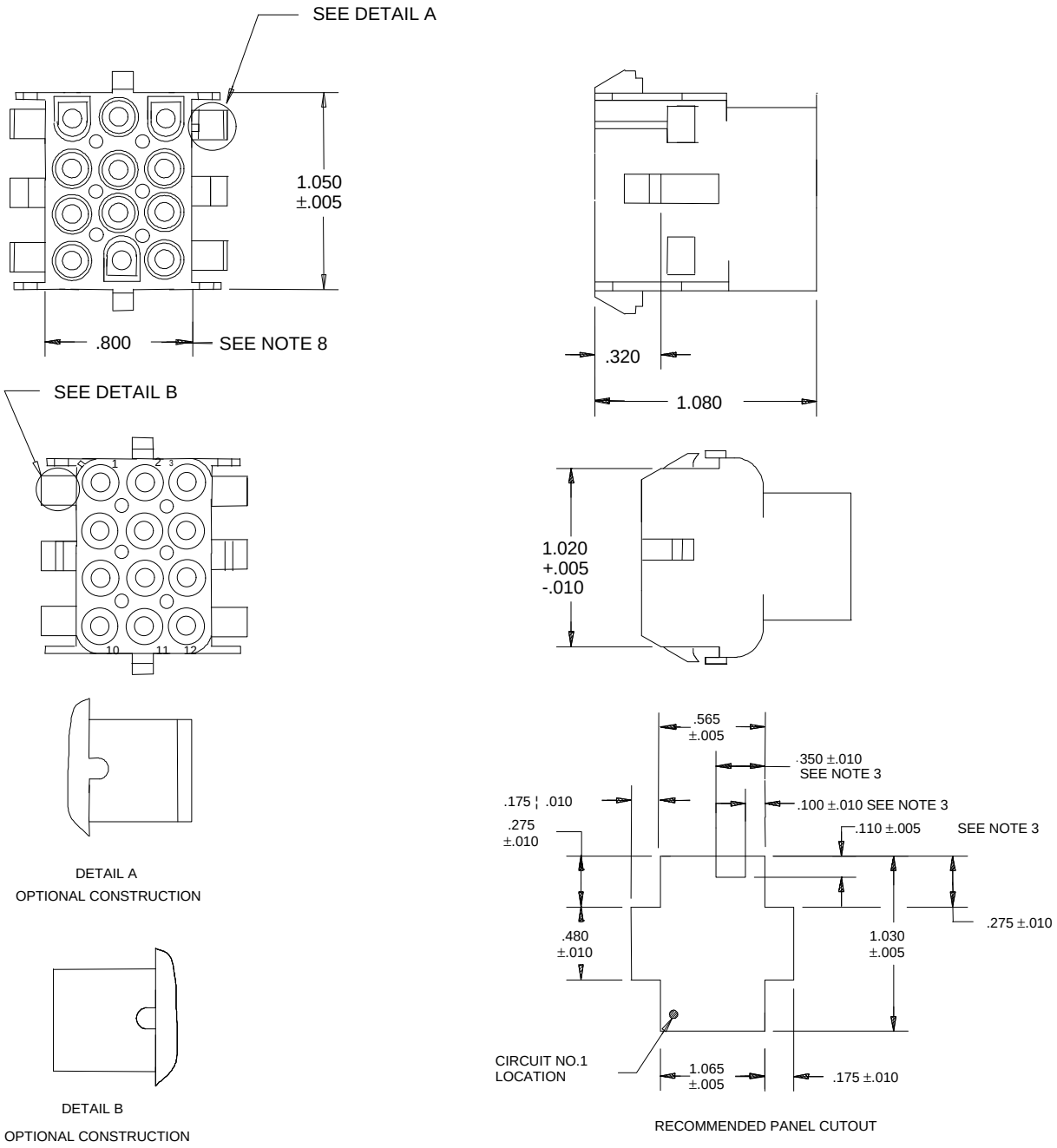
Configuration D

Figure 1. Dimensions and configurations - Continued.



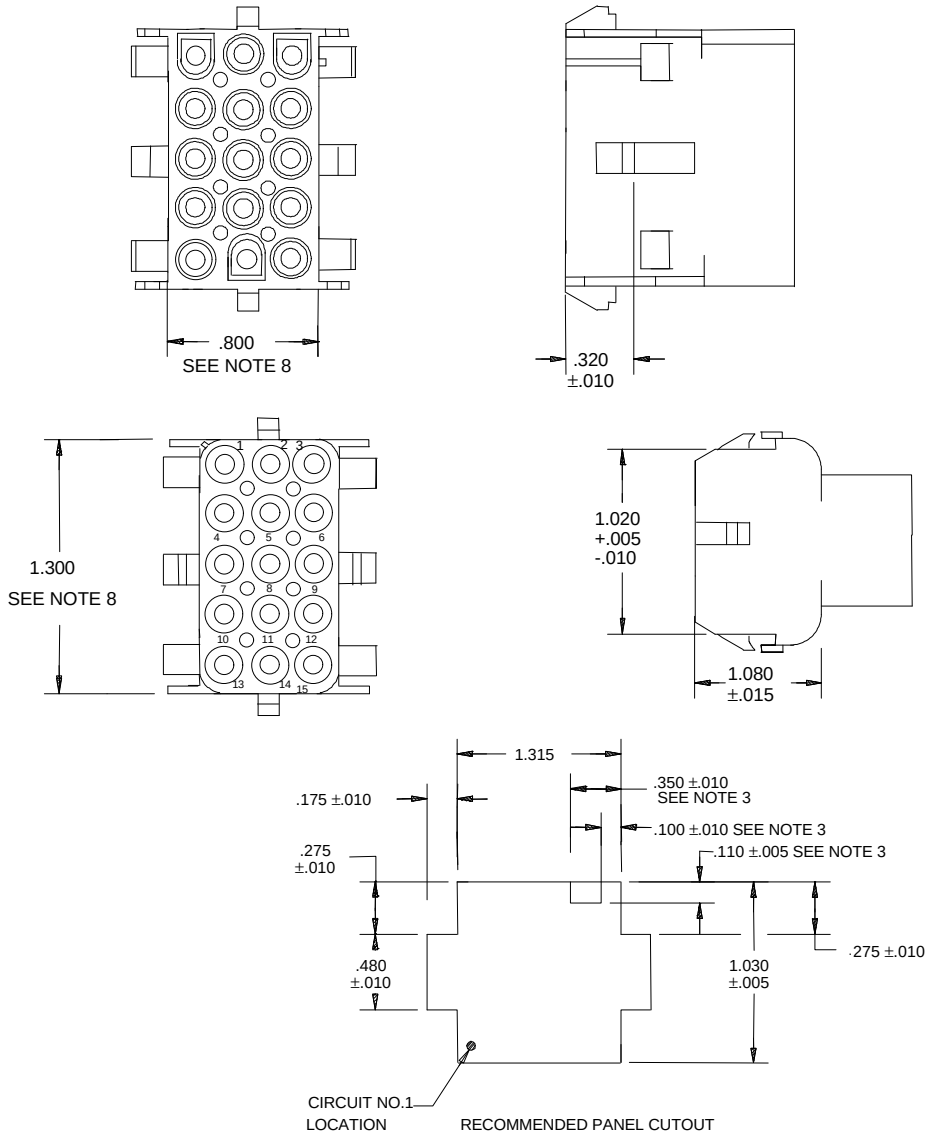
Configuration E

Figure 1. Dimensions and configurations - Continued.



Configuration F

Figure 1. Dimensions and configurations - Continued.



NOTES

1. Recommended panel thickness shall be .030 inch (0.76 millimeter) through 0.90 inch (2.29 millimeters)
2. Panel shall be punched so that the housing enters the panel in the same direction as the punch.
3. Keying in panel shall be optional.
4. Unless otherwise specified tolerances shall be ±.015 inch (0.38 millimeter).
5. Dimensions are in inches.
6 Millimeters are in parentheses.
7. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.
8. Dimensions indicated are as molded. Additional growth due to subsequent moisture absorption may occur.

Configuration G

Figure 1. Dimensions and configurations - Continued.

Vibration. The connector, or hardware when assembled to the connector, shall exhibit no evidence of breaking, cracking, or loosening of parts when subjected to vibration of 10-55-10 Hz traversed in 1 minute at 1.52 millimeters (.06 inch) total excursion for 2 hours in each of three mutually perpendicular planes. The contacts shall evidence no discontinuity greater than 10 microseconds and a termination resistance dry circuit of 5 milliohms maximum.

Physical shock. The connector, or hardware when assembled to the connector, shall be subjected to 50 G's at 10 milliseconds; 3 shocks in each direction applied along the three mutually perpendicular planes, total 18 shocks. The contacts shall evidence no discontinuity greater than 10 microseconds and a termination resistance, dry circuit 6.0 milliohms maximum.

Thermal shock. The connector, when mated, shall be subjected to 25 cycles between -55°C and +85°C, dielectric withstanding voltage; 3.75 milliohms maximum termination resistance, dry circuit.

Temperature-humidity cycling. The connector, when mated, shall be subjected to 25 cycles between +25°C and +65°C at 95 percent RH, with cold shock at -10°C during any 5 of the first 9 cycles.

Housing lock strength. Housing lock strength shall be 155.69 newtons (35 pounds) minimum.

Regulatory requirements. This section is not applicable to this CID.

Quality assurance provisions.

Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections, examinations, or tests set forth in this description where such inspections, examinations, and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

Contractor certification statement. The contractor shall certify and maintain objective quality evidence that the product offered meets the requirements of this CID, and that the product conforms to the producer's own drawings, specifications, standards, quality assurances practices, and is the same as the product provided as a bid sample. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

Certificate of compliance. A certificate of compliance shall accompany all parts supplied to this CID.

Packaging.

Preservation, packaging, packing, labeling, and marking. Preservation, packaging, labeling, and marking shall be as specified in the contract or purchase order.

Notes. This section contains relevant information which is useful to buyers, users and suppliers in the process of procuring the item, but is not mandatory.

Ordering data (see table I). Acquisition documents should specify the following:

a. CID document number and revision and CID PIN.

b. Quality assurance provisions.

c. Packaging requirements.

d. Color (if applicable).

Comments. Comments on this CID should be directed to Defense Electronics Supply Center, 1507 Wilmington Pike, ATTN: DESC-ELDI, Dayton, OH 45444-5270, or telephone (513) 296-5391.

TABLE I. Ordering data.

CID dash number A-A-55463-	Figure number 1, configuration	Number of positions
01	A	2
02	B	3
03	C	4
04	D	6
05	E	9
06	F	12
07	G	15

Sources of supply. A suggested source of supply is listed in table II. Additional sources will be added as they become available.

TABLE II. Suggested sources of supply.

CID dash number A-A-55463-	Vendor commercial PIN	Vendor CAGE number
01	350778-1	00779
02	350767-1	00779
03	350780-1	00779
04	350781-1	00779
05	350782-1	00779
06	350783-1	00779
07	350784-1	00779

Vendor CAGE number	Vendor name and address
00779	AMP, Incorporated P.O. Box 3608 Harrisburg, PA 17105-3608

Supersession data. Supersession data shall be as specified in table IV.

TABLE IV. Supersession data.

Superseded (old) PIN 87096-	Superseding (new) PIN A-A-55463-
002	01
004	02
006	03
008	04
010	05
012	06
014	07

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE

PREPARING ACTIVITY:

DLA-ES

(Project 5935-D481)