

**Synchro, Control Differential Transmitter, Type 11CDX4B**

**FSC 5990**

**RATIONALE**

This Revision consists of a 5 (five) year review, which provides updates to current format and references.

**NOTICE**

This specification is approved for use by all Departments and Agencies of the Department of Defense. The requirements for acquiring the Synchros described herein shall consist of this specification and the latest issue of SAE AS20708.

SAENORM.COM : Click to view the full PDF of AS20708-81A

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TABLE 1 – REQUIREMENTS

| REQUIREMENT          | VALUE     | UNIT         | TOLERANCE |
|----------------------|-----------|--------------|-----------|
| Frequency            | 400       | Hz           | ±1%       |
| Primary Voltage      | 78        | volts        | ±1%       |
| Primary Current      | 49.0      | milliamps    | maximum   |
| Primary Power        | 0.64      | watts        | maximum   |
| Impedance:           |           |              |           |
| Zso                  | 1590-2050 | ohms         | min.-max. |
| Zrs                  | 470-570   | ohms         | min.-max. |
| Impedance Angle:     |           |              |           |
| Zso                  | 79.0-85.0 | degrees      | min.-max. |
| Zrs                  | 23.0-33.0 | degrees      | min.-max. |
| Transformation Ratio | 1.154     | ----         | ±2%       |
| Phase Shift (Lead)   | 4.0       | degrees      | ±2.0      |
| Electrical Error     | 7.0       | minutes      | maximum   |
| Null Voltage:        |           |              |           |
| Total                | 90.0      | millivolts   | maximum   |
| Fundamental          | 60.0      | millivolts   | maximum   |
| Friction Torque      | 0.07      | ounce-inches | maximum   |
| Radial Play          | 0.0006    | inches       | maximum   |
| End Play             | 0.0010    | inches       | ±0.0005   |
| Temperature Rise     | 20.0      | degrees (C)  | maximum   |

TABLE 2 – MILITARY PART NUMBER VARIANT CHARACTERISTICS

| Military Part No. <u>1</u> / | A<br>± .010 | B<br>± .010 | G<br>Maximum | Shaft Style     | Terminal<br>End | U<br>+ .0000<br>- .0002 |
|------------------------------|-------------|-------------|--------------|-----------------|-----------------|-------------------------|
| M20708/81-01B                | .555        | .500        | 1.789        | Splined         | Terminal Board  | .1872                   |
| M20708/81-02B                | .368        | .312        | 1.687        | Plain & Slotted | Wire Leads      | .1200                   |
| M20708/81-03B                | .430        | .375        |              |                 |                 |                         |
| M20708/81-04B                | .493        | .437        |              |                 |                 |                         |
| M20708/81-05B                | .555        | .500        |              |                 |                 |                         |
| M20708/81-06B                | .618        | .562        |              |                 |                 |                         |

1/ Military Part number M20708/81-01B shall be the NATO standard.

1/ The suffix letter following the numerical dash number corresponds to the latest modification letter in the type designation.