DATA SET 208B-TYPE TRANSMITTER-RECEIVER SUMMARIZING SPECIFICATION DATA SYSTEMS

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, summarizes for ordering purposes, the design requirements for circuit packs, framework, assembly, and circuits covering data set 208B type, which is for use on the 2-wire switched direct distance dialing (DDD) telephone network. The data set requires a type II DATA-PHONE® loop.

1.02 This section is reissued to change the reference from data set 208B-L1 to data set 208B type. Data set 208B-L1 has been rated Mfr Disc.

CAPACITY OR FEATURES, USE

1.03 Data set 208B type is a synchronous, phase-modulated, voiceband transmitter and receiver for binary serial data that operates at 4800 bits per second on the 2-wire DDD network. This data set is compatible for use only with another data set 208B type. The set includes provisions for local tests and for remote tests from a test center. The output level of the data set is 0 to −15 dBm in 1-dBm steps. The receiver provides adequate dynamic range for operation of the DDD network. Data set 208B type is recommended for use with a 565HK-type, or equivalent, key telephone set that allows manual call origination and voice, data transfer. Five data sets may be connected to one telephone set. The HOLD button on the telephone set should be relabeled DATA. A Bell System 801-type automatic calling unit (ACU) may be used in addition to the telephone set to provide automatic call origination.

DESCRIPTION

1.04 Data set 208B type consists of plug-in circuit boards, an 83A power unit, and a backplane assembly mounted in an extruded anodized aluminum housing. Front and rear molded black plastic covers are mounted on the housing. The overall dimensions of the data set are approximately 16 inches wide, 4-1/4 inches high, and 11-1/2 inches deep. The weight is approximately 20 pounds. Circuit boards included in each type are:

(a) Data set 208B-L1: HG2 through HG6, HG11, two HG12, HG13, HG14B, HG15B, HG16B, and HG17 through HG22. (HG14, HG15, and HG16, rated Mfr Disc., are replaced by HG14B, HG15B, and HG16B.)

(b) Data set 208B-L1A: HG2 through HG6, HG11, two HG12, HG13, HG14B, HG15B, HG16B, HG17, HG18, HG20 through HG22, and HG24. (HG19, rated Mfr Disc., is replaced by HG24.)

1.05 The data set 208B type status lamps, five test switches, and one customer option switch are mounted on a circuit board immediately behind the front cover. The status lamps monitor the power unit and certain interface leads. Each lamp illuminates a 2-letter symbol on the front cover, which indicates the control lead or condition being monitored. All of the test switches are locking-type except for the lamp test switch (LP). The customer option switch is a locking type. The test switches allow the data set to be tested in the local analog loop-back mode, the end-to-end test mode, and in the remote test mode.

1.06 The back cover of the data set has openings that allow access to the telephone and customer interface connectors and to the power cord receptacle. The 25-pin customer interface connector is a KS-19087, L2. The customer data

equipment must be equipped with a cable terminated in a Cinch or Cannon DB-19604-432 plug equipped with a hood, such as a DB-51226-1 hood. The 25-pin telephone interface connector is a KS-19088, L2. Connection to the telephone network is made with an M13F cord supplied with the data set. The M13F cord may be extended by use of a B25A cable that must be ordered separately.

Note: The 565HK-type telephone set must be ordered separately.

POWER REQUIREMENTS

1.07 Power for the data set is provided by the 83A power unit mounted in the data set. This power unit provides +12, −12, +5, and −6 volts. The power unit requires 105- to 130-volt ac power at 60 Hz. A KS-14532, L24 power cord, 6 feet in length (previously a P3BJ power cord that is also acceptable), is provided with the data set. The cord is terminated with a Twist-lock connector body at the data set end to prevent inadvertent removal of the cord. If a different power cord is desired, it must be ordered separately and must be terminated at the data set end with a connector body compatible with the Hubbell BL-12583 Twist-lock receptacle mounted at the back of the 83A power unit, such as a Hubbell No. 7593 connector body. The power unit contains a self-resetting thermal overload switch that shuts off the power unit if the transformer temperature rises excessively. An overvoltage circuit is also included that reduces the output voltages to a safe level if an internal power supply fault should cause the output voltages to become excessive. This circuit is reset by removing and then reapplying the ac voltage to the data set.

OPTIONS

1.08 Data set 208B type is provided with a number of options that must be installed prior to placing the data set in service. The option settings are controlled by switches mounted on a circuit pack, which are accessible when the front cover is removed. The options to be installed in the data set should be specified on the service order. Refer to 592-030-100 and 592-030-200 for description and location of options.

ENVIRONMENT

1.09 The data set operates in an environment of 40 to 120°F (5 to 50°C) ambient temperature and 20 to 95 percent relative humidity.

2. SUPPLEMENTARY INFORMATION

592-000-000—Numerical Index—200 Series Data Sets and Associated Service
502-543-405—565HK Telephone Set
590-002-110—Reference Guide, Data Set 208-Type
590-010-200—General Installation and Connection Information
592-030-100—Data Set 208B-Type—Transmitter-Receiver— Description and Operation
592-030-200—Data Set 208B-Type—Transmitter-Receiver—Installation and Connections
592-030-300—Data Set 208B-Type—Transmitter-Receiver—Maintenance
592-030-500—Data Set 208B-Type—Transmitter-Receiver—Test Procedures
598-010-Series—Data Auxiliary Set 801A Type for Automatic Calling
598-012-Series—Data Auxiliary Set 801C Type for Automatic Calling
800-610-158—Packaged Electronic Products
800-610-159—Printed Wiring Products
999-100-139—Data Set 208B-Type—How-to-Operate Manual
X-17966—Manufacturing Testing Requirements for Data Set 208B-Type
CD-1D242-01—Data Set 208B-Type—Circuit Description
TI-383—Test of Services Provided by Data Set 208B-Type From a 904A- and a 904C-Type Data Test Center (DTC)

3. DRAWINGS

SD-1D242-01—Data Set 208B-Type (Also covers circuit packs HG2 through HG6, HG11 through HG13, HG14B, HG15B, HG16B, HG17, HG18, HG20 through HG22, and HG24. HG14, HG15, HG16, rated Mfr Disc., are replaced by HG14B, HG15B, and HG16B. HG19, rated Mfr Disc., is replaced by HG24.)
SD-82134-01—83A Power Unit

4. PRODUCT

Data Set 208B-Type—Transmitter-Receiver

List 1A—Assembly and wiring for one data set 208B type per SD-1D242-01.

TABLE OF AUTHORIZED ORDERABLE CODES

DATA SET	RATING
208B-L1A	AT&TCo Std

Note: Ordering information for the above products should be listed in this form:

Set, Data, 208B-L1A

5. GENERAL NOTES

5.01 Data set 208B type can be installed for multiple arrangements on 19- or 23-inch rack mountings or in a cabinet with 19- or 23-inch rack mountings, which allows front and rear access to the data sets. The following brackets are required for each data set and must be ordered separately as indicated below:

One D-180556—Mounting Brackets for Data Set 208 or 209 Type

5.02 When the data sets are mounted in a cabinet, the maximum cabinet ambient temperature should be limited as indicated in Fig. 1.

5.03 The data sets can be stacked on top of each other as follows:

MAX. ROOM TEMP	NO. OF DATA SETS
85°F	3
110°F	2
120°F	1

5.04 A D-180657 (102308822) spare parts and tool kit for maintenance of the data sets 208A-L1A and 208B-L1A is available. It contains: one each of circuit packs HG2 through HG8; HG11 through HG13, HG14B, HG15B, HG16B, HG17, HG18, and HG20 through HG24; two sets of test pins for use with data test set 914B; and four circuit pack shipping cartons.

List of Authorized Mfr Disc. Products

LIST OF AUTHORIZED MFR DISC. PRODUCTS

CODE NO.	REPLACED BY
208B-L1	208B-L1A

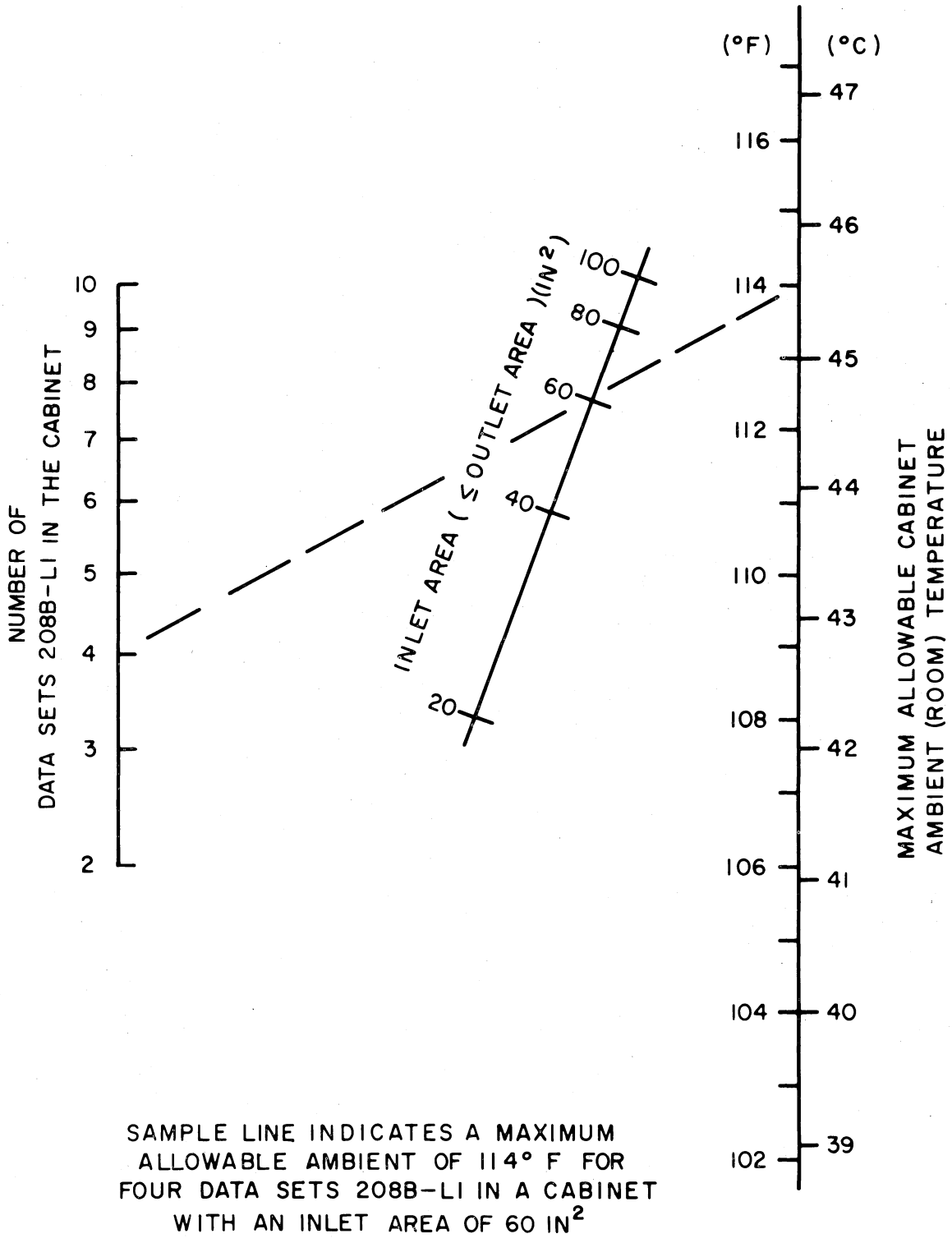

Fig. 1—Ambient Temperature vs Number of Data Sets and Inlet Area