J98726BP-2, L2; BP-3, L3 4E&MER CHANNEL UNIT D4CE120

DATA SHEET

D4 CHANNEL BANK

The 4-wire, 600-ohm E and M Extended Range (4E&MER) channel unit (J98726BP) provides an interface between a D4 channel bank or SLC* -96 carrier system terminal and a 4-wire, 600-ohm E and M circuit. The channel unit provides; (1) impedance and level conversion at voice frequencies (VF), (2) E and M signaling and supervision (Type I, II, or III interface), (3) jack access for system measurements and analysis, (4) trunk processing in response to a carrier failure, and (5) additional transmit and receive gain and level adjustment capability to allow direct connection to a 4-wire switching system without the need for external pads.

* Trademark of Western Electric

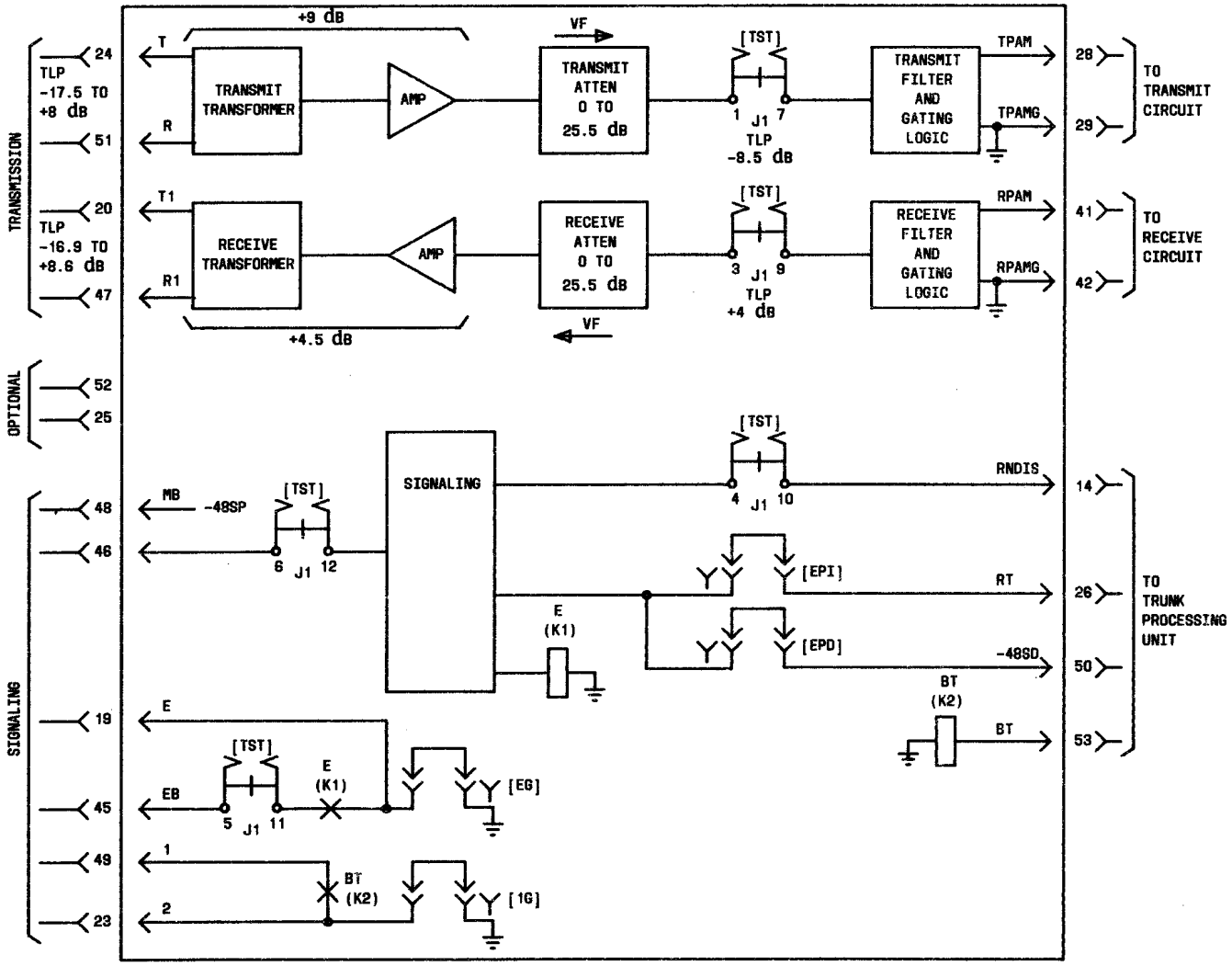

Fig. 1—J98726BP-2, -3 Block Diagram

This section is reissued to include the L3 version of the channel unit. This unit is designed for direct connection to a 4-wire switching machine with no need for external pads. For signaling and supervision, it converts E and M signals from the trunk circuit into pulses for the digital network. Similar pulses from the digital network are converted into E and M signals for the trunk circuit.

The transmission circuitry of this unit contains transformers, amplifiers, and 0 to 25.5 dB attenuators.

For detail, see CD- and SD-3C332-02, -03 and Section 365-170-111. Section 855-351-105 gives prescription (option) settings and application information.

Figure 1 is a functional block diagram of the unit and Fig. 2 gives major component location and option information.

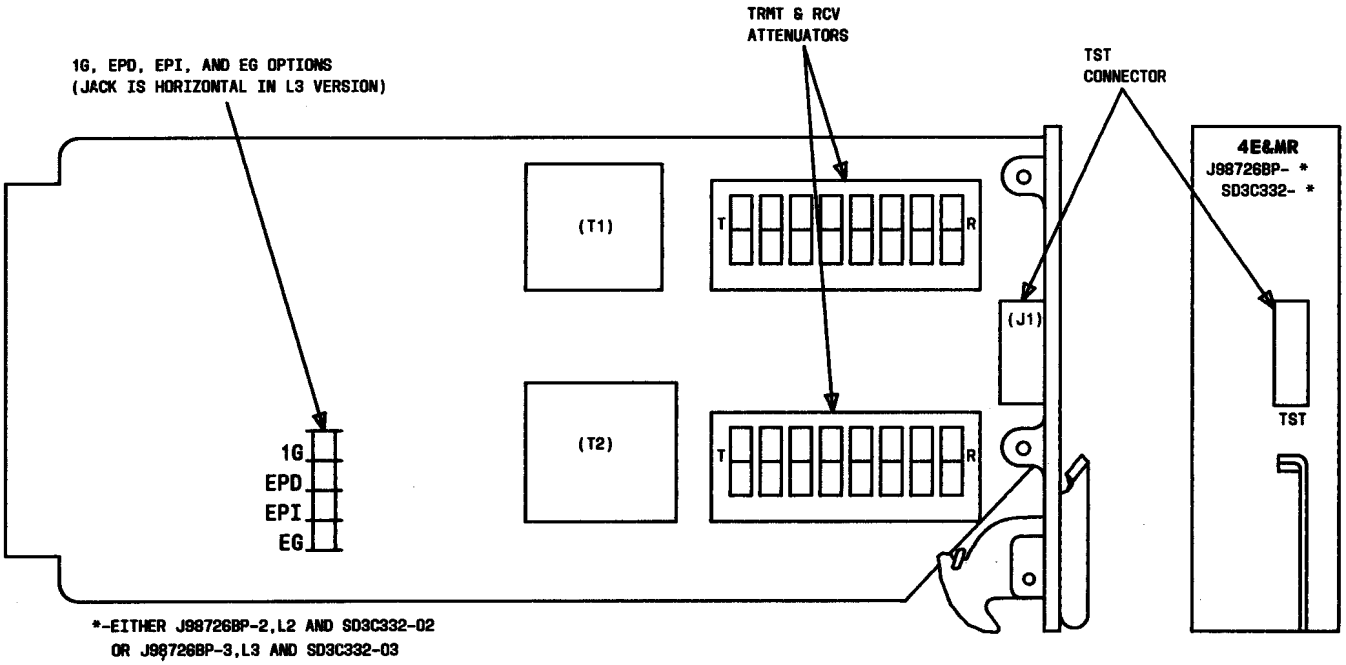

Fig. 2—J98726BP-2, -3 Block Diagram

TST CONNECTOR: Insertion of a test card into this connector provides splitting access to the TRMT TLP, the RCV TLP, the M lead, and the E lead for test and maintenance purposes. Insertion also opens the RNDIS lead and re-enables transmission if it has been disabled by TPU operation.

TRMT AND RCV ATTENTUATORS: Rocker switches on the transmit and receive attenuators provide 0 to 25.5 dB of attenuation in the transmit and/or receive transmission paths in steps of 0.1 dB. The left side of each attenuator is dedicated to the transmit path and the right side is dedicated to the receive path. These switches are set to obtain the required transmission level at the TRMT and RCV TLP test terminals (−8.5 dB and +4.0 dB respectively). The amount of attenuation is determined by adding the values of the switches set toward the IN position.

1G OPTION: This option provides a ground on the 1 lead (make-busy lead) when trunk processing is initiated. After a 2.5 second delay, the ground disconnects for 100 milliseconds and then reconnects for the duration of the carrier failure. This option is normally selected (white showing) for use with all electromechanical switching machines except No. 5 crossbar.

EG OPTION: This option provides a local ground to the E lead to indicate an off-hook state. It is selected (white showing) for type I interface (standard, for electromechanical switching systems) or type III interface (partially looped, for some electronic switching machines). The EG option is not selectred (black showing) for type II interface (completely looped, electronic switching) because the trunk circuit supplies the ground.

EPD OPTION: This option causes the channel unit to open the E lead when trunk processing begins and then grounds the E lead after a 2.5 second delay. It is normally selected (white showing) when make-busy leads are not available at the originating end of a 1-way trunk or at either end of a 2-way trunk.

EPI OPTION: This option causes the channel unit to ground the E lead immediately when trunk processing occurs. Supplying an immediate E lead ground to a dial-long-line circuit can suppress erratic ringing at the subscriber end. When neither the EPD nor EPI option is selected, the E lead opens when trunk processing occurs.