SLC®-2000 MSDT

BDJ241 FSM Power Circuit Pack — SAIUNJOBBA

Overview

This data sheet describes the BDJ241 power circuit pack (COMCODE 107287351) and is intended for the end-user of the unit. It is used at a *SLC*®-2000 Fiber Service Module (FSM). The FSM multiplexes 12 DSX-1 signals into a 51 Mb/s signal for optical transport. This increases the circuit capacity on the fiber lines between a *SLC*-2000 host digital terminal (HDT) and multi-services distant terminal (MSDT). The FSM power circuit pack is used in FSMs at both the HDT site and the MSDT site.

The FSM power circuit pack provides power for the other circuit packs in the FSM. As shown in the block diagram in Figure 1, this circuit pack has the following two functional elements:

- ***–48 to ±5 Volt DC-to-DC Converter***. This element takes a regulated –48 volt DC power source from an existing system (such as a power converter unit (PCU) at the MSDT and HDT site) and converts it to ±5 volts to power the other three FSM circuit packs.
- ***Microwire* interface with the FSM's MUX circuit pack***. This element sends alarm information to the FSM's MUX circuit pack through *Microwire* protocol.

The FSM power circuit pack also interfaces the backplane connector.

* Microwire is a registered trademark of Advanced Interconnection Technology, Inc.

At an 841 cabinet/MSDT site, when using the FSM, AT&T recommends the use of the *SPQ*®909 low power quad channel unit (CU) specifically designed for fiber-in-the-loop applications. The FSM consumes less than 10 watts of –48 volt power which is supplied from a power card cage in the 841 cabinet.

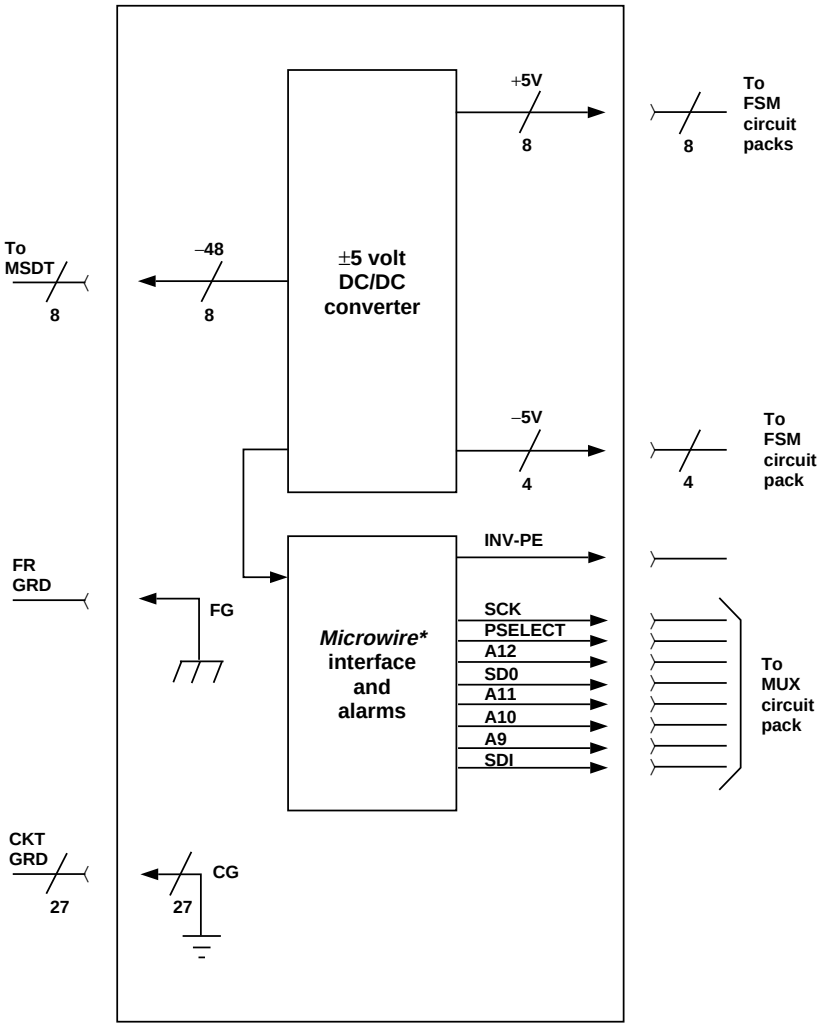

Figure 1. BDJ241 FSM Power Circuit Pack Block Diagram

Indicators and Alarms

As shown in Figure 2, the FSM power circuit pack contains the following indicator:

- ***FAIL LED***. The red FAIL LED on the faceplate may light during power-up. It will go off when a MUX circuit pack is installed. After power-up, the LED indicates low ±5 volt outputs when lit. The unit reports this alarm through the MUX circuit pack using the alarm contact closures. The LED goes off once the voltages are within normal regulation limits.

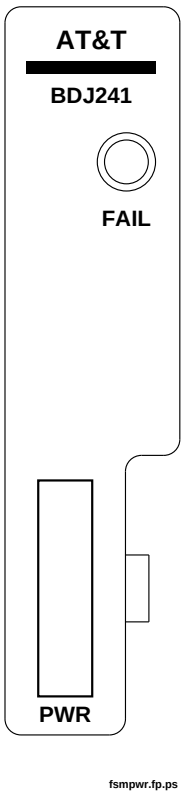

Figure 2. BDJ241 FSM Power Circuit Pack Faceplate

Technical Specifications

The FSM power circuit pack conforms to the following technical specifications:

- ***Regulation***: For an input voltage range of 36 volts DC to 72 volts DC, each output is within 5 % of the rated output. Each output is individually regulated by its own control circuit.
- ***Noise***: The output ripple and noise are 50 mV peak-to-peak.
- ***Output Current***: The output current is 1.7 amps for the +5 volt output and 50 mA for the –5 volt output.
- ***Current Limit Output***: The typical short-circuit current limit is 3.5 amps.
- ***Fusing***: The circuit pack includes a 1-amp input line fuse in series with the input. The customer cannot replace this fuse.
- ***Inrush Limiting***: The circuit pack uses early make backplane pin configurations and inrush current limiting resistor technology.
- ***Overvoltage Protection***: Each output has independent overvoltage clamps at maximum levels of +7 volts for the positive output and –7 volts for the negative output.
- ***Efficiency***: Minimum efficiency is 75% at 10 watts load.
- ***Operating Temperature Range***: The operating temperature range is between –40˚ and +85˚ C.
- ***Maximum Power Drain (–48S source)***: The maximum power drain from the –48S source is 12 watts.

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the *SLC*-2000 Access System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

Ordering Information

Call the Customer Information Center at 1-800-432-6600 to get additional copies of this document (AT&T 363-005-318).

Comments

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