



L8567 SLIC for People's Republic of China Applications

Features

- Low active power (typical 149 mW during on-hook transmission)
- Sleep state for low idle power (47 mW typical)
- Quiet tip/ring polarity reversal
- Distortion-free on-hook transmission
- -35 V to -65 V battery operation
- Convenient operating states:
 - Forward active
 - Polarity reversal active
 - Sleep
 - Forward disconnect
- Supervision functions:
 - Fixed threshold off-hook detector with longitudinal rejection and hysteresis
 - Ring trip detector
 - Thermal shutdown indication
- Adjustable loop current limit
- Three driver outputs for relay driver
- LED driver output to indicate off-hook
- Latched parallel data interface
- Battery and +5 V required:
 - Optional auxiliary lower voltage battery to reduce short loop power
- -40 °C to +85 °C operational temperature range
- User-selectable power management techniques
- Thermal protection
- 32-pin PLCC or 44-pin PLCC packaging

Description

This electronic subscriber line interface circuit (SLIC) is optimized for low cost and low power consumption while providing a full-feature set.

Included in the feature set is quiet reverse battery. Quiet polarity reversal is possible because the ac path is uninterrupted during transmission. The dc loop current limit is user-adjustable via a single external resistor. The maximum battery voltage is specified as -65 V for long loop applications. The L8567 supports on-hook transmission.

This SLIC may be used with any commercially available codec; however, when used with the Lucent Technologies Microelectronics Group T7507, the two devices form a complete line circuit optimized for requirements in the People's Republic of China. The ac interface between the two components is extremely simple, requiring only a single capacitor in the transmit direction and a short-circuit connection, using no external components, in the receive direction.

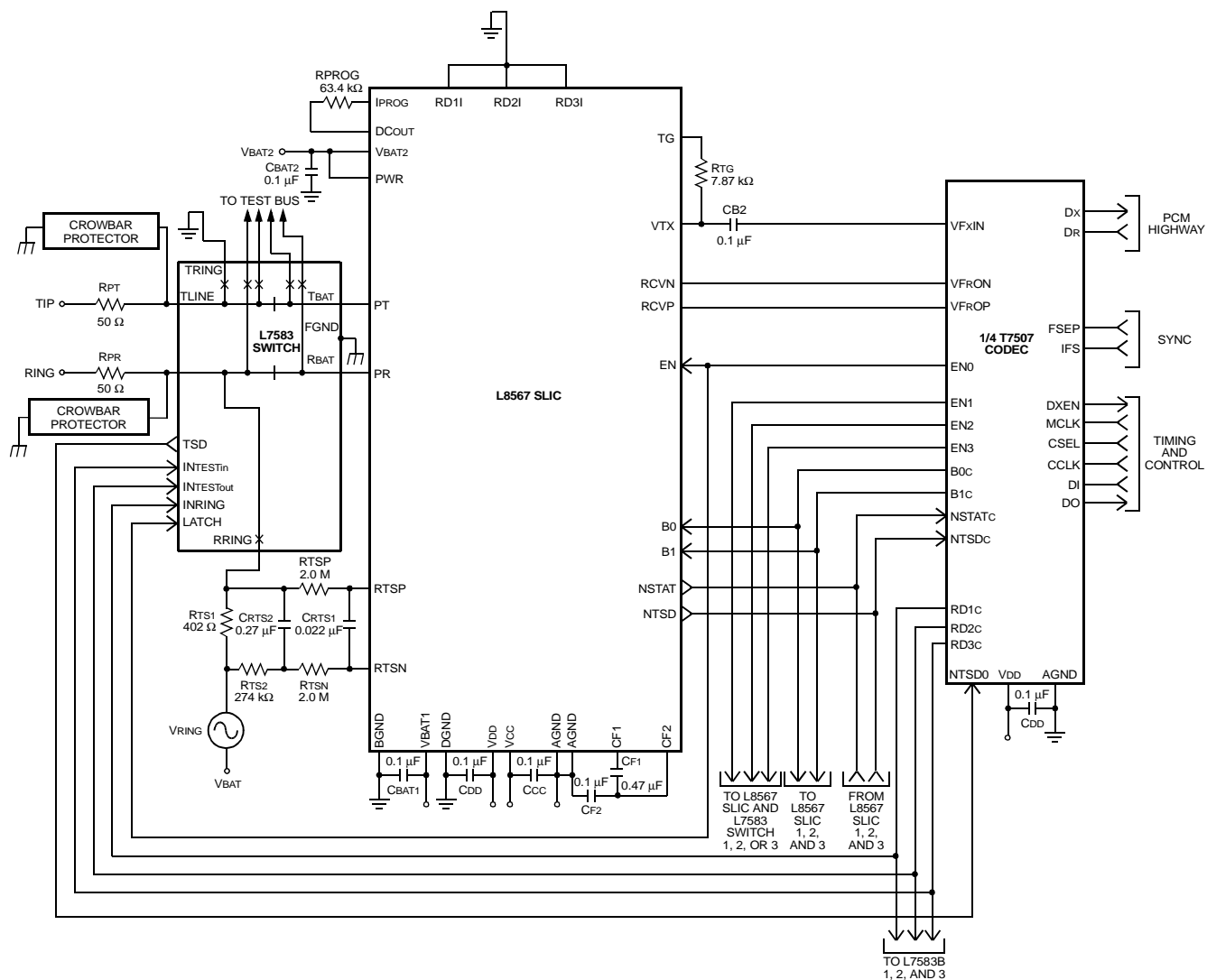
The complex $200\ \Omega + 680\ \Omega \parallel 100\ \text{nF}$ termination and hybrid balance is digitally synthesized by the T7507 codec. Additionally, the tip/ring to PCM (transmit) gain is fixed and set digitally by the T7507 codec at 0 dB. The PCM to tip/ring (receive) gain is also digitally set by the T7507 codec and is programmable via a bit in the codec serial data control stream to either -3.5 dB or -7.0 dB.

The control interfaces of the L8567 and T7507 are designed for compatibility with each other.

Both the T7507 codec and L8567 SLIC require only battery and +5 V to operate. When both devices are used, no -5 V supply is required.

The L8567 is available in a 32-pin PLCC or 44-pin PLCC package.

Application for People's Republic of China Functional Diagram



12-3366a (F)

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