

3 REN Ringing SLIC For ISDN Modem/TA and WLL

The HC5517 is a ringing SLIC designed to accommodate a wide variety of local loop applications. The various applications include, basic POTS lines with answering machines and fax capabilities, ISDN networks, wireless local loop, and hybrid fiber coax (HFC) terminals. The HC5517 provides a high degree of flexibility with open circuit tip to ring DC voltages, user defined ringing waveforms (sinusoidal to square wave), ring trip detection thresholds and loop current limits that can be tailored for many applications. Additional features of the HC5517 are complex impedance matching, pulse metering and transhybrid balance. The HC5517 is designed for use in systems where a separate ring generator is not economically feasible.

The device is manufactured in a high voltage Dielectric Isolation (DI) process with an operating voltage range from -16V, for off-hook operation and -80V for ring signal injection. The DI process provides substrate latch up immunity, resulting in a robust system design. Together with a secondary protection diode bridge and "feed" resistors, the device will withstand 1000V lightning induced surges, in a plastic package.

A thermal shutdown with an alarm output and line fault protection are also included for operation in harsh environments.

Ordering Information

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HC5517IM	-40 to 85	28 Ld PLCC	N28.45
HC5517CM	0 to 75	28 Ld PLCC	N28.45
HC5517IB	-40 to 85	28 SOIC	M28.3
HC5517CB	0 to 75	28 SOIC	M28.3

Features

- Thru-SLIC Open Circuit Ringing Voltage up to $77V_{PEAK}/54V_{RMS}$, 3 REN Capability at $44V_{RMS}$
- Sinusoidal Ringing Capability
- DI Process Provides Substrate Latch Up Immunity when Driving Inductive Ringers
- Adjustable On-Hook Voltage for Fax and Answering Machine Compatibility
- Resistive and Complex Impedance Matching
- Programmable Loop Current Limit
- Switch Hook and Adjustable Ring Trip Detection
- Pulse Metering Capability
- Single Low Voltage Positive Supply (+5V)

Applications

- Solid State Line Interface Circuit for Wireless Local Loop, Hybrid Fiber Coax, Set Top Box, Voice/Data Modems
- Related Literature
 - AN9606, Operation of the HC5517 Evaluation Board
 - AN9607, Impedance Matching Design Equations
 - AN9628, AC Voltage Gain
 - AN9608, Implementing Pulse Metering
 - AN9636, Implementing an Analog Port for ISDN Using the HC5517
 - AN549, The HC-5502S/4X Telephone Subscriber Line Interface Circuits (SLIC)

Block Diagram

