DALLAS SEMICONDUCTOR **MAXIM**

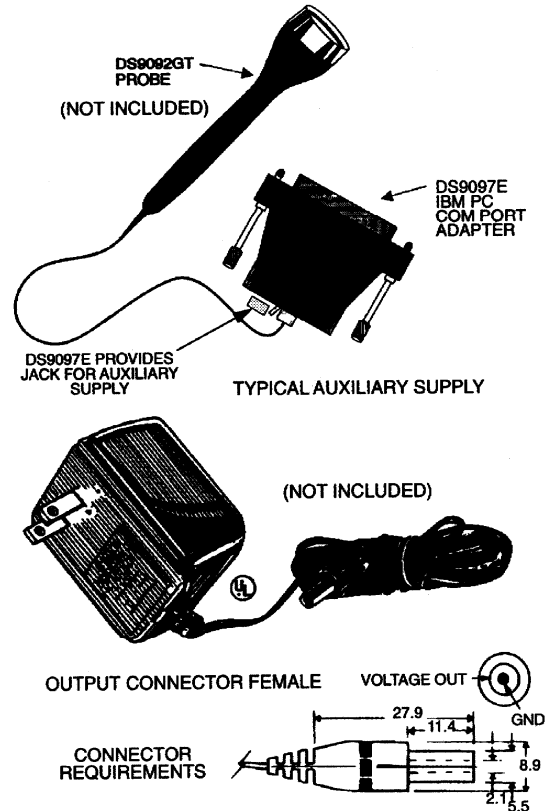www.maxim-ic.com

DS9097/DS9097E COM Port Adapter

FEATURES

- Provides a simple, low-cost interface to an RS232C COM Port for reading and writing iButton™ devices (DS9097E required for programming DS198x Add-Only iButtons)
- Adapter is powered entirely from an RS232 interface (DS9097E may require optional auxiliary 12V supply)
- Standard DB-9 (DSD9097) or DB-25 (DS9097E) female connector for mating the adapter to the COM Port of a computer and RJ-11 connector for easy attachment of a probe such as the DS9092GT
- DS9097E has an additional 2.1 mm male power jack to allow for an auxiliary 12V DC supply for programming Add-Only iButtons

  Pin assignment DS9097, DB-9
  TXD (3), RXD (2), DTR (4), PC-Ground (5); all other pins not connected

  Pin assignment DS9097E, DB-25
  TXD (2), RXD (3), DTR (20), RTS (4), PC-Ground (7); all other pins not connected

  Auxiliary supply should be a regulated 12V @ 10 mA minimum, center=GND, outer ring=V+ (Newark Electronics Stock No. 84F2081, Allied Electronics Stock No. 928-9895, Stancor Model STA-300R, or equivalent)

DS9092GT PROBE (NOT INCLUDED)

DS9097E IBM PC COM PORT ADAPTER

DS9097E PROVIDES JACK FOR AUXILIARY SUPPLY

TYPICAL AUXILIARY SUPPLY

(NOT INCLUDED)

OUTPUT CONNECTOR FEMALE   VOLTAGE OUT

GND

CONNECTOR REQUIREMENTS

27.9   11.4   8.9   2.1   5.5

All dimensions are in millimeters.

ORDERING INFORMATION

DS9097#   DB-9 Version
DS9097E#   DB-25 Version, EPROM upgraded
 # Denotes an RoHS-compliant device that may include lead(Pb) that is exempt under the RoHS requirements.

DESCRIPTION

The DS9097 COM Port Adapter is a simple, low-cost passive adapter which performs RS232C (±12V) level conversion, allowing an iButton probe to be connected to the serial port of a computer so that a non-EPROM iButton can be read and written directly. It can also read all EPROM-based iButtons. The serial port must support a data transmission rate of 115.2 kbits/s in order to create the 1-Wire™ time slots correctly. Nearly all PCs support the required data rate and are fully compatible with the DS9097. Since an 8-bit character (6 data bits plus start and stop bit) on the RS232 port operating at 115.2 kbits/s is used to form a single 1-Wire time slot, the maximum effective 1-Wire transfer rate is 14.4 kbits/s (regular speed). Details on the operation of the DS9097 are found in Application Note 214, Using a UART to Implement a 1-Wire Bus Master.

iButton is a trademark of Maxim Integrated Products, Inc.

The DS9097E is an upgraded version of the DS9097 that is capable of supplying the 12 volts necessary to program the EPROM-based iButton products (DS198x Add-Only iButtons) in addition to reading and writing SRAM and EEPROM-based devices (DS199x, DS196x, DS197x). When combined with the appropriate software, the DS9097E can be used in a standalone mode where all of the programming current is supplied by the serial port itself. In this configuration, the maximum number of EPROM bits that can be programmed simultaneously is four on a typical serial port. For higher performance, the above mentioned 12V auxiliary supply can be plugged into the power jack on the DS9097E and with proper software enable the serial port to program up to eight EPROM bits simultaneously.

REVISION HISTORY

REVISION DATE	DESCRIPTION	PAGES CHANGED
8/09	• Added an *Ordering Information* table. • Changed the reference to Application Note 74 to Application Note 214 in the *Description* section.	1