OPTICON INC.

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CMOS SINGLE-CHIP DECODER
MODEL BR-01

Opticon's CMOS Single Chip LSI Decoder is an 8-bit microcomputer that interfaces bar code scanners to a computer. It decodes the bar data read by the scanner and outputs the decoded data in TTL compatible, serial ASCII format. The decoding conditions can be set by the software command through the serial input line, or through the DIP switch settings.

The BR-01 Decoder is available in either 40-pin dual in-line or surface-mount flat pack case.

FEATURES

● Single-Chip CMOS LSI

● Reads the four major bar code formats:
  Code 39
  Interleaved/Standard 2-of-5
  CODABAR
  UPC, EAN, JAN, WPC

● Two-way asynchronous serial data/command communication lines.

● Selectable baud rate: 300, 1200, 9600, or any baud rate using an external clock.

● Buzzer port for valid-read indicator.

● Reader LED modulation for lower current consumption.

● Single +5V operation.

● Low power consumption, ideal for portable equipment.

● Versatile software commands:
  Code selection
  Start/Stop character suppression
  Check digit calculation
  Read error transmission
  Remote buzzer beep

● Reads long labels, up to 38 characters.
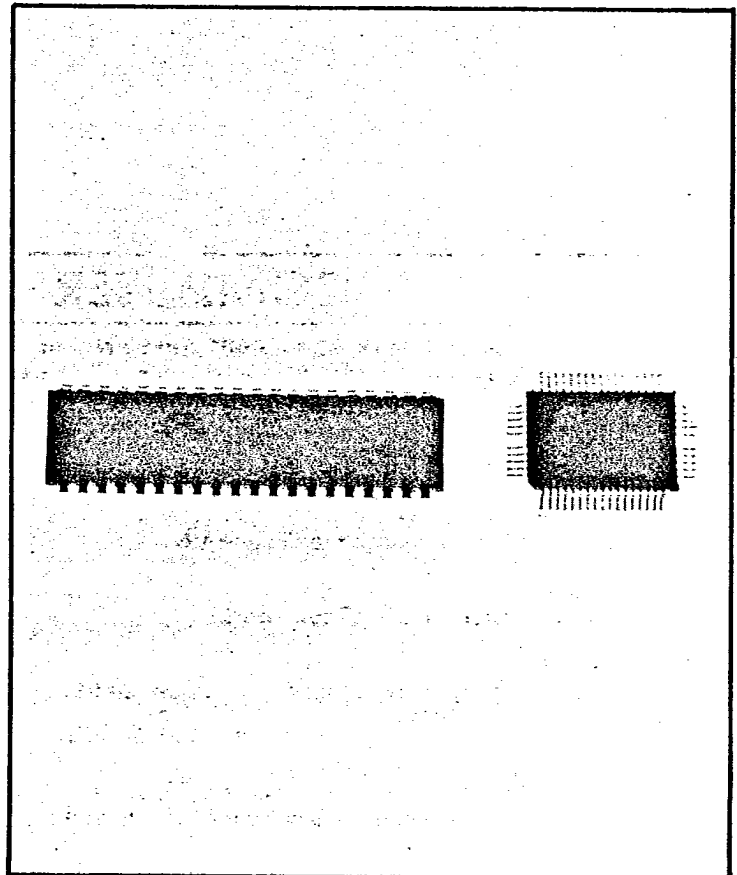
A TYPICAL APPLICATION

Bar Code : Code 39
Baud Rate: 1200
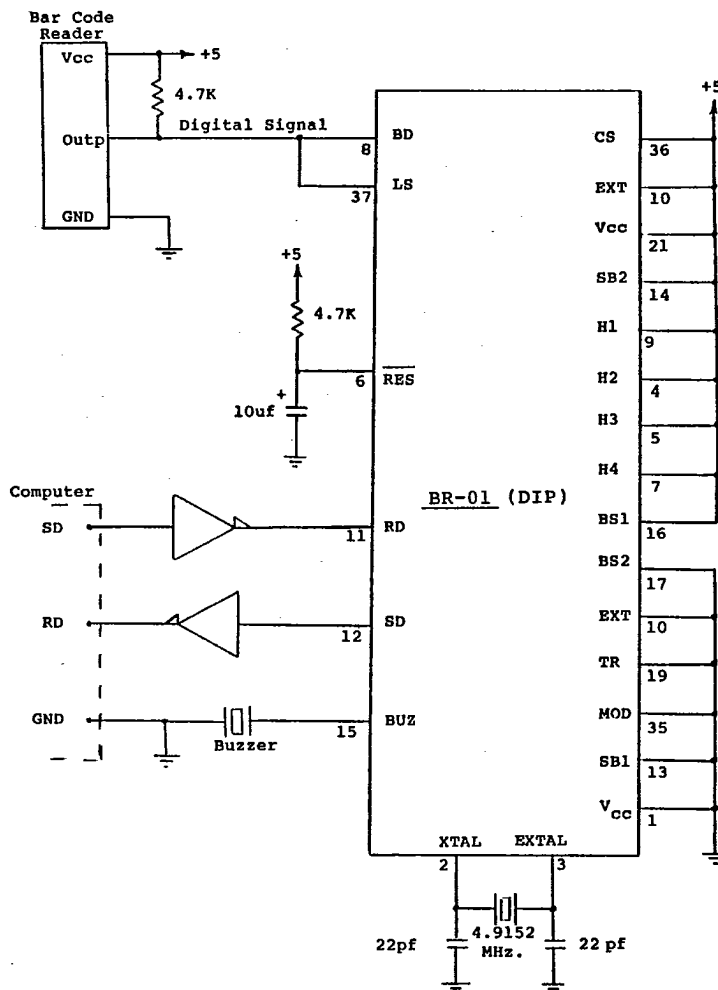
COMPUTER COMMANDS

The initialized parameters of BR-01 can be altered by a series of commands from a host computer. These commands can also specify several features that are not settable by hardware switches. All commands are received through the RD port in the form of 3-character, 8-bit serial ASCII data.

1. ESC W C/R
The bar code type is changed to UPC, EAN, Jan, WPC.

2. ESC 7 C/R
The bar code type is changed to CODABAR.

3. ESC 9 C/R
The bar code type is changed to Code 39.

4. ESC 5 C/R
The bar code type is changed to Code 2-of-5, Interleaved and Industrial.

5. ESC C C/R
The check digit calculation is performed for Codes 39 and 2-of-5. No decoded data is transmitted if the check digit is incorrect.

6. ESC T C/R
Deletes the Start/Stop characters from the transmission data of the Codes 39 and CODABAR.

7. ESC B C/R
Outputs a burst of 0.3 second, 2 KHz tone to the buzzer.

8. ESC E C/R
Enables the option of sending a read error message to the host computer. When the lead margin and a start or stop character is read successfully, but the other characters fail to decode, a read error will be generated. The read error message is a 2-character data: NULL C/R. This mode can be cleared only by reset.

9. ESC S C/R
Inhibits the buzzer output for a valid read. This mode can be cleared only by reset.

10. ESC R C/R
Clears all previously sent commands and returns system parameters to hardware defined values.