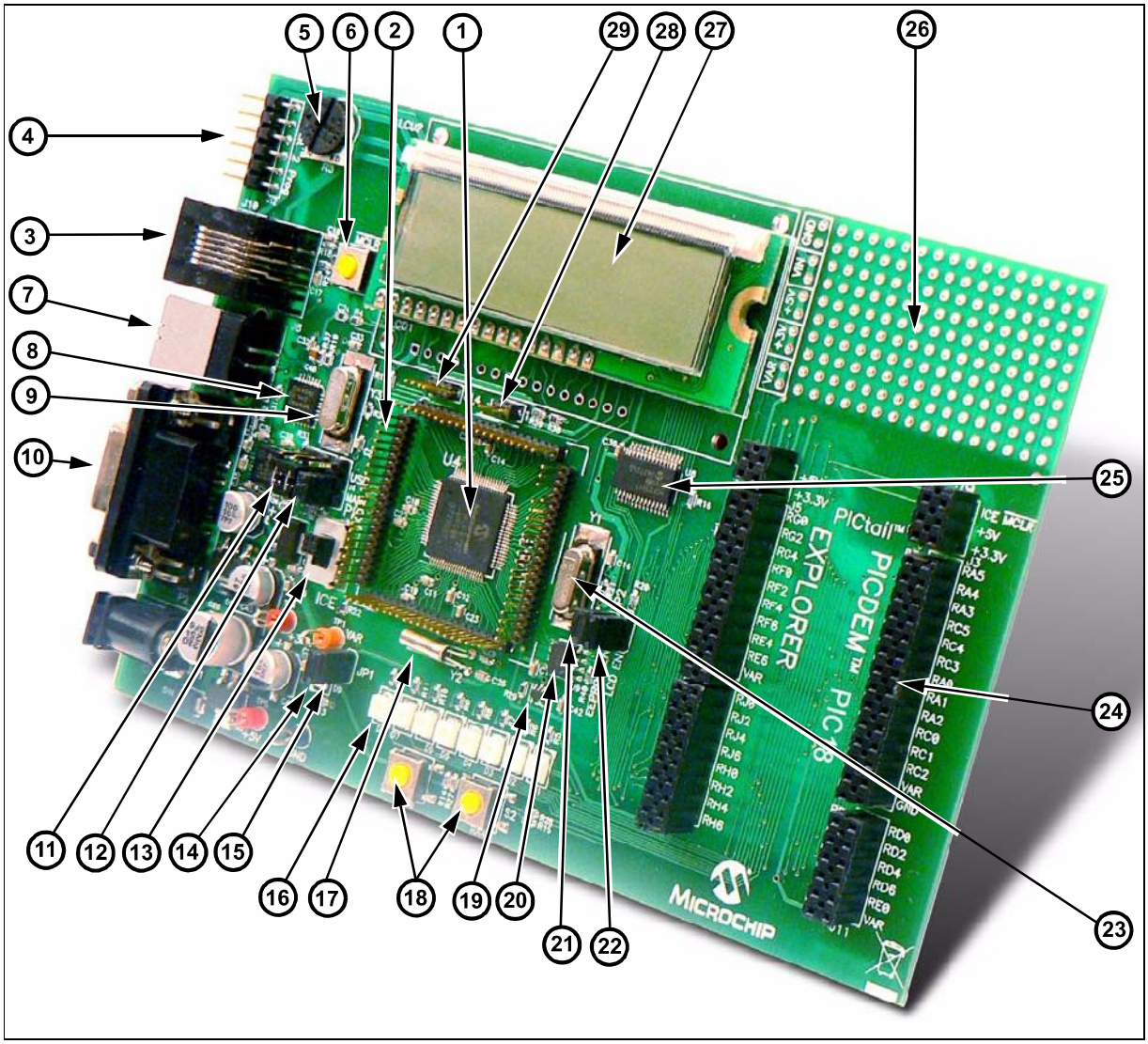
1.3 PICDEM™ PIC18 EXPLORER DEMONSTRATION BOARD

The PICDEM PIC18 Explorer Demonstration Board has the following hardware features with each feature's number corresponding to the number in Figure 1-1 that shows the feature's location on the board:

1. PIC18F8722 microcontroller – The sample, primary microcontroller mounted on the board.
2. Male header pins for connecting Plug-In Modules (PIMs). A PIM enables an alternate PIC18 device to be connected to the board, as the primary microcontroller.
3. In-Circuit Debugger (ICD) connector.
4. Six-pin, PICkit™ 2 connector.
5. 10 kΩ potentiometer for analog inputs.
6. Push button switch – For external Reset.
7. USB connector – For RS-232 communication.
8. PIC18LF2450 microcontroller – For converting RS-232 communication to USB protocol for attachment of a host PC.
9. 12 MHz crystal – For the PIC18LF2450 microcontroller.
10. RS-232 DB9 socket and associated hardware – For direct connection to an RS-232 interface.
11. Jumper J13 for routing RS-232 communication through either the USB port or the RS-232 socket.
12. Jumper J4 – For selecting between programming the main PIC® device or the PIC18LF2450, used for USB to RS-232 communication.
13. Switch S4 – For designating the main microcontroller as either the board-mounted PIC18F8722 or a PIM-mounted microcontroller.
14. LED – For power-on indication.
15. JP1 – For disconnecting the eight display LEDs.
16. Eight LEDs.
17. 32.768 kHz crystal – For Timer1 clock operation.
18. Two push button switches – For external stimulus.
19. Analog temperature sensor, MPC9701A.
20. 25LC256 SPI EEPROM.
21. JP2 – To enable/disable EEPROM.
22. JP3 – To enable/disable LCD.
23. 10 MHz crystal – For the main microcontroller.
24. PICtail™ daughter board connector socket.
25. SPI I/O expander – For LCD display, MCP23S17.
26. Prototype area – For user hardware.
27. LCD display.
28. J2 three-pin, male header – For selecting between a voltage of 3.3V or 5V.
29. J14 four-pin, male header – For use with a PIM, if required, to connect 3.3V or 5V, V_{IN} and ICE $\overline{MCLR}$.

FIGURE 1-1: PICDEM™ PIC18 EXPLORER DEMONSTRATION BOARD



1.4 SAMPLE DEVICES

The PICDEM PIC18 Explorer Demonstration Board comes with two sample devices that alternately can be used as the main microcontroller:

- An 18-pin, 5V PIC microcontroller (the PIC18F8722) mounted on the board
- A 3.3V PIC18 device (PIC18F87J11) mounted on an 80-pin PIM that connects to the demo board via an 80-pin male

1.5 SAMPLE PROGRAMS

The PICDEM PIC18 Explorer Demonstration Board Kit includes a CD-ROM with sample demonstration programs. These programs may be used with the included sample devices and with an In-Circuit Debugger (ICD).

Also provided on the disc is demonstration source code that includes several assembly source code (ASM) files and one Hex compiled code file.

FIGURE A-2: PICDEM™ PIC18 EXPLORER DEMONSTRATION BOARD SCHEMATIC – 1 OF 2

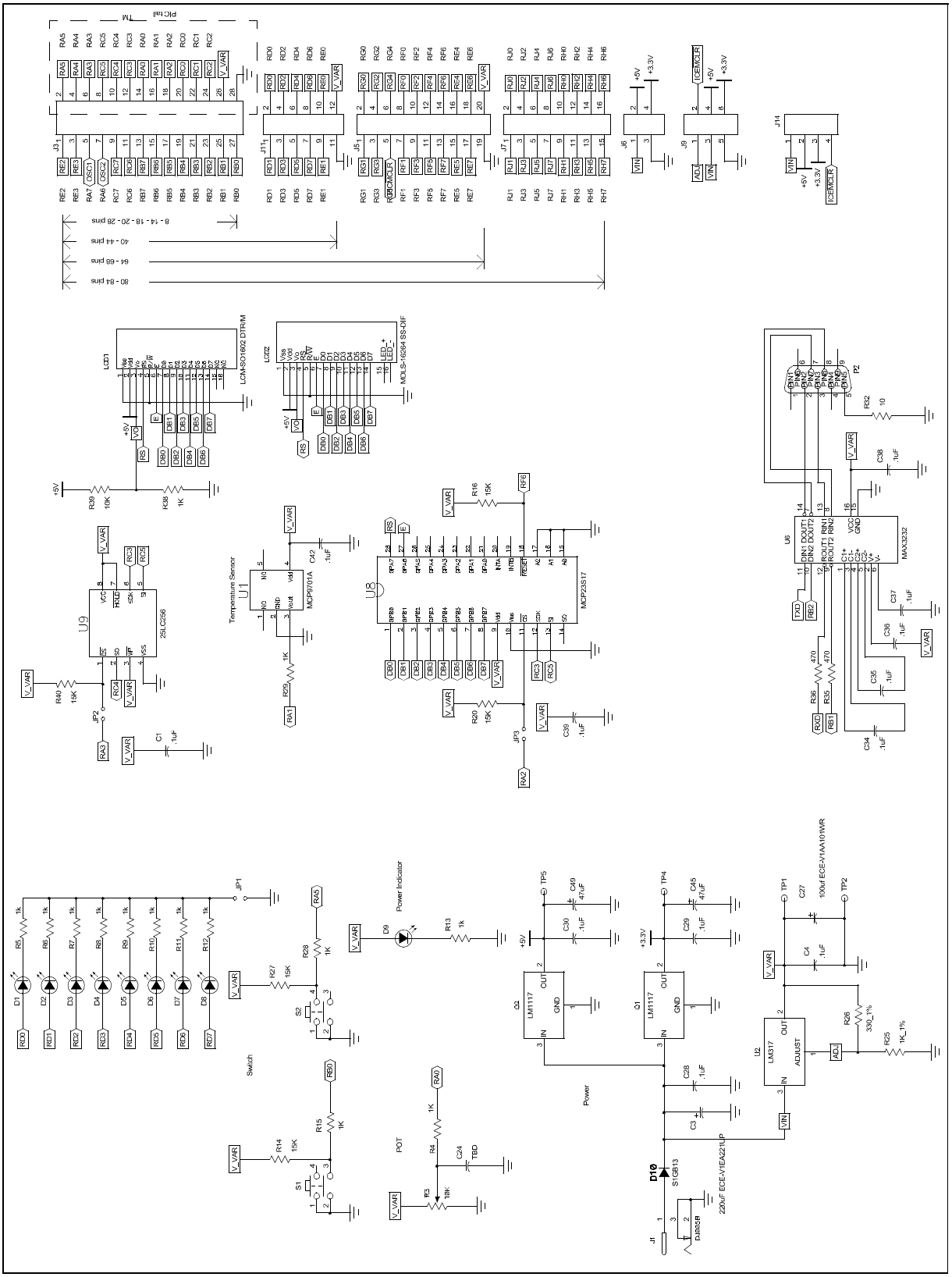


FIGURE A-3: PICDEM™ PIC18 EXPLORER DEMONSTRATION BOARD SCHEMATIC – 2 OF 2