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## BASIC Stamp<sup>®</sup> 2sx Change Notice (for Interpreter Chip Users)

This document contains details of revisions made to the BASIC Stamp 2sx interpreter chip firmware as well as the BASIC Stamp 2sx module. This information is intended only for use by customers who purchase the BS2sx interpreter chips and embed the BASIC Stamp 2sx circuit into their designs.

If you use BASIC Stamp 2sx modules (as opposed to interpreter chips) then you can safely ignore this information.

As of July 2007, Parallax, Inc. has modified the firmware in the BASIC Stamp 2sx interpreter chip in a way that increases reliability, but requires an electrical change on the PCB that the interpreter is used on. Parallax has already made the necessary changes to the new BASIC Stamp 2sx modules that are produced, however, if you use the individual interpreter chips, instead of the modules, your embedded circuit will need to be modified in a similar way.

BS2sx Details (interpreter chip changes, software and BS2sx module changes):

Interpreter chip firmware updated to v1.3.

- Disabled internal interpreter brown-out detector. This change requires that, instead, an external brown-out detector be included in the circuit for proper operation.
- BASIC Stamp Editor v2.3.1 (or above) supports this new firmware version.

EEPROM changed to a Microchip 24FC128I. The previous EEPROM (Catalyst 24WC128J) has been discontinued by the manufacturer. This change is independent of the firmware update; if you have a supply of EEPROMS that you've successfully used in previous builds, there is no need to change it. NOTICE: The Catalyst 24C128WI is not recommended for use in the BS2sx circuit.

The 50 MHz resonator has been replaced with a RoHS compliant, industrial, resonator.

- A 10 K Ohm feedback resistor across the XI/XO pins of the resonator is used to optimize oscillation across the industrial temperature range.

The schematic on the following page shows the current design in use, as described above. Please review it to aid in adjusting your BS2sx embedded designs.

If you have any further questions regarding this matter, please contact us and we will answer them promptly.

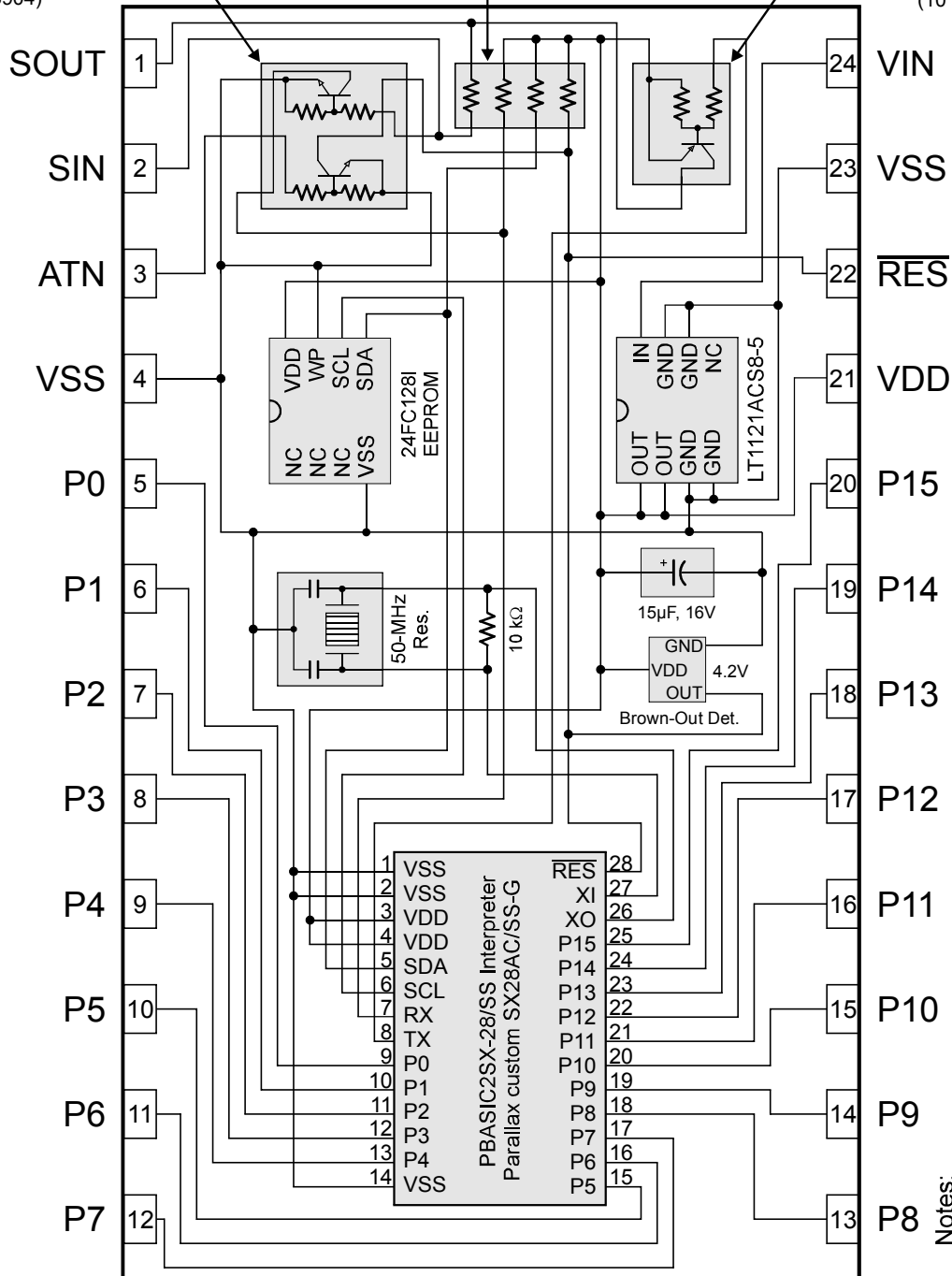
## BASIC Stamp® BS2sx-IC Module Schematic Rev. F

Updated 08-02-07 © Parallax, Inc.

Dual NPN Trans. Pack  
 (10 kΩ Res. & 2N3904)

Quad Res. Pack (4.7 kΩ Res.)

Single PNP Trans. Pack,  
 (10 kΩ Res. & 2N3906)



Notes:

The 15µF, 16V capacitor may be a 10-22µF, 6.3-16V tantalum capacitor.

The 24FC128I Industrial EEPROM may be a non-industrial 24FC128, or 24WC128J EEPROM.

The 50 MHz resonator is not polarity sensitive and the middle pin can be connected to either VDD or VSS.

