



Kit Part MPD 8021-0001 has a number of circuits that have been developed for the MPD 8021 array. These circuits represent some of the most fundamental linear building blocks of a high-voltage analog array. this part:

- a. Operational Amplifier(OPAMP)
- b. Comparator(COMP)
- c. Bandgap Reference(BGR)
- d. High Voltage Charge Pump(HSBIAS)
- e. High Voltage Pre-driver Output Stage(PHASE\_X)
- f. Voltage Translator/Level Shifter(BVFLS)

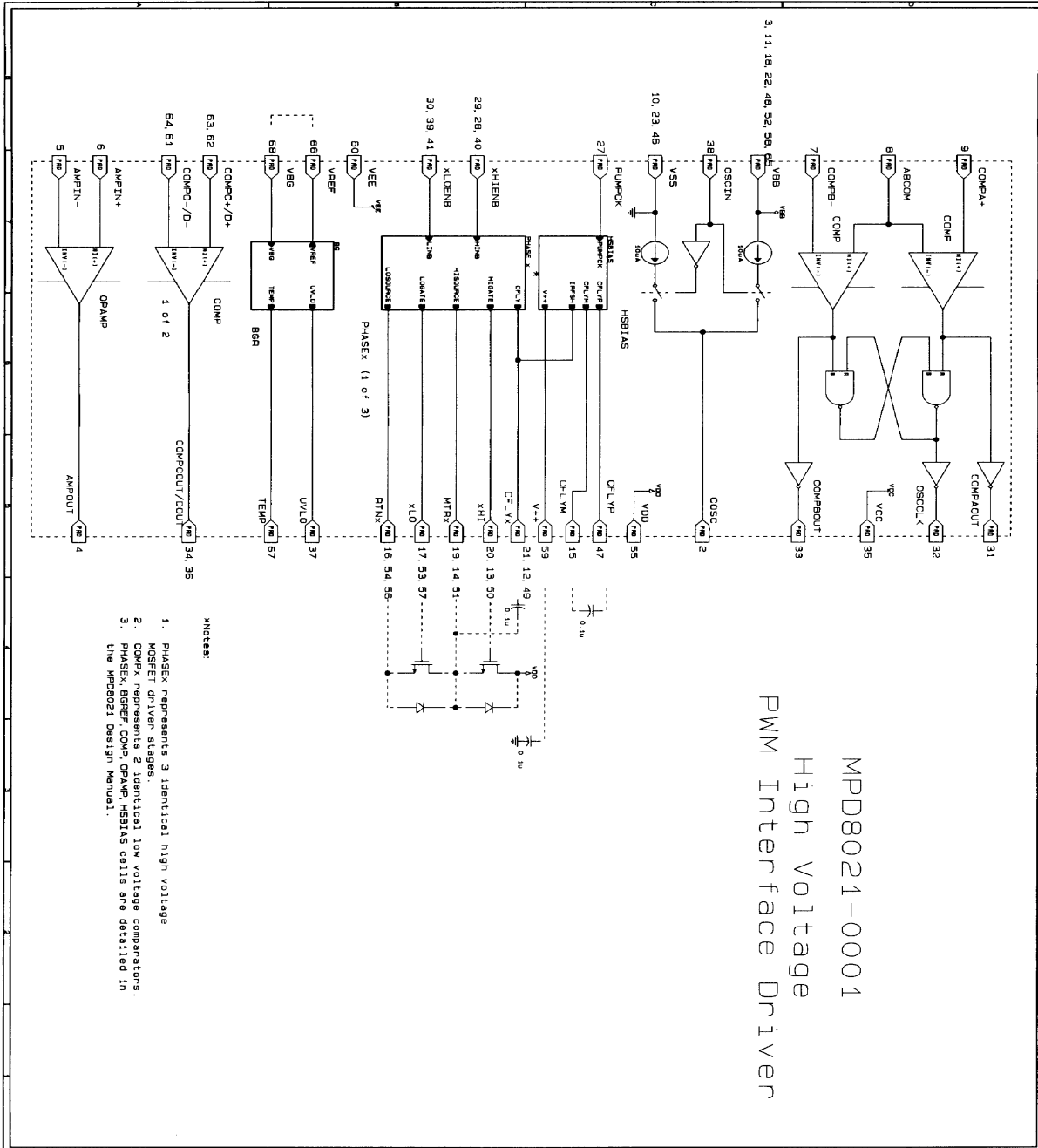
These circuits have been successfully fabricated and tested, and are offered as examples of how to perform design and layout with the MPD 8021 analog array. Designers are invited to use these circuits directly for applications without any special demands. The Phase\_X circuit includes a voltage translator/level shifter(BUFLS) which is not directly accessible. The BUFLS cell is an important function, as most all MPD 8021 designs will have a level shifter circuit to translate from logic voltage level to output drive voltage level.

The Kit part also includes circuitry than can be used to generate an oscillator and a charge pump for enhancement voltage to drive a N Fet in a high side configuration.

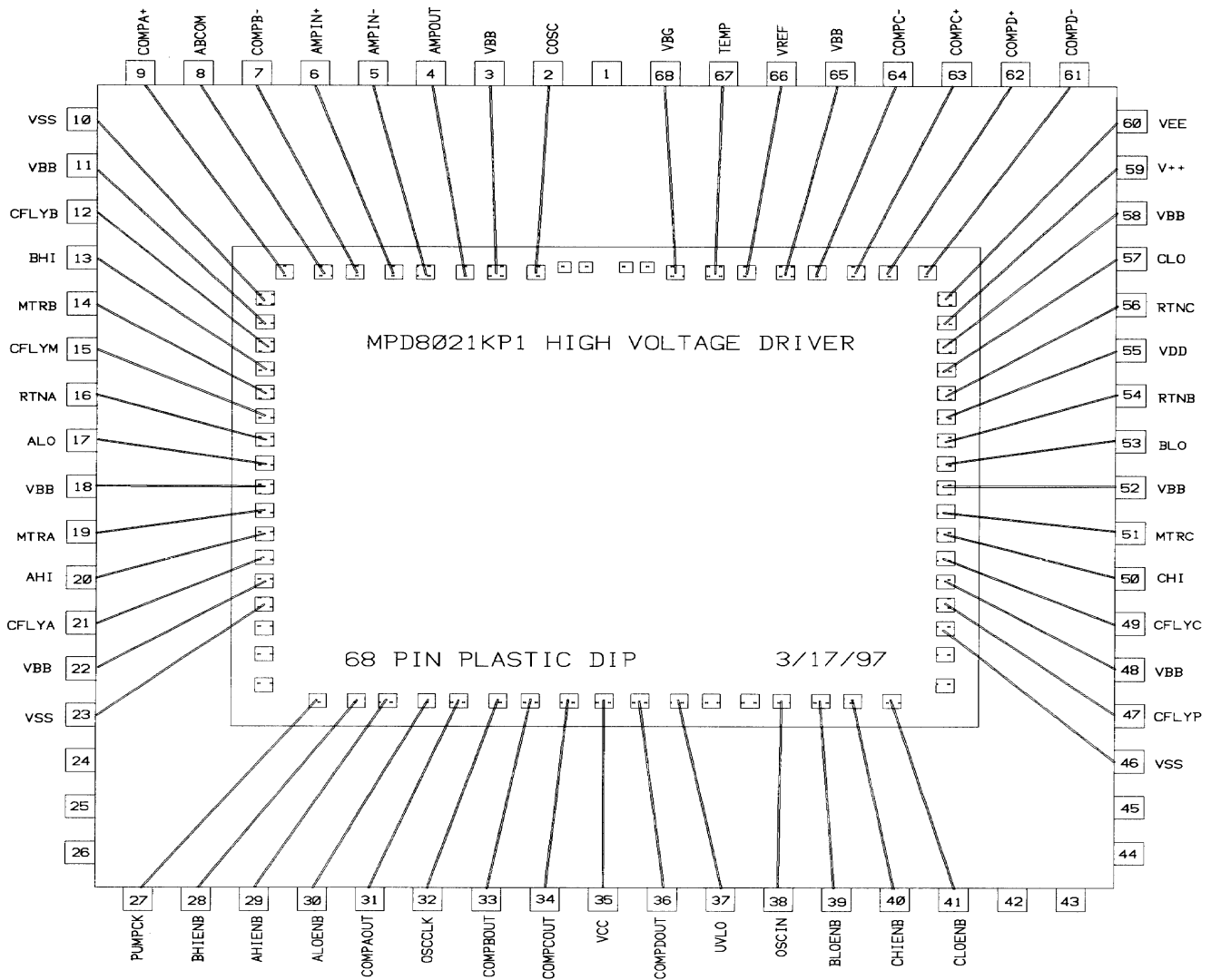
A schematic of each of these circuits, along with an application for each circuit, and a description of how to use the circuit can be **DOWNLOADED** in the specification section of the MPD 8021 Design Manual. Typical performance data for each circuit is also provided, with an assessment of the real estate required to implement each circuit on the array. Net-lists of any of these circuits may be downloaded via the Internet.

## **Schematic-MPD 8021-0001-Sub Circuit Array**

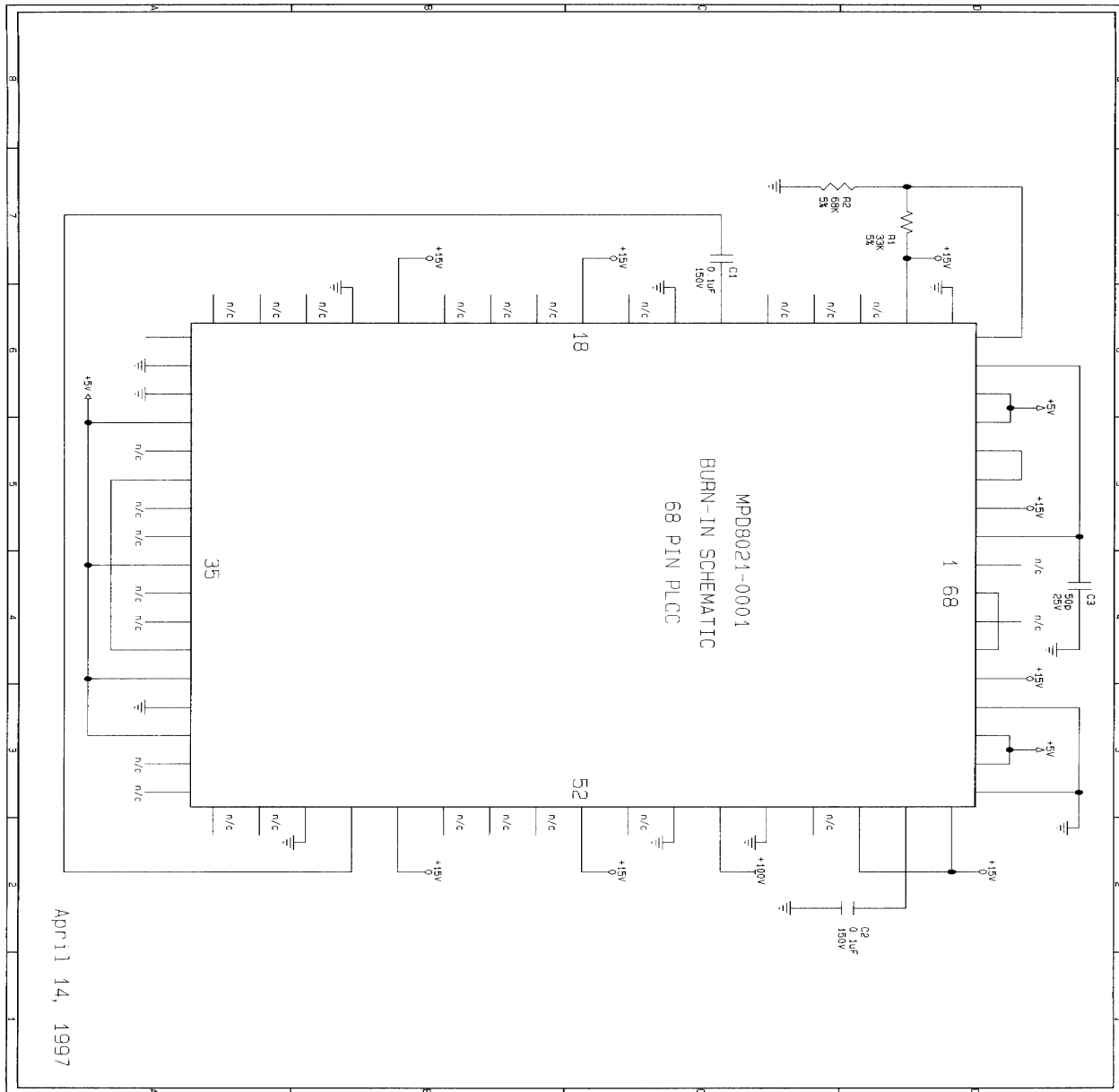
### **68 PLCC PACKAGE**



**MPD 8021-0002  
COMPONENT ARRAY**



**MPD 8021-0001**  
**68 PIN DIP PACKAGE**



**MPD 8021-0001-BURN IN SCHEMATIC**  
**68 PIN PLCC PACKAGE**