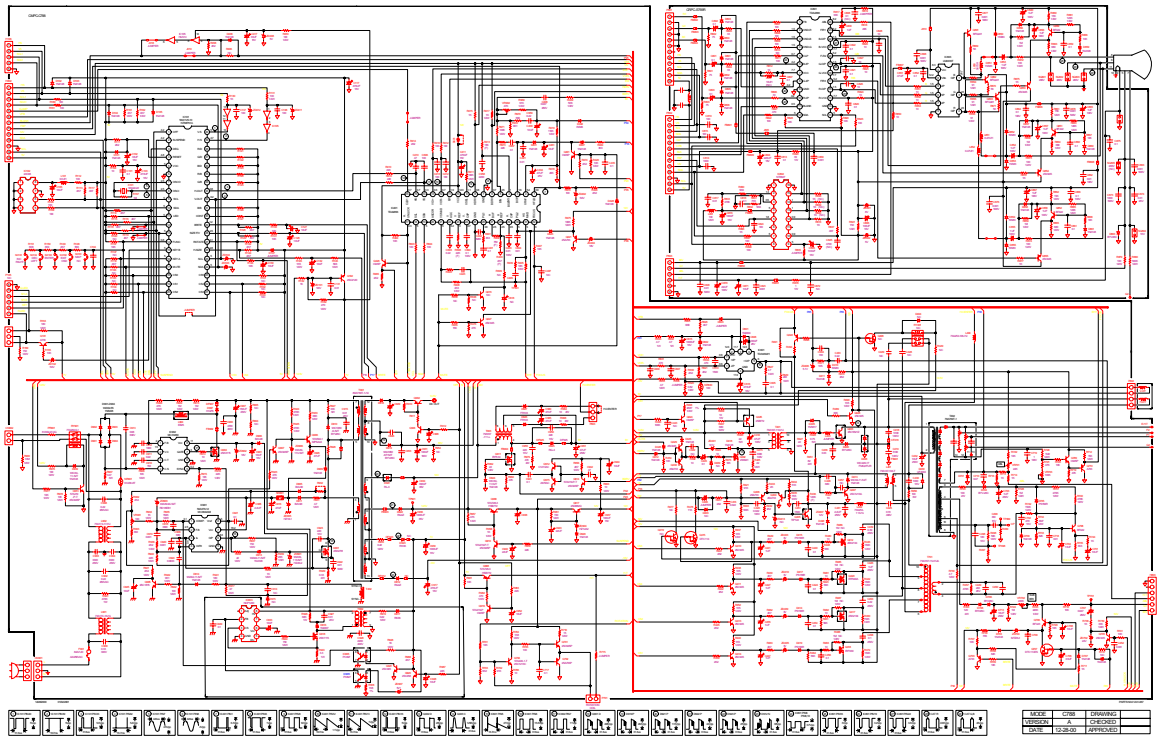12 SCHEMATIC DIAGRAM