ABSTRACT

SUBSTRATES INCLUDING INNOVATIVE SOLDER BALL PAD STRUCTURE

A solder ball pad is provided for mounting and connecting of electronic devices and, more particularly, apparatus and methods are disclosed providing an improved solder ball pad structure on a substrate, such as a printed circuit board ("PCB") or a semiconductor die, while enabling better use of the spaces between adjacent solder ball pads, and at the same time providing increased surface area for bonding to a solder ball. More particularly, the inventive solder ball pad structure comprises a terminal pad exposed through an aperture in an insulative mask having a bond pad layer comprising at least another metal layer formed over, at most, a portion of the exposed portion of the terminal pad. Methods of manufacture and substrates incorporating same are also disclosed.

[FIG. 7I]