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**Huang et al.**(10) **Pub. No.: US 2022/0369464 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **SANDWICH STRUCTURE POWER SUPPLY  
MODULE****Publication Classification**(71) Applicant: **Monolithic Power Systems, Inc.**, San  
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**Xinmin Zhang**, San Jose, CA (US)(51) **Int. Cl.****H05K 1/18** (2006.01)**H01L 23/495** (2006.01)**H05K 1/02** (2006.01)**H01L 23/66** (2006.01)**H01L 23/528** (2006.01)**H01L 23/367** (2006.01)(52) **U.S. Cl.**CPC ..... **H05K 1/181** (2013.01); **H01L 23/49562**  
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**H01L 23/367** (2013.01)(21) Appl. No.: **17/878,356**(22) Filed: **Aug. 1, 2022****Related U.S. Application Data**(63) Continuation-in-part of application No. 17/589,277,  
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(57)

**ABSTRACT**

A power supply module having at least one inductor mod-  
ules, a top PCB mounted on top of the at least one inductor  
modules, and at least one pair of power device chips  
mounted on top of the top PCB, wherein power pins and  
signal pins for connecting the top PCB and a board that the  
at least one inductor modules are attached to, are imple-  
mented by metal layers wrapping each of the at least one  
inductor modules.

