



US00D775091S

(12) **United States Design Patent** (10) **Patent No.:** **US D775,091 S**
Edenharter et al. (45) **Date of Patent:** **** Dec. 27, 2016**

(54) **POWER SEMICONDUCTOR MODULE**

6/4262;G02B 6/428; G02B
6/4281; H05K 1/14; H05K 1/141; H05K
1/142; H05K 1/144; H05K 1/18; H05K
1/181; H05K 1/182; H05K 1/026

(71) Applicant: **Infineon Technologies AG**, Neubiberg
(DE)

See application file for complete search history.

(72) Inventors: **Stefan Edenharter**, Unterhaching (DE);
Christoph Koch, Salzkotten (DE);
Sven Schennetten, Balve (DE)

(56) **References Cited**

(73) Assignee: **Infineon Technologies AG**, Neubiberg
(DE)

U.S. PATENT DOCUMENTS

(**) Term: **14 Years**

(21) Appl. No.: **29/517,909**

(22) Filed: **Feb. 18, 2015**

(30) **Foreign Application Priority Data**

Aug. 19, 2014 (EM) 002521518-0003

(51) **LOC (10) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/182**

(58) **Field of Classification Search**
USPC D13/110, 182; 257/678, 684, 690, 691;
361/679.01, 713, 728, 736, 760, 761, 772,
361/775, 783, 820; 174/250, 253; 438/15,
438/25, 26, 51, 55, 63, 64, 106
CPC .. H01L 21/00; H01L 2224/42; H01L 2224/43;
H01L 2021/00; H01L 2021/02; H01L
2021/04; H01L 21/4814; H01L 21/4846;
H01L 21/4871; H01L 21/67144; H01L
23/12; H01L 23/13; H01L 23/14; H01L
23/147; H01L 2924/171; H01L
2924/1711; H01L 2924/1715; H01L
2924/17151; H01L 2924/181; H01L
2924/1811; H01L 2924/1815; H01L
2924/19042; H01L 2924/1905; H01L
2224/08054; H01L 23/58; H05B 41/14;
H02B 6/4201; G02B 6/4256; G02B
6/4257; G02B 6/4261; G02B

D288,557	S *	3/1987	Du Bois	.....	D13/182
5,347,160	A *	9/1994	Sutrina	.....	H01L 24/72 257/678
D357,671	S *	4/1995	Terasawa	.....	D13/182
D357,672	S *	4/1995	Terasawa	.....	D13/182
D360,619	S *	7/1995	Terasawa	.....	D13/182
5,512,782	A *	4/1996	Kobayashi	.....	H02M 7/003 257/691
D389,808	S *	1/1998	Yamada	.....	D13/182
D396,450	S *	7/1998	Nishiura	.....	D13/182
D441,726	S *	5/2001	Sofue	.....	D13/182
6,521,983	B1 *	2/2003	Yoshimatsu	.....	H01L 25/072 257/678
D476,959	S *	7/2003	Yamada	.....	D13/182

(Continued)

Primary Examiner — Elizabeth J Oswecki
(74) *Attorney, Agent, or Firm* — Murphy, Bilak &
Homiller, PLLC

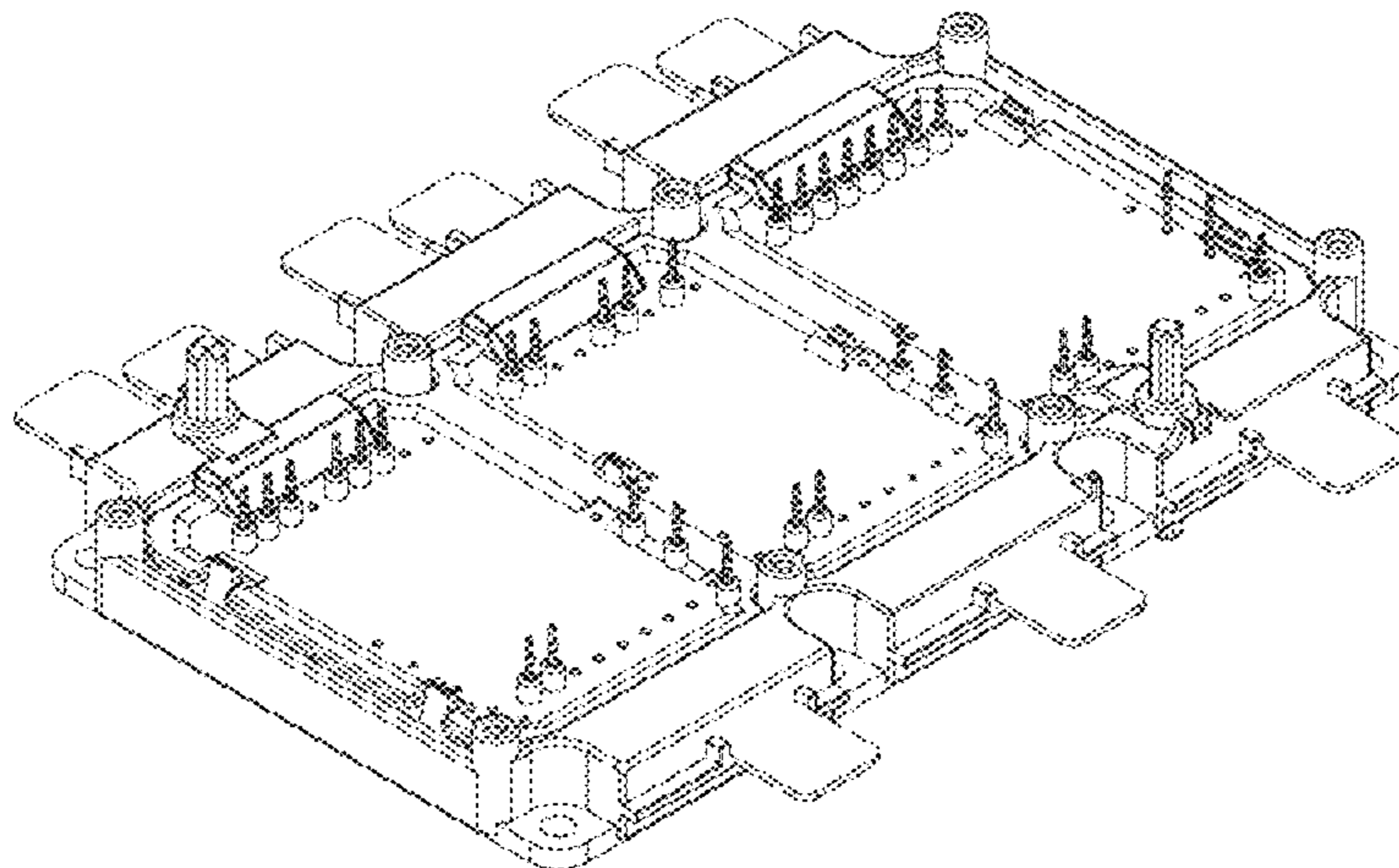
(57) **CLAIM**

The ornamental design for a power semiconductor module,
as shown and described.

DESCRIPTION

FIG. 1 is a bottom plan view of a power semiconductor
module showing our new design;
FIG. 2 is a top plan view thereof;
FIG. 3 is a side elevational view thereof;
FIG. 4 is another side elevational view thereof; and,
FIG. 5 is a top, side perspective view thereof.
All surfaces not shown form no part of the claimed design.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,774,465 B2 * 8/2004 Lee H01L 23/049
257/671
D503,149 S * 3/2005 Teramae D13/110
D587,662 S * 3/2009 Soutome D13/182
D589,012 S * 3/2009 Soyano D13/182
D606,951 S * 12/2009 Soyano D13/182
D648,290 S * 11/2011 Mori D13/182
D653,633 S * 2/2012 Soyano D13/182
D653,634 S * 2/2012 Soyano D13/182
D686,174 S * 7/2013 Soyano D13/182
D689,446 S * 9/2013 Soyano D13/180
D699,693 S * 2/2014 Otsuka D13/182
D704,670 S * 5/2014 Chen D13/182
D704,671 S * 5/2014 Chen D13/182
D705,184 S * 5/2014 Takahashi D13/182
D710,317 S * 8/2014 Chen D13/182
D710,318 S * 8/2014 Chen D13/182
D710,319 S * 8/2014 Chen D13/182
D712,853 S * 9/2014 Nakamura D13/182
D719,537 S * 12/2014 Kawase D13/182
D721,048 S * 1/2015 Nakamura D13/182
D721,340 S * 1/2015 Nakamura D13/182
D748,595 S * 2/2016 Bertalan D13/182
2001/0038143 A1 * 11/2001 Sonobe H01L 24/49
257/690
2010/0149774 A1 * 6/2010 Matsumoto H01L 23/055
361/783
2011/0044012 A1 * 2/2011 Matsumoto H01R 4/04
361/728

* cited by examiner

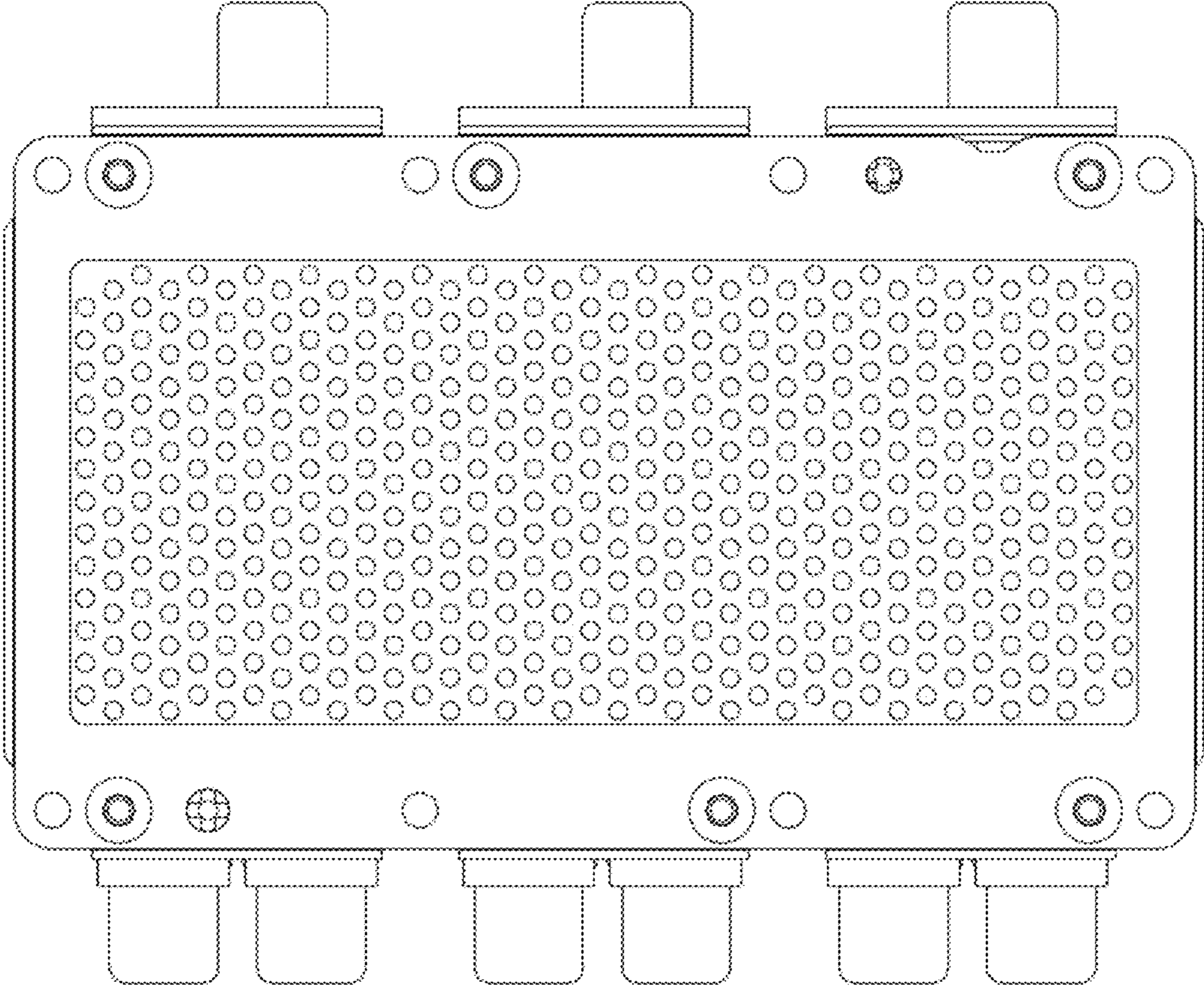


Figure 1

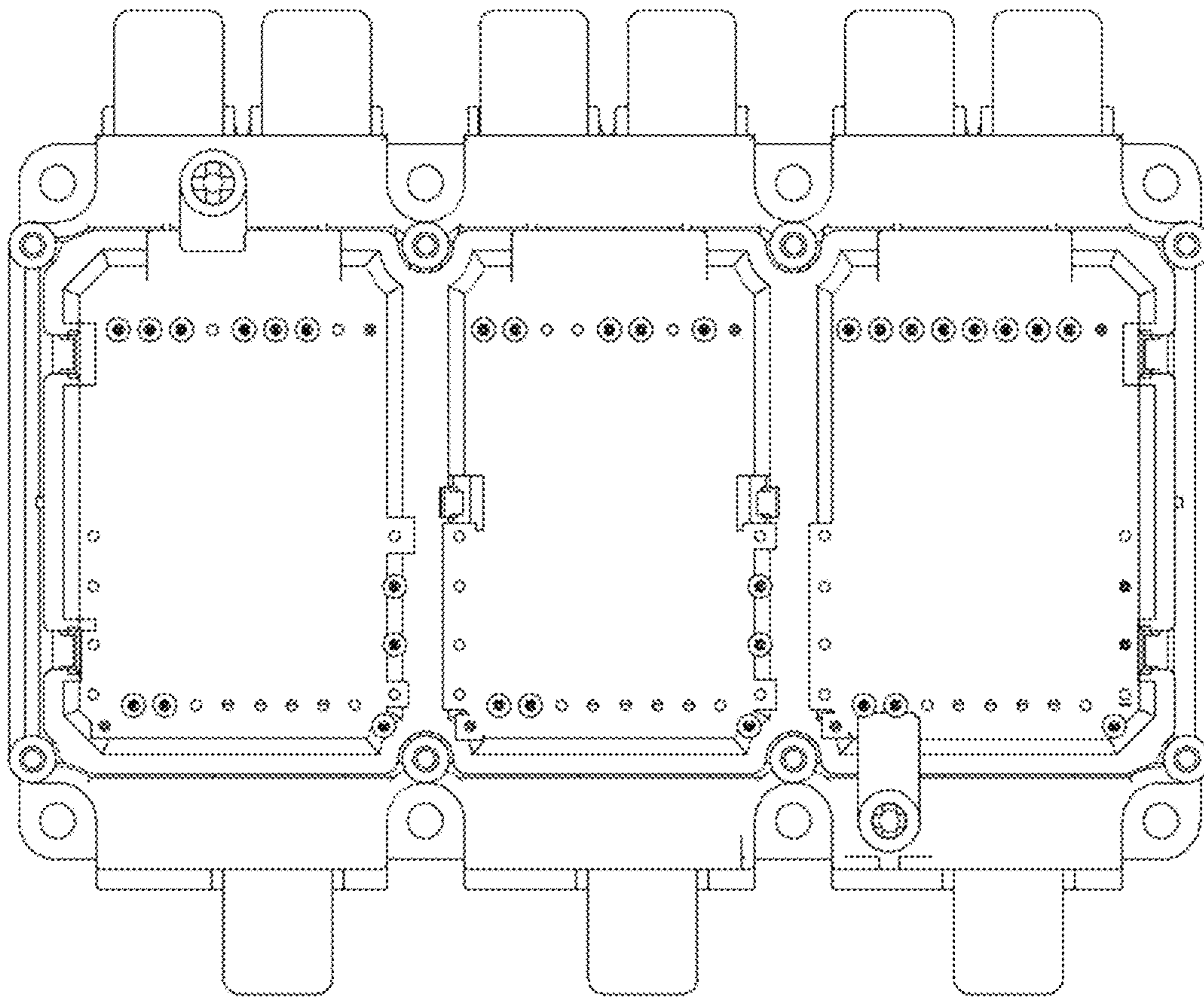


Figure 2

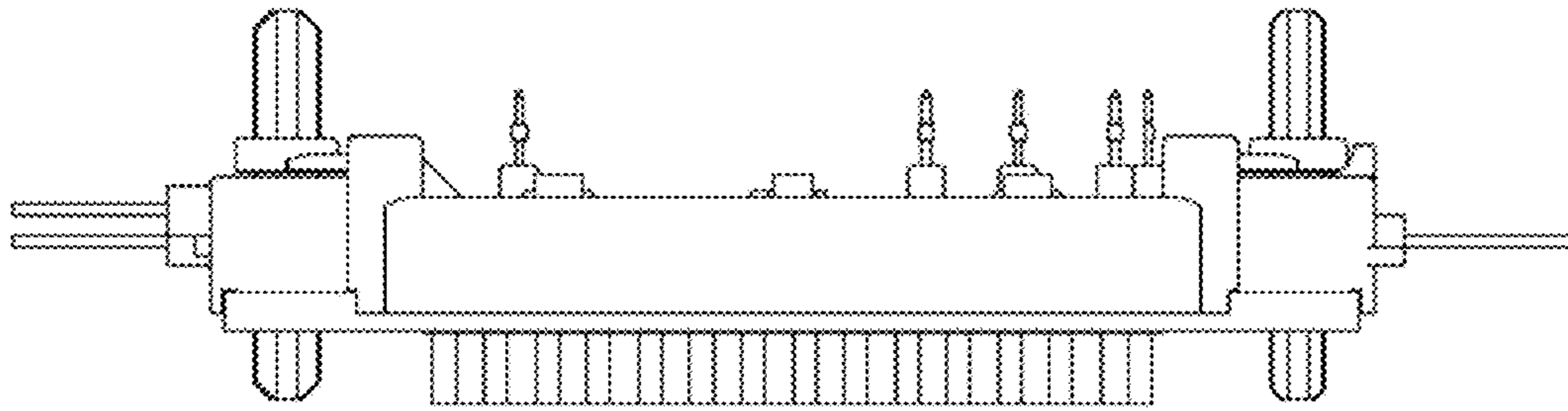


Figure 3

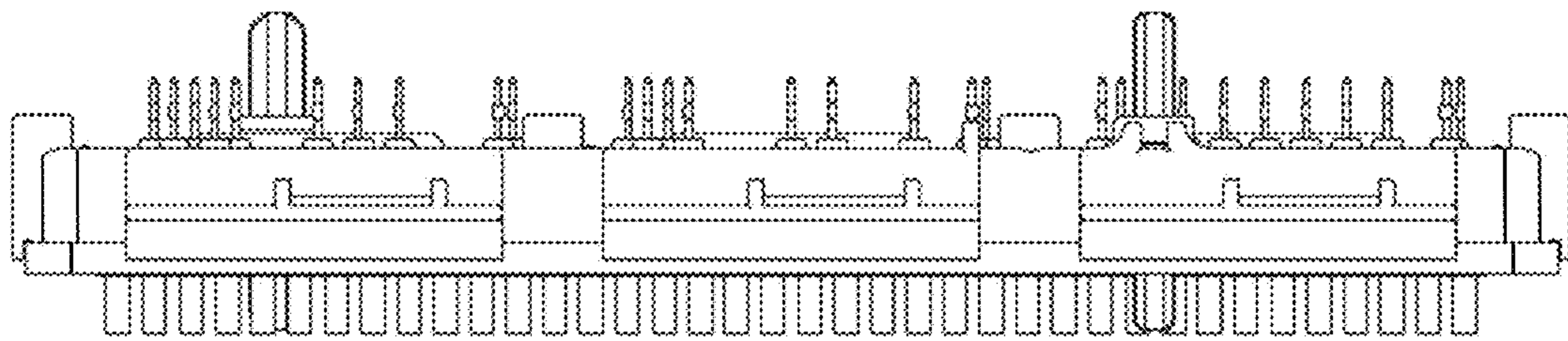


Figure 4

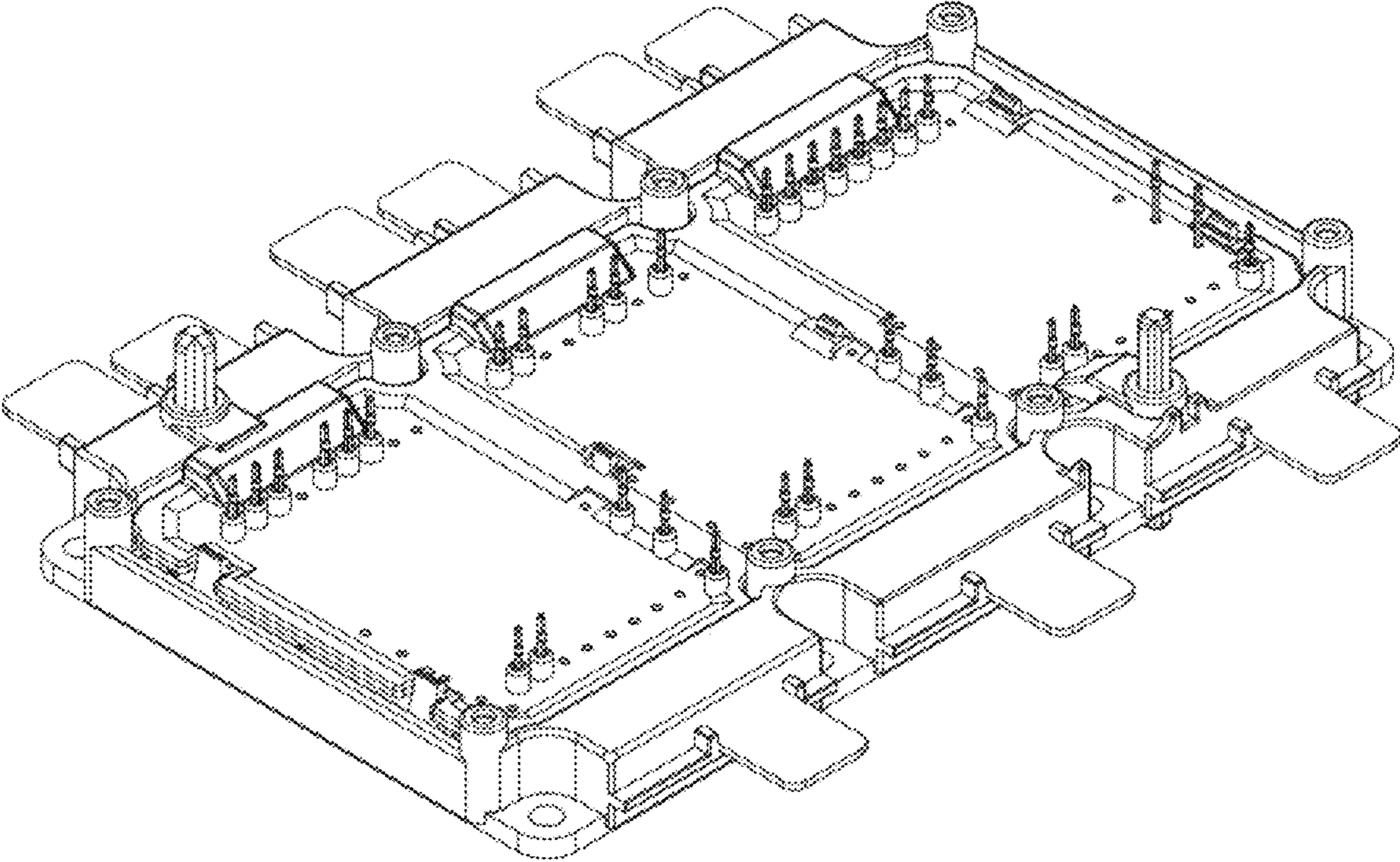


Figure 5