



**PERBADANAN HARTA INTELEK MALAYSIA**  
**INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA**  
(Agensi dibawah KPDNHEP)



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**APPLICATION NO.** : PI 2018001536  
**GRANT NO.** : MY-189133-A  
**OWNER** : ROKKO LEADFRAMES PTE LTD  
**DATE OF GRANT AND PUBLICATION** : 27 JANUARY 2022  
**APPLICANT'S/AGENT'S REF.** : MP2471/PK

**NOTICE OF GRANT**

The purpose of this notice is to advise you that a patent/utility innovation has been granted on the above application.

Please find enclosed a certificate of grant with a copy of the patent/utility innovation together with a copy of the Examiner's final report (if not previously provided) in accordance with Section 31 (2)(a) of the Patents Act.

Copies of the Patent/utility innovation were made available to the public on the date of grant. A reference to the grant will be published in the Gazette as soon as possible.

Your attention is drawn to the need to pay annual renewal fees in order to keep the patent/utility innovation in force (see Section 35(2) and (3) of the Patents Act and Schedule 1 of the Regulations).

**Date** : 15 FEBRUARY 2022

**(NAZIRA ADILA BINTI TAHZIR)**

**For Registrar of Patents**  
✉ nazira@myipo.gov.my  
☎ 03-2299 8851

**To** : SIVAPRIYA KRISHNAN  
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**MALAYSIA**

**CERTIFICATE OF GRANT OF A PATENT**

In accordance with Section 31 (2) of the Patents Act 1983 a patent for an invention having grant number MY-189133-A has been granted to ROKKO LEADFRAMES PTE LTD, in respect of an invention having the following particulars:

**TITLE** : SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURE

**FILING DATE** : 09 MARCH 2017

**PRIORITY DATE** : 10 MARCH 2016

**NAME OF INVENTOR** : YARANIAN, RAVI  
DHAMODARAN, SANGEETHA

**PATENT OWNER** : ROKKO LEADFRAMES PTE LTD  
61 KAKI BUKIT ROAD 2  
SINGAPORE 417869

**DATE OF GRANT** : 27 JANUARY 2022

**DURATION OF PATENT** : 09 MARCH 2017 UNTIL 09 MARCH 2037

**END OF PROTECTION** : 26 JANUARY 2023 (SUBSEQUENT ANNUAL FEE SHALL FOLLOW AS STATED IN THE SCHEDULE OF FEES AT THE BACK OF THIS PAGE)

Dated this 27 day of JANUARY 2022

A handwritten signature in black ink, appearing to read 'Kamal Kormin'.

(KAMAL KORMIN)  
Deputy Registrar of Patents  
MALAYSIA

## SCHEDULE OF ANNUAL FEES\*

Annual Fee for Patent	Due Date of Annual Payment	Online Filing (RM)	Manual Filing (RM)
a) for 2 <sup>nd</sup> year after grant of patent	26 January 2023	260	290
b) for 3 <sup>rd</sup> year after grant of patent	26 January 2024	330	360
c) for 4 <sup>th</sup> year after grant of patent	26 January 2025	390	420
d) for 5 <sup>th</sup> year after grant of patent	26 January 2026	460	490
e) for 6 <sup>th</sup> year after grant of patent	26 January 2027	520	560
f) for 7 <sup>th</sup> year after grant of patent	26 January 2028	600	640
g) for 8 <sup>th</sup> year after grant of patent	26 January 2029	650	690
h) for 9 <sup>th</sup> year after grant of patent	26 January 2030	720	760
i) for 10 <sup>th</sup> year after grant of patent	26 January 2031	780	820
j) for 11 <sup>th</sup> year after grant of patent	26 January 2032	850	890
k) for 12 <sup>th</sup> year after grant of patent	26 January 2033	900	940
l) for 13 <sup>th</sup> year after grant of patent	26 January 2034	1050	1100
m) for 14 <sup>th</sup> year after grant of patent	26 January 2035	1200	1250
n) for 15 <sup>th</sup> year after grant of patent	26 January 2036	1300	1350
o) for 16 <sup>th</sup> year after grant of patent	26 January 2037	1600	1660

In the case of late payment of annual fees:

- i) Payment of annual fee can still be made within 6 months (grace period) from the due date but a surcharge of 100% of the fee for the year concerned will be imposed.
- ii) If no payment is made after the grace period, the patent will be published as lapse in the government gazette.
- iii) The applicant can still file reinstatement of the lapse patent within 2 years from the date of the publication of lapse in the government gazette. Surcharge and Reinstatement Fee shall be applied.
- iv) For more information, please contact us at [www.myipo.gov.my](http://www.myipo.gov.my) or 03-2299 8558/8554.

\*Fees subject to change according to Patents & Regulations.

<p>(12) <b>MALAYSIAN PATENT</b></p>	<p>(11) <b>MY-189133-A</b></p>
<p>(21) <b>Application No.</b> : PI 2018001536</p> <p>(22) <b>Filing Date</b> : 09 MARCH 2017</p> <p>(47) <b>Date of Publication and Grant</b> : 27 January 2022</p> <p>(30) <b>Priority Data</b> : 10201601865X; 10/3/2016; SG</p> <p>(51) <b>Classification, INT CL</b> : C23F 1/00 C25D 3/12</p> <p>(72) <b>Inventors</b> : Ravi YARANIAN Sangeetha DHAMODARAN</p>	<p>(56) <b>Prior Art</b> : CN103928302A, SICHUAN JINWAN ELECTRONIC CO LTD, 16 July 2014, See the document; US2003153129A1, TEXAS INSTRUMENTS INC, 14 August 2003, See the document; WO2013126018A1, ROKKO LEADFRAMES PTE LTD, 29 August 2013, See the document; Bright Future for Plating LED Lights [retrieved from internet on 26 April 2017] &lt;URL: <a href="http://www.pfonline.com/articles/bright-future-for-plating-led-lights">http://www.pfonline.com/articles/bright-future-for-plating-led-lights</a>&gt; published on 05 September 2015 as per Wayback Machine whole document;</p> <p>(73) <b>Patent Owner</b> : Rokko Leadframes Pte Ltd 61 Kaki Bukit Road 2 Singapore 417869</p> <p>(74) <b>Agent</b> : Sivapriya Krishnan Marks &amp; Clerk (Malaysia) Sdn. Bhd.</p>

(54) **Title** : Semiconductor Device and Method of Manufacture

(57) **Abstract** :

The present invention relate to a leadframe or flexible printed circuit (FPC) and a method of manufacturing a leadframe or FPC having a GAM value of greater than 2.0. The method comprises subjecting an electrolytically cleaned leadframe or FPC to a microetching step to provide a microetched leadframe or FPC or subjecting an electrolytically cleaned leadframe or FPC to a copper plating process to provide a double copper plated leadframe or FPC. The microetched leadframe or double copper plated leadframe or FPC is then subjected to a bright-deposition nickel plating process, a silver strike electroplating process, a bright silver plating process, and then a silver stripping process to provide a mirror bright silver leadframe or FPC.

Figure 2

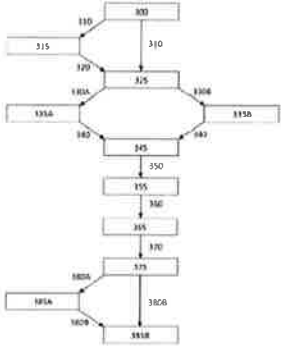


Fig 2



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**SUBSTANTIVE EXAMINATION**  
**CLEAR REPORT - Section 30(1)**

The Examiner has reported that the above application complies with the requirements of the Patents Act 1983 and Patents Regulations 1986. The examination was carried out on the following application documents:

Description:	Pages	1 - 19	filed on	06 September 2018
Claims:	Pages	20 - 23	filed on	28 September 2021
Drawings:	Figure	1 & 2	filed on	06 September 2018
Abstract:	Pages	24	filed on	06 September 2018
	Figure	2	filed on	06 September 2018

Notice of Grant will be issued once the application is granted.

A search report is attached No

\* Delete if not applicable.

**(SITI NAFEESA BINTI JALALUDIN)**  
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