



SEMI-CONDUCTOR LABORATORY
Ministry of Electronics and Information Technology
Government of India
Sector 72, S.A.S. Nagar – 160 071, Punjab, India
Phone: 0091 172 2296100/200/300/400 (Ext. 6169)
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INVITATION TO TENDER NO.: SCL/PS/45081/VAHD/05/2025

E-tender /Online bid is invited for **Supply of Ceramic IC Package and Sealing Lid with Preform (LWP)-both two types** in accordance with the purchaser's tender specifications. The invitation to tender, tendering conditions, general conditions of contract, special conditions of contract and additional conditions of contract, if any, which will govern the contract pursuant to tender are attached.

Bidders interested to submit bid are requested to go through the contents of this document and ensure that the bid is submitted online on or before the due date and time indicated in NIT and as per technical specifications and terms and condition indicated herein.

Please note all bid related documents scanned copy is to be submitted on the online portal, only EMD Demand draft has to reach physical on mentioned address. (If applicable)

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Tender Document

For

**Supply of Ceramic IC Package and Sealing Lid
with Preform (LWP)-both two types**

TENDER NO.: SCL/PS/45081/VAHD/05/2025

TENDER INVITING AUTHORITY

SEMI-CONDUCTOR LABORATORY

**MINISTRY OF
ELECTRONICS AND
INFORMATION
TECHNOLOGY**

GOVERNMENT OF INDIA

SECTOR 72, SAS NAGAR MOHALI

PUNJAB – 160 071

Mr. Naresh Singh

PSO

Direct - 0172-2296169

Email: naresh@scl.gov.in



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Tender Document

TENDER NO.: SCL/PS/45081/VAHD/05/2025

February 27, 2025

Subject: Quotation for “ **Supply of Ceramic IC Package and Sealing Lid with Preform (LWP)-both two types**”-reg.

We intend to procure as per details given below:

Sr. no	SCL Material Code	Item Description and Specification	Qty. (Nos.)
1	230216045	Ceramic IC Package CDIP-28 Pin (Die cavity 5.6mm x 5.6mm) as per enclosed drawing and material specifications	5000
2	230215010	Sealing Lid with Preform(LWP) OD 493 mils x 493 mils, ID 423 mils x 423 mils as per enclosed drawing and material specifications	5000
3	230216143	Ceramic IC Package CQFJ 68 Pin (Die cavity 8.3mm x 8.3mm) as per enclosed drawing and material specifications	3000
4	211215011	Sealing Lid with Preform(LWP) OD 590 mils x 590 mils, ID 520 mils x 520 mils as per enclosed drawing and material specifications	2000

Kindly submit your quotation online as per tender schedule.

Note:

- Tender details may be viewed and downloaded from the website. <https://eprocure.gov.in/eprocure/app>
- The bids have to be submitted online in electronic form on www.eprocure.gov.in only. No physical bids will be accepted.
- For any queries please mail us at naresh@scl.gov.in , ymehta@scl.gov.in Contact No. 0172-296172/2296175

Filled up response fully stamped and signed by authorized bidder to be scanned and uploaded

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date: _____

To,

Sub: Acceptance of Terms Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work:- _____

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: _____ as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public Sector Undertaking.

6. I / We certify that all information furnished by our Firm is true correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

**(Signature of the Bidder, with
Official Seal)**

Filled up response fully stamped and signed by authorized bidder to be scanned and uploaded in Technical part Cover-1 only

Sr.no	Description	Vendor's Compliance
1.	Being a Two Part Tender Technical and Commercial part are separate. The Technical part (Cover-1) should not contain any Pricing information. The tenders containing Price details in Technical part (Cover-1) will be summarily rejected. The prices should be quoted in Price-Bid Form BOQ and to be uploaded in BOQ-Commercial (Cover-2) only.	
2.	The Vendor / Contractor shall confirm that they have submitted the offer for NEW Items only.	
3.	OEM or authorised distributor/representatives of OEM can participate in the tender and an authorisation certificate/letter from OEM to be submitted alongwith the Cover-I of the bid.	
4.	For the qualified bidder in Cover-I, the Comparative statement will be made for each tendered item separately to evaluate the best offer for each item.	
5.	Compliance/acceptance to : I. Drawings and Material specifications of the required both items: Packages and LWPs. II. Tender Acceptance Letter. III. BOQ in xls. and as well as signed, stamped and scanned copy. IV. The bids have to be submitted online in electronic form on www.eprocure.gov.in only. V. No physical bids will be accepted.	
6.	Validity of Bid: The offer should be valid for a minimum period of 120 from the date of opening of Tehno-Commercial bid and 90 days after opening of Price Bid.	
7.	Delivery Terms (For imported stores): Prices shall be quoted on FOB/FCA nearest International/Gateway airport basis inclusive of all taxes, levies, duties arising in the tenderer country.	
8.	Export Formalities, Taxes & Duties: Any export approvals/Govt. clearances required, Taxes and duties as per laws of the exporting country shall be the responsibility of Vendor. Any Govt. formalities/ Clearances required, Taxes and duties etc. payable as per Indian Laws shall be PURCHASERS responsibility.	
9.	Delivery Terms (For Indigenous stores): Prices shall be quoted on F.O.R. destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab exclusive of GST as may be applicable.	
10.	For imported materials: Vendors, who are offering the delivery term as High Sea Sales/DDP/FOR basis, please note that Purchaser is entitled to issue Customs duty	

	<p>exemption certificate (CDEC) to the contractor under customs notification no. 51/96 dated 23.07.1996 and subsequent amendments to enable the contractor to avail off the benefit of concessional rate of customs duty. Under this notification, basic Customs Duty shall be applicable at the rate 5.5 percent plus GST as applicable. In addition to the above CDEC, any documentary support requested by the contractor from the purchaser for customs clearance of goods against the above CDEC shall be provided by the purchaser.</p> <p>(Purchaser will provide Customs Duty Exemption Certificate in case of Import Orders/ imported supplies/ High Sea Sales).</p>	
11.	<p>Goods and Service Tax (GST (for Indigenous Stores):</p> <p>GST shall be payable extra as applicable. Please mention percentage of applicable GST along with HSN Code in your response.</p>	
12.	<p>Security Deposit (SD):</p> <p>On acceptance of the tender, the Vendor shall submit security deposit for three percent (3% percent) value of the Purchase Order (PO) within 15 days from the date of PO towards successful execution of the PO. Security Deposit shall be submitted through Demand Draft /Bankers Cheque/ fixed deposit receipt or Bank Guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid till execution of PO and should remain valid for a period of sixty (60) days beyond the date for completion of the Purchase Order. This will be returned by SCL immediately on execution of the PO satisfactorily as per order terms. If not, the amount will be forfeited.</p> <p>Note: In case, Security Deposit is submitted in the form of Bank Guarantee (BG) and Issuing Bank utilizes SFMS (Structured Financial Messaging Solution) Gateway for issuing the BG in favour of SCL and mention IFSC code of SCL banker i.e. State Bank of India, SBIN00061229, genuineness of the BG will be verified by SCL's banker by checking into SFMS gateway.</p> <p>In case, Security Deposit is submitted in the form of Bank Guarantee (BG) and Issuing Bank not utilizes SFMS (Structured Financial Messaging Solution) Gateway for issuing the BG, Vendor to ensure that Banker gives Bank Guarantee (BG) confirmation over email from their Domain immediately after issuance of the same at the following email Ids followed by hard copy:</p> <p>sunitagaur@scl.gov.in CC: naresh@scl.gov.in and vmehhta@scl.gov.in In addition, the banker may send a scanned copy of the BG as an attachment.</p>	
13.	<p>Terms of Payment in case of overseas supplier(s):</p> <p>100% payment shall be made through SIGHT DRAFT after shipment. Vendor is requested to send the original documents (i.e Invoice, Packing List, AWB or BL etc.) to PURCHASER BANKER routed through VENDOR BANK for payment at the following address:</p> <p>State Bank of India(61229) Semi-Conductor Laboratory Sector 72, Mohali, Punjab - 160071, INDIA.</p>	

14.	Bank Charges: All bank charges outside India related to the payment shall be borne by the Contractor and all bank charges in India shall be borne by the purchaser.	
15.	Terms of payment in case of Indigenous supplier(S): 100% payment shall be made for the accepted stores with 30 days from the date of receipt and acceptance of the materials at SCL.	
16.	Tax Deducted At Source (TDS) for overseas supplier (s): Tooling cost / NRE Charges shall be payable after deduction of TDS as per Indian Income Tax Act 1961 with latest amendments thereof, if the vendor has permanent establishment in India. Vendor shall also certify whether they have valid PAN issued by Income Tax Department of India. If the vendor has not permanent establishment in India, TDS shall be deducted as Double Taxation Avoidance Agreement.	
17.	Delivery Period: The vendor shall specify their best minimum delivery period inclusive of all Govt. formalities of the exporting country.	
18.	Delay in Completion/Liquidated Damages(LD): If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed.	
19.	Extension of Time: If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.	
20.	Despatch of stores after expiry of delivery period: i. After expiry of the delivery period, the vendor should not despatch the stores till such time an extension in delivery period is granted by the Purchaser, and Purchaser reserves the right to cancel the Purchase Order/Contract when the ordered stores items are not received before expiry of the original delivery period or the extended delivery period. ii. In case the stores are dispatched by the vendor before obtaining an extension of the delivery period from the Purchaser, he would be doing so at his risk and no claim for payment shall lie against the Purchaser either in respect of the cost of the stores despatched or any other related expenses which the vendor may have incurred. iii. In case the stores are required by the Purchaser even though they are delivered after the delivery period, the delivery date may be extended and the stores taken delivery off, subject to the right to claim damages for delay in supply. iv. The payment shall be made to the vendor after getting necessary amendment as per clause (iii) above.	

21.	Mode of Despatch: (i) Overseas Supplier, stores should be despatched by Indian Flag Vessels/Air India or through any Agency nominated by SCL whose contact details shall be indicated in the purchase order. (ii) Indigenous orders: Vendor responsibility.	
22.	Packing and Forwarding: The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.	
23.	Fall Clause: The prices charged for the stores supplied under the Contract by the vendor should in no event exceed the lowest price at which the vendor sells the stores of identical description to any other person during the period of the Contract. If at any time, the prices are reduced, the same shall be notified to the Purchaser and shall stand correspondingly reduced.	
24.	Rejection: In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser.	
25.	Replacement: If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.	
26.	Arbitration: In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in New Delhi in the Arbitration and Conciliation Centre, New Delhi (Domestic and	

	<p>International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.</p> <p>Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.</p>	
27.	<p>Applicable Law: The Contract shall be interpreted, construed and governed by the laws of India.</p>	
28.	<p>Whether the Vendor / Supplier is from any country sharing land boundary with India or whether the vendor / supplier is representing any principal vendor / principal supplier sharing land boundary with India. If the vendor / supplier is from any country which shares land border with India or if the vendor / supplier is and Indian Agent representing principal vendor/principal supplier of a country which shares land border with India they need to submit a photo copy documentary proof of Registration with Registration Committee constituted by Department of promotion of Internal Industry and Trade DPIIT Offers received from vendors who fall in this category but does not submit copy of documentary proof of registration shall be rejected.</p>	
29.	<p>The participating Indian Vendors/Suppliers/Service Providers shall indicate specifically whether they fall in the category of Class I local supplier or Class II local supplier or Nonlocal supplier for evaluation as per Ministry of Commerce Industry office order no. P45021/2/2017PP(BEII) dt. 16th September, 2020. The vendor/supplier/Service Provider shall submit declaration as documentary proof in this regard.</p> <p>The provision of above referred OM shall apply for this procurement.</p>	
30.	<p>Indian agent remuneration/service charge (If applicable) shall be payable by the Purchaser directly to the Indian agent in Indian Rupees based on T.T buying rate of exchange prevailing on the date of placement of purchase order within 30 days of acceptance of material at purchaser site.</p>	
31.	<p>Indicate the Name and address of the vendor for placing purchase order along with their e-mail ID, contact person name and designation, Telephone no. and fax no.</p>	
32.	<p>Any Other Term:</p>	

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

INSTRUCTION FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal i.e. <https://eprocure.gov.in/eprocure/app>, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirement and submitting their bids online on the CPP Portal.

REGISTRATION

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal([URL:https://eprocure.gov.in/eprocure/app](https://eprocure.gov.in/eprocure/app)) by clicking on the link “Online Bidder Enrolment” option available on the homepage. **Enrolment on the CPP Portal is free of charge.**
- (ii) During enrolment/registration, the bidders should provide the correct/true information including valid email id mobile no. All the correspondence shall be made directly with the contractors/bidders through email-id provided.
- (iii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv) Any bidder from a country which shares a land borders with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority as mentioned in the GFR2017 Rule144(xi).
- (v) For e-tendering possession of valid Digital Signature Certificate (Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY /nCode/eMudra or any Certifying Authority recognized by CCA India one-Token/Smartcard.
- (vi) Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vii) Only one valid DSC should be registered by a bidder. Bidders are responsible to ensure that they do
- (viii) Not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (ix) Bidders can then login to the site through these credentials by entering their user ID/password and the password of the DSC/e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other key words, etc., to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents/ tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate

the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/ help from the Help desk.

PREPARATION OF BIDS:

- (i) For preparation of bid Bidders shall search the tender from published tender list available on site and download the complete tender document and should take into account corrigendum if any published before submitting their bids. After selecting the tender document same shall be moved to the 'My favorite' folder of bidders account from where bidder can view all the details of the tender document.
- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall note the number of covers in which the bid documents have to be submitted, the number of documents- including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- (iii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.
- (iv) Bidders should get ready in advance the bid documents in the required format (PDF/xls/rar/dwf/jpg formats) to be submitted as indicated in the tender document/schedule.
- (v) Bidders can update well in advance, the documents such as experience certificates, annual report, PAN, EPF other details etc., under " My Space/ Other Important Document" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing up load time of bids.

SUBMISSION OF BIDS:

- (i) Bidder should login to the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay.
- (ii) While submitting the bids online, the bidder shall read the terms conditions (of CPP portal) and accepts the same in order to proceed further to submit their bid.
- (iii) Bidder shall digitally sign and upload the required bid documents one by one as indicated in the tender document.
- (iv) Bidders shall note that the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (v) **If price quotes are required in XLS format, utmost care shall be taken for uploading Schedule of quantities and Prices and any change/modification of the price schedule shall render it unfit for bidding.**
Bidders shall download the Schedule of Quantities and Prices i.e. Schedule-

A, in XLS format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, there after save and upload the file in financial bid cover (Price bid) only.

If the template of Schedule of Quantities and Prices file is found to be modified/corrupted in the eventuality by the bidder, the bid will be rejected and further dealt as per provision of clause no 23.0 of ITB including for feature of EMD if any.

- (vi) Bidders shall submit their bids through online e-tendering system of the Tender Inviting Authority (TIA) well before the bid submission end date time (as per Server System Clock). **The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.**
- (vii) After the bid submission (i.e. after Clicking “Freeze Bid Submission” in the portal), the bidders shall **take print out of system generated acknowledgement** number and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.
- (viii) Bidders should follow the server time being displayed on bidder’s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in thee-tender system.
- (ix) All the documents being submitted by the bidders would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology.

ASSISTANCE TO BIDDERS:

- (i) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for attender or the relevant contract person indicated in the tender.
- (ii) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24X7 CPP Portal Helpdesk. The 24 x 7 Help Desk Number 0120-4200462,0120-4001002and0120-4001005.The help desk email id is support-eproc@nic.in

INSTRUCTION FOR e-PROCUREMENT

1. PREPARATION AND SUBMISSION OF BIDS:

- a. The detailed tender documents may be downloaded from <https://eprocure.gov.in/eprocure/app> till the last date of submission of tender. The Tender may be submitted online through CPP Portal <https://eprocure.gov.in/eprocure/app>
- b. The bidder should submit the bid online in **Two Covers** as Technical bid in Cover-1 and Financial Bid in Cover-2 separately. Technical Bid and Financial Bid should be uploaded online in separate covers

2. SUBMISSION OF THE BID : All interested eligible bidders are requested to submit their bids online on CPP Portal: <https://eprocure.gov.in/eprocure/app> as per the criteria given in this document:

- a. Technical Bid and Financial Bid should be upload online and cover should be placed online on the CPP Portal (<https://eprocure.gov.in/eprocure/app>).

3. Techno Bid and Financial BID: Signed and Scanned copies of the bid documents as under must be submitted online on CPP Portal: <https://eprocure.gov.in/eprocure/app>.

a) List of Documents to be scanned and uploaded (Under Cover-1) within the period of bid submission: -

- i. Scanned copy of Bank details. (Bank details of principal supplier in case of Import shipments)
- ii. Scanned copy of certificate of GST. (GST IN of Indian Agent in case of Import Shipments) (Not applicable in case of foreign vendor)
- iii. Scan copy of tender acceptance letter.
- iv. Scanned copy of specifications or brochures (if any).
- v. Scanned copy of other document mentioned in tender document (if any)

4. Financial Bid

In preparing the financial bids, bidders are expected to take into account the requirements and conditions laid down in this Tender document. The financial bids should be uploaded online as per the specified “.Xls” format i.e. Price Bid Excel sheet attached as ‘Xls’ with the tender and based on the scope of work, service conditions and other terms of the Tender document. It should include all costs associated with the Terms of Reference/Scope of Work of the assignment.

5. Last Date for Submission of Tender:

- a. Online bids complete in all respects, must be submitted on or before the last date and time specified in the schedule of events.
- b. The SCL, S.A.S. Nagar may, at its own discretion, alter/extend the last date for submission of tender.

6. Bid Validity

- a. The offer should be valid for a minimum period of 90 days from the date opening of Techno Commercial Bid. However, the quoted rates should be valid for the initial/extended period of order from the

effective date of PO/Contract. No request will be considered for price revision during the original Contract period.

- b. A bid valid for a shorter period shall be declared as non responsive.
- c. In exceptional circumstances, prior to expiry of the original time limit, SCL, Mohali may request the bidders to extend the period of validity for a specified additional period Beyond the original validity of 90 days. The request and the bidders responses shall be made in writing. The bidders, not agreeing for such extensions will be allowed to withdraw their bids without forfeiture of their Bid Security.

7. Modification/Substitution/Withdrawal of bids:

- a. No Bid shall be modified, substituted or withdrawn by the Bidder after the Bid's due Date.
- b. Any alteration/modification in the Bid or additional information supplied subsequent to the Bid's due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

8. Rejection of the Bid: The bid submitted shall become invalid if:-

- c. The bidder is found ineligible.
- d. The bidder does not upload all the documents as stipulated in the bid document.

9. Evaluation of Price Bid:

The following elements shall be considered for evaluation of Price Bids:

- a. Price quoted by the bidder in the price bid template is for meeting the functionalities given in the Tender and Technical Specifications sheet.
- b. In case quotations are submitted in foreign currencies, during preparation of price tabulation, Foreign Exchange(FE) conversion rate vis-a-vis Indian currency(INR) will be worked out on the basis of FE TT selling rate prevailing on the day of opening of technical bids.
- c. Compliance with the Payment Terms prescribed in this tender document. In the event, the bidder offers Payment Terms stringent than SCL prescribed Payment Terms, the bid of the bidder shall be loaded as per prime landing rate of Reserve Bank of India (RBI) and added to the landed cost.
- d. In the event of the bidder requiring SCL to bear bank charges outside India (foreign bank charges),the bidders bid shall be loaded suitably on the quoted price towards bank charges outside India.
- e. In case, the price quoted is FCA/FOB/Ex-works, the charges towards Freight as quoted or a maximum of 5% of price quoted, Customs Duty taxes as applicable shall be taken in to account to arrive landed cost.
- f. Comparison between Indigenous Imported Offers: If both indigenous offers and imported offers are to be compared, 2% of the total landed cost of foreign offers shall be added towards charges for Customs clearance and local transportation for delivery at SCL.

INSTRUCTIONS TO TENDERERS AND TERMS and CONDITIONS OF TENDER

1. Bid shall be submitted online only complying specified schedule.
2. GST and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender.
3. Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
4. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non acceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.
5. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
6. The tenderer should supply along with his tender, the name of his/her banking details such as account no. IFSC Code etc.

TERMS and CONDITIONS OF TENDER

1. DEFINITIONS:

- (a) The term PURCHASER shall mean the President of India or his successors or assigns.
- (b) The Term CONTRACTOR/Vendor/Supplier shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractors successors, representative, heirs, executors and administrators unless excluded by the Contract.
- (c) The term STORES shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants and machinery and subsequent testing, should such a condition is included in the Purchase Order.
- (d) The term PURCHASE ORDER shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. DESPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

4. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the dispatch documents.

5. ACCEPTANCE OF STORES:

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.
- (d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

6. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

7. DELIVERY:

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either:
 - (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5 percentage per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10 percentage, or

- (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
- (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub clause (ii) and (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the repurchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such repurchase made against default. The manner and method of such repurchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such repurchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

8. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages.

9. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

10. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

11. COUNTER TERMS AND CONDITION OF SUPPLIERS:

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

12. SECURITY FOR PURCHASE OF MATERIALS:

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

General Terms & Condition for Foreign Vendors

1. EMD

- EMD where called for will have to be submitted by the participating bidder in the form and manner specified in the NIT so as to reach the purchaser at the address mentioned in the NIT on or before the due date and time mentioned in the NIT.
- Non receipt of EMD as per above, will result in rejection of bid without any reference to the bidder, except in cases given under Clause no. 2.3 below.
- The following categories of bidders are exempted from submission of EMD:
 - i) Bidders having valid registration with Directorate of Purchase and Stores, Department of Atomic Energy;
 - ii) Micro and Small Enterprises having valid registration with MSME or NSIC or Udyog Aadhaar in respect of procurement of goods and services, produced and provided by MSE and startups recognized by Department of Industrial Policy & Promotion (DIPP) are eligible for exemption according to government policies.
 - iii) Foreign Bidder directly submitting bid (not through their Indian Agent or Indian Counterpart or Indian subsidy) in the currency other than INR.
- Forfeiture of EMD
 - i) EMD shall be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity of his bid.
 - ii) If the successful bidder fails to furnish the required Security Deposit, the EMD furnished shall be forfeited.
- REFUND OF EMD
 - i) EMD of unsuccessful bidders will be returned within thirty days after finalisation of the tender or after expiry of validity of their bid, whichever is later.
 - ii) EMD of successful bidders will be returned within thirty days of submission of security deposit as called for in the contract.

2. Bid /Open Authorization shall be submitted online only complying specified schedule and complete in all respects with technical specifications, including pamphlets and catalogues.

3. A Proforma Invoice may also be given which should contain the following information:

- a) The FOB/FCA value, the C and F value for import by Sea freight / Air freight up to and for air parcel post up to..... should be separately indicated.
- b) Agency Commission: The amount of commission included in the price and payable to the Indian Agent of the Contractor shall be paid directly to the Indian Agent by the Purchaser in equivalent Indian Rupees on the basis of an Invoice from him applying T.T.

buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. This payment will be released to the Indian Agent immediately after Customs clearance of the goods in India.

- c) The Contractor shall invoice only for the net amount payable to deducting the amount of Agency Commission included in the invoice which will be paid to the Indian Agent directly by the Purchaser. However, the Contractors invoice should separately reflect the amount of commission payable to his Indian Agent.
 - d) The earliest delivery period and country of origin of the Stores.
 - e) Bankers name, address, telephone/fax Nos. and eMail ID of the Contractor.
4. The FOB/FCA and C and F prices quoted should be inclusive of all taxes, levies, duties arising in the tenderers country.
 5. Samples, if called for, should be sent free of all charges.
 6. Late and delayed tenders will not be considered. Quotations by cable must be followed by detailed offers.
 7. Offers made by Indian Agents on behalf of their Principals, should be supported by the proforma invoice of their Principals.
 8. Instructions / Operation Manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents/ correspondence should be in English language only.
 9. The Purchaser reserves the right to accept or reject the lowest or any offer in whole or part without assigning any reason.
 10. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
 11. a) Part shipment is not allowed unless specifically agreed to by us.

b) As far as possible stores should be despatched by Indian Flag Vessels / Air India through any Agency nominated by us.
 12. Inspection / Test Certificate should be provided for the goods after testing it thoroughly at the Contractors works. If any Inspection by Lloyds or any other testing agency is considered necessary, it shall be arranged by Contractors.
 13. For items having shelf life, those with maximum shelf life should be supplied if order is placed.

TERMS AND CONDITIONS

1. DEFINITIONS:

- (a) The term Purchaser shall mean the President of India or his successors or assignees.
- (b) The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractors Successors, representatives, heirs, executors and administrators unless excluded by the Contract.
- (c) The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery or equipment of part thereof.
- (d) The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

2. PRICES:

Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

3. DEMURRAGE:

If applicable, Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 34 days from the date of Air Way Bill for air consignments.

4. ADDRESS OF INDIAN AGENTS:

.....

5. GUARANTEED TIME DELIVERY:

The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.

6. INSPECTION AND ACCEPTANCE TEST:

- 6.1 The Purchaser representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractors premises the material and workmanship of all stores to be supplied under this Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the purchasers representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractors premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.
- 6.2 For tests on the premises of the Contractor or of any of his sub Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the purchasers representative to carry out the tests efficiently.
- 6.3 When the stores have passed the specified test, the purchasers representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the purchaser as may be required.

7. MODE OF DESPATCH:

Generally, stores should be dispatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the purchaser. A copy of the invoice and packing list should invariably be kept inside each of the packages.

8. PORT OF ENTRY: IGI airport New Delhi / Mumbai

9. CONSIGNEE: Purchase and Stores Officer, Stores,
10. SHIPPING MARKS.

The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:

PURCHASE ORDER NO.
DATED
SEMI CONDUCTOR LABORATORY
GOVERNMENT OF INDIA

Destination: and
Port of Entry:

11. INSURANCE OF THE STORES:

The necessity or otherwise of insurance will be as indicated in the Purchase Order.

12. CONTRACTORS DEFAULT LIABILITY:

The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

- a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/ agreement or within the period for which extension has been granted by the Purchaser to the Contractor.
- b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

13. In the event the Purchaser terminates the Contract in whole or in part, the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in Clause 19 until such reasonable time as may be required for the final supply of stores.

14.1 If this Contract is terminated as the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

- a) Any completed stores.
- b) Such partially completed stores, drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

14.2 In the event the Purchaser does not terminate the Contract, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delay until the stores are accepted.

15. REPLACEMENT:

If the stores or any portion thereof is damaged or lost during transit, the

Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.

16. REJECTION:

In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either :

- a) replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or
- b) terminate the Contract for default, or
- c) acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchasers rights.

17. EXTENSION OF TIME:

If the completion of supply of stores is delayed due to reason of *force majeure* such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

18. REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES ORDERED:

The Contractor shall also undertake the supply of additional number of items covered by the order as considered necessary by the purchaser at a later date, the actual price to be paid shall be mutually agreed to after negotiations.

19. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.

20. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract.

21. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.

22. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

INSTRUCTIONS TO TENDERERS AND TERMS and CONDITIONS OF TENDER (For Indigenous Vendor)

1. EMD

- EMD where called for will have to be submitted by the participating bidder in the form and manner specified in the NIT so as to reach the purchaser at the address mentioned in the NIT on or before the due date and time mentioned in the NIT.
- Non receipt of EMD as per above, will result in rejection of bid without any reference to the bidder, except in cases given under Clause no. 2.3 below.
- The following categories of bidders are exempted from submission of EMD:
 - i) Bidders having valid registration with Directorate of Purchase and Stores, Department of Atomic Energy;
 - ii) Micro and Small Enterprises having valid registration with MSME or NSIC or Udyog Aadhaar in respect of procurement of goods and services, produced and provided by MSE and startups recognized by Department of Industrial Policy & Promotion (DIPP) are eligible for exemption according to government policies.
 - iii) Foreign Bidder directly submitting bid (not through their Indian Agent or Indian Counterpart or Indian subsidy) in the currency other than INR.
- Forfeiture of EMD
 - i) EMD shall be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity of his bid.
 - ii) If the successful bidder fails to furnish the required Security Deposit, the EMD furnished shall be forfeited.
- REFUND OF EMD
 - i) EMD of unsuccessful bidders will be returned within thirty days after finalisation of the tender or after expiry of validity of their bid, whichever is later.
 - ii) EMD of successful bidders will be returned within thirty days of submission of security deposit as called for in the contract.

2. Bid /Open Authorization shall be submitted online only complying specified schedule.

3. Late tenders and delayed tenders will not be considered.

4. GST and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender.

5. Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
- (b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non acceptance of tender, the tenderer will have to remove the samples at his own expense.
- (c) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.
7. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
8. The tenderer should supply along with his tender, the name of his/her banking details such as account no. IFSC Code etc.

TERMS and CONDITIONS OF TENDER

1. DEFINITIONS:

- (a) The term PURCHASER shall mean the President of India or his successors or assigns.
- (b) The term CONTRACTOR/Vendor/Supplier shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractors successors, representative, heirs, executors and administrators unless excluded by the Contract.
- (c) The term STORES shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants and machinery and subsequent testing, should such a condition is included in the Purchase Order.

(d) The term PURCHASE ORDER shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. DESPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

4. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the dispatch documents.

5. ACCEPTANCE OF STORES:

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.
- (d) If the whole or any part of the stores supplied are rejected in accordance with

Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

6. REJECTED STORES:

Rejected stores will remain at destination at the Contractors risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractors address at the Contractors entire risk and expense, freight being payable by the Contractor at actuals.

7. DELIVERY:

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.
 - (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5 percentage per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10 percentage, or
 - (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
 - (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under subclause (ii) and (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the repurchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such repurchase made against default. The manner and method of such repurchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such repurchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

8. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages.

9. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

10. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the

purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfilment of the contract.

11. COUNTER TERMS AND CONDITION OF SUPPLIERS:

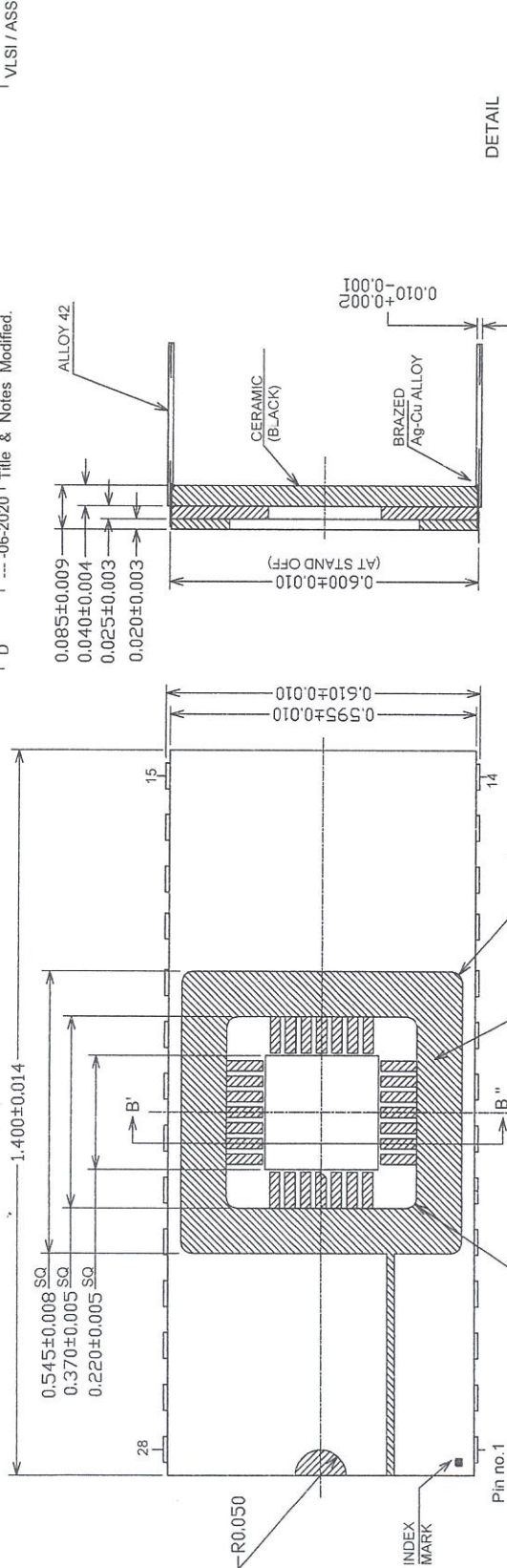
Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

12. SECURITY FOR PURCHASE OF MATERIALS:

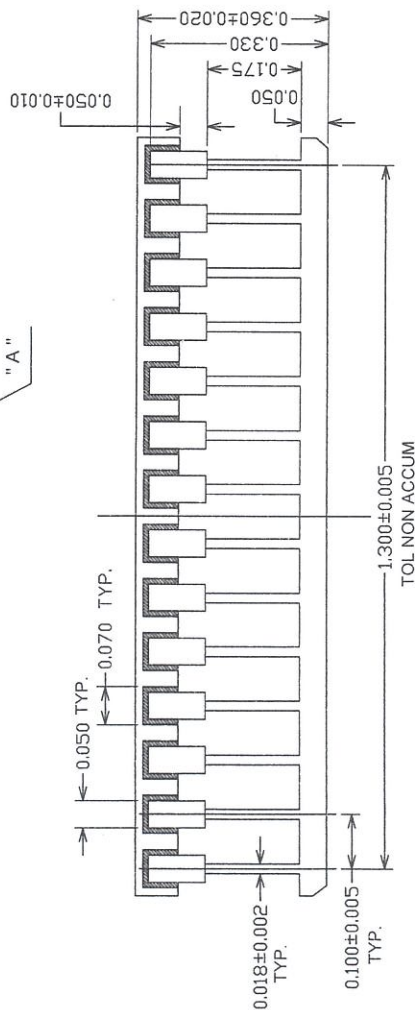
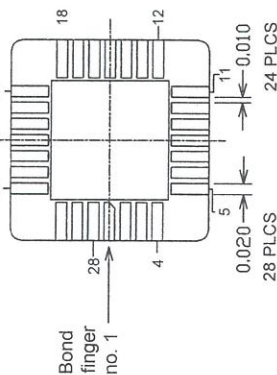
any Successful tenderer will have to furnish in the form of a bank guarantee or other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

REVISIONS

REV.	DATE	DESCRIPTION	ECN No	APPROVAL	DCC
C	28-08-2018	Whole drawing revised & Drawing no. renewed. Old Drawing no. 031202013	VLSI / ASSY / 248		
D	---06-2020	Title & Notes Modified.	VLSI / ASSY / 293		



SECTION B'-B'

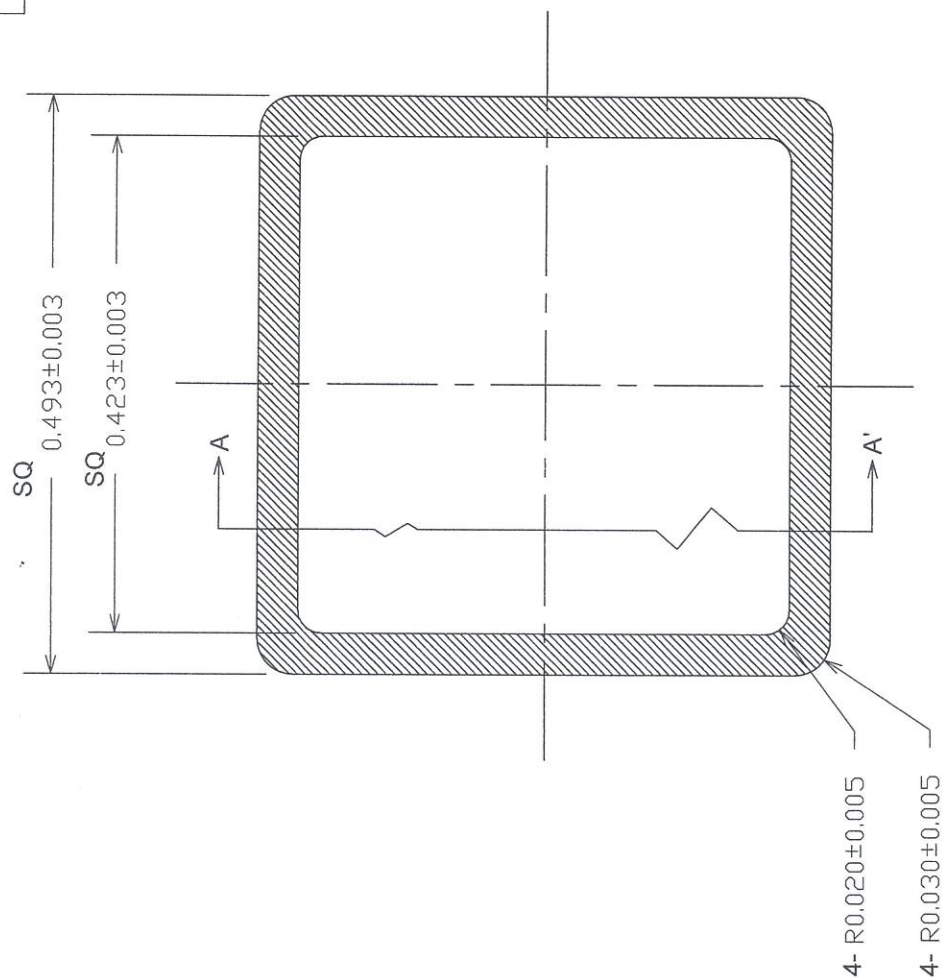


NOTE : 1. SEAL AREA TO BE METALLIZED.
2. DIE - ATTACH AREA TO BE METALLIZED
3. SEAL RING AND DIE ATTACH PAD TO BE FLOATING FROM ANY PINS.
4. LEAD RESISTANCE : 0.35 OHM MAX.
5. PLATING THICKNESS TO BE AS PER SCL SPECIFICATION.

TOLERANCE IN INCH. UNLESS UNTIL SPECIFIED	1% MINIMUM.	MATERIAL :	AS PER SPECS	FINISH	AS PER SPECS.	USED ON		DCC	DATE		<h1>Semi-Conductor Laboratory</h1> <p>(DEPT. OF SPACE , GOVT. OF INDIA) SECTOR 72, S.A.S. NAGAR - 160 071 PUNJAB (INDIA)</p>																																																																						
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REVISIONS

REV.	DATE	DESCRIPTION	ECN No	APPROVAL	DCC
A	18-02-2020	Whole Drawing Revised	VLSI/ASSY/286		
B	26-02-2020	Drawing Format Changed from mm. to inches	VLSI/ASSY/288		
C	02-01-2025	Tolerance of solder Preform revised	VAHD/ASSY/55	<i>[Signature]</i>	




Section A-A'



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PUNJAB (INDIA)

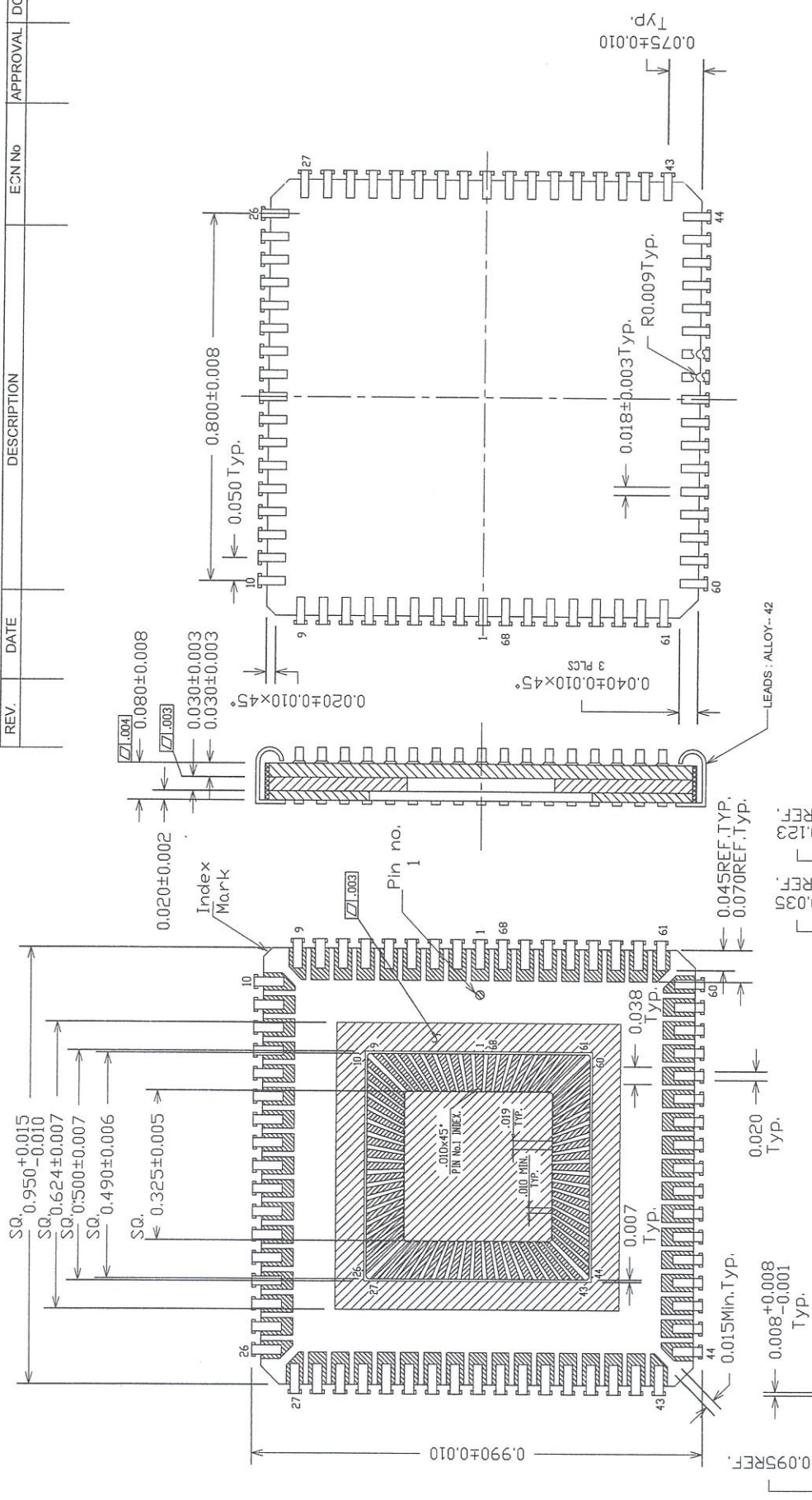
	AS PER SPEC.	DGN.	DATE	TITLE	LID WITH PREFORM OD: 493mils X 493mils (12.522mm X 12.522mm) ID: 423mils X 423mils (10.744mm X 10.744 mm)
	FINISH	DGN.	DATE		
AS PER SPEC.	DRAWN	2/26/13	DATE		
	CHKD	2/11/13	DATE	ITEM CODE.	SIZE
USED ON	APPD.	2/26/13	DATE	A - 4	DRAWING NO
	APPD.	2/26/13	DATE	A1542020370	REV C
	DATE	SCALE :			NTS SHEET 1 OF 1
		ALL DIMENSIONS ARE IN inches. UNLESS UNTIL SPECIFIED			

FORM NO. DCC/16

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REVISIONS

REV.	DATE	DESCRIPTION	ECN No	APPROVAL	DCC



NOTE:

- NOTE:
1. ALL EXPOSED METAL & METALIZED AREA SHALL BE GOLD PLATED 60 MICRO INCH MIN. THK. OVER NICKEL PLATING UNLESS OTHERWISE SPECIFIED.
 2. FLATNESS METALIZED PAD'S ONLY.
 3. SEAL AREA AND DIE ATTACH AREA SHALL BE ISOLATED FROM ANY LEADS, (ZERO GROUND)
 4. DIE-ATTACH CAVITY : BARE OR METALIZED.

TOLERANCE IN INCH. UNLESS
UNTIL SPECIFIED

MATERIAL	Multi layer Ceramic
PACKAGE BODY : CERAMIC	

FINISH

USED O

①



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SECTOR 72, S.A.S. NAGAR - 160 071
PUNJAB (INDIA)

Ceramic IC Package
68 Lead / J / CQFJ
Cavity Size 0.325"X 0.3

EM CODE:

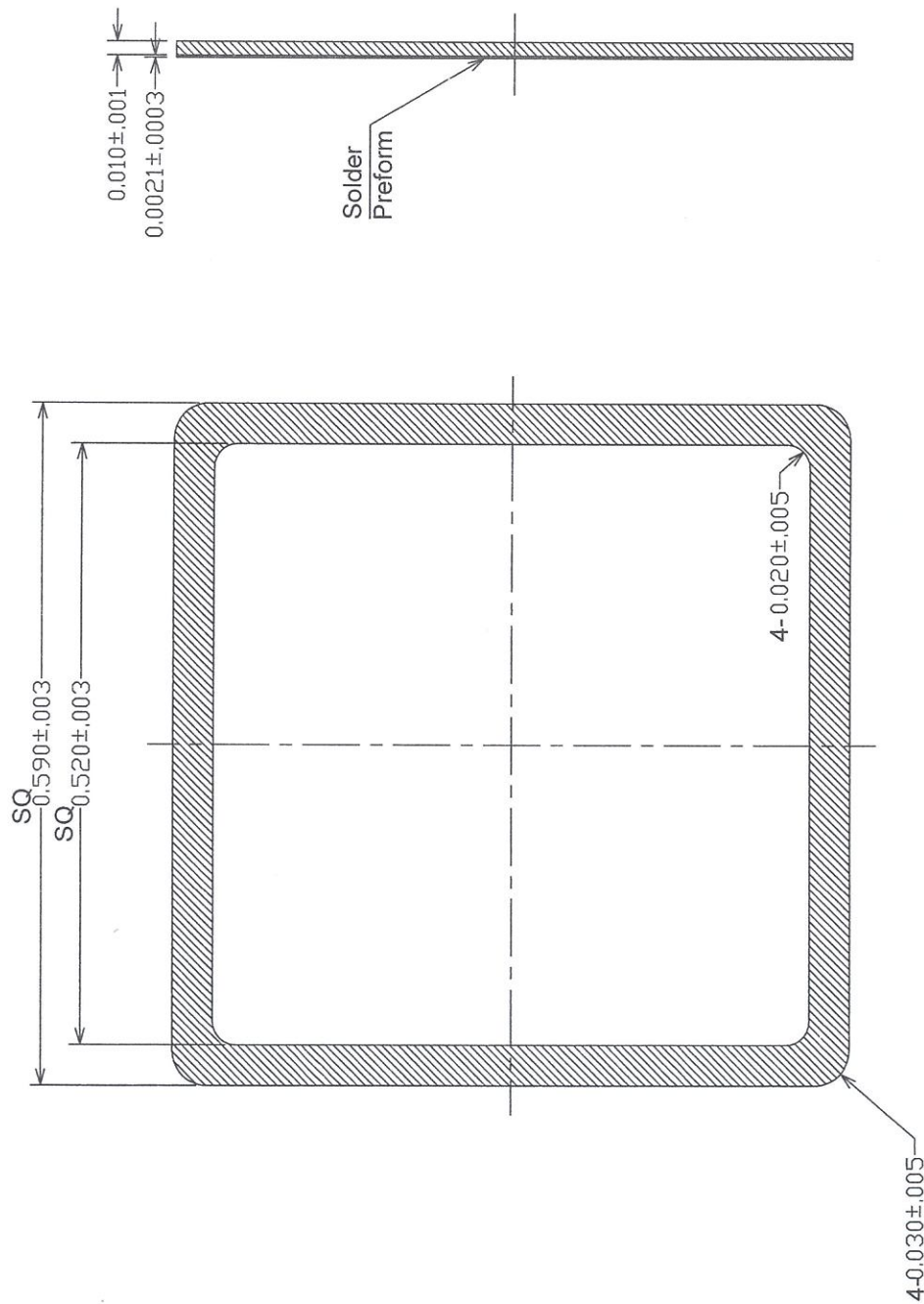
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FORM NO. DCC/16

PROPRIETARY NOTE: The design and data contained herein are the exclusive property of SEMI-CONDUCTOR LABORATORY, and are to be used and held on a confidential basis. All written material and data pertaining thereto will be returned to us upon our demand.

REVISIONS					
REV.	DATE	DESCRIPTION	ECN No	APPROVAL	DCC
A	01-01-2025	Whole Drawing Revised	VAHD/ASSY/54	<i>[Signature]</i>	



TOLERANCE IN mm UNLESS UNTIL SPECIFIED ± 0.010 MATERIAL AS PER SPEC.		<h1>Semi-Conductor Laboratory</h1> <p>(DEPT. OF SPACE, GOVT. OF INDIA) SECTOR 72, S.A.S. NAGAR - 160 071 PUNJAB (INDIA)</p>			
		DGN.	DATE	TITLE	LID WITH PREFORM
FINISH	DGN.	DATE	OD: 590mils X 590mils (14.986mm X 14.986 mm)		
AS PER SPEC.	DRN. 01/05/2011	DATE 01/05/2011	ID: 520mils X 520mils (13.208mm X 13.208 mm)		
USED ON	CHD 01/05/2011	DATE 01/05/2011	ITEM CODE.	SIZE	
	APPD. 01/05/2011	DATE 01/05/2011	DRAWING NO.	REV. A	
			A1542020367		
			ALL DIMENSIONS ARE IN INCHES, UNLESS UNTIL SPECIFIED		
DCC 	DATE	SCALE	SHEET 1 OF 1		

**SEMI-CONDUCTOR LABORATORY**DEPARTMENT OF SPACE, GOVT. OF INDIA
SECTOR - 72, S.A.S NAGAR - 160071**MATERIAL CODE**

As per table-1

DRG NO.

As per table-1

ISSUE**REV.**
H**PAGE**
1 of 7**MATERIAL SPECIFICATIONS****TITLE: CERAMIC SIDE BRAZED PACKAGE BASE**

1. **Purpose** : Side brazed package with non-metallized or metallized ceramic die pad area for hermetic seal packaging using silver epoxy or silver-glass as die attach adhesive.

2. **Specifications:**

Technical data:

(I) **Material:**

- i) Material of the base: Chip free ceramic (minimum 90% Al_2O_3 black)
- ii) Lead material: KOVAR with gold metallization.
- iii) Braze material: Ag-Cu Eutectic with melting point equal to or greater than 750 degree centigrade which will provide sufficient bond strength of the lead to the ceramic.
- iv) Gold plating: 99.99% minimum purity gold.

(II) **Dimensions:**

- i) Lead count & die attach cavity size: As specified in table-1
- ii) Other dimensions: As specified in the corresponding drawing (drawing no. is mentioned in table-1)

(III) **Product design:**

- i) Die-attach cavity: Bare ceramic or metallized as specified in table-1
- ii) Gold plating: On all metallized areas the gold plating thickness shall be minimum of 1.5 micron over a minimum thickness of 2 micron of nickel plating.
- iii) Lead one identification: The lead 'one' identification should be a geometric symbol.
- All the pins should be floating with respect to die attach surface or as specified in the drawing.

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DATE: 6-9-2018**APPROVED**DESIG.: Head, VAS
DATE: 7/9**AUTHORISED:**DESIG.: MR
DATE:**DCC:**DESIG.:
DATE: M(MIS)**DATE:**

14/9/18



MATERIAL SPECIFICATIONS

TITLE: CERAMIC SIDE BRAZED PACKAGE BASE

(IV) Physical characteristics:

a) Ceramic area:(other than seal area)

- i) Cracks: Not allowed.
- ii) Chip: Corner - maximum 0.030" x 0.030" x 0.060"
Edge - maximum 0.100" x 0.030" x 0.030"
Chips should not encroach or expose any metallized area.
- iii) Bumps & projections: On ceramic surface should not exceed 0.004" maximum.
- iv) Camber: Should be 0.004"/ inch maximum

b) Die - attach area:

- i) Void: Maximum 0.010" diameter by a distance greater than 0.030" with no more than 3 voids.
- ii) Flatness: 0.0025" over the entire cavity.

c) Seal Area:

- i) Chips :
 - 0.030" x 0.010" x 0.010" max for .300" package base
 - 0.050" x 0.015" x 0.015" max for .600" package base
 - 0.060" x 0.020" x 0.020" max for .900" package base.
 - Chip can not reduce the seal width of more than 1/3 of the design width.
- ii) Flatness:
 - 0.002" TIR maximum (at center of package base) for .300" package base.
 - 0.0025" TIR maximum (at center of package base) for .600" package base.
 - 0.003" TIR maximum (at center of package base) for .900" package base.
- iii) Bump & Projections: 0.001" Maximum above seal area.
- iv) Void : On the seal area maximum of 3 voids no larger than 0.005" in diameter are allowed. Also the distance between any two voids should be at least 0.030".

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**SEMI-CONDUCTOR LABORATORY**DEPARTMENT OF SPACE, GOVT. OF INDIA
SECTOR - 72, S.A.S NAGAR - 160071**MATERIAL CODE**

As per table-1

DRG NO.

As per table-1

ISSUE

REV.
HPAGE
3 of 7**MATERIAL SPECIFICATIONS****TITLE: CERAMIC SIDE BRAZED PACKAGE BASE**

- v) Seal plan run down: Internal Cavity – not to exceed 25% of the cavity layer thickness.
External cavity – not to come within 0.005" (.127mm) of any side way metallization (braze pad)

d) Wire bond finger area:

- i) Bumps & Projections: 0.001" Maximum above metallization.
- ii) Voids: 0.010" x 0.010" void free area within the specified wire bond finger area as given in the drawing.
- iii) Wire bond finger pull back : Bonding finger pullback should be maximum of 0.003" (0.076mm) for bonding fingers which are shorter than 0.025" (0.635mm) in length and a maximum of 0.005" (0.127mm) pull back for bonding fingers which are 0.025" (0.635mm) or greater in length.
- iv) Wire bond finger rundown: Not to exceed 25% of the ceramic layer thickness or 0.005" (whichever is smaller).

e) Lead Attachment:

- i) Voids in gold plated leads: 75% of the braze filler will be void free.
- ii) Misalignment : The leads should not overhang the braze pads by more than 25% of the measured paddle width to reduce the clearance between adjustment pad or lead to less than 50% of the clearance between adjacent metallization.
- iii) Offset: Lead center line must be aligned to within 0.015" relative to the position of the leads on the opposite side of the package base.
- iv) Lead to Lead alignment: 0.010" measured at the base of the ceramic on same side.
- v) Co planarity: ± 2 mils.

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DATE: 6-9-2018.

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DATE: 11/9/18.

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DATE:

14/9/18



DRG NO.

As per table-1

ISSUE

REV.
H

PAGE
4 of 7

MATERIAL SPECIFICATIONS

TITLE: CERAMIC SIDE BRAZED PACKAGE BASE

f) Gold Plating:

- i) Blister, flaking
Discoloration: Shall not be there when viewed under 10X magnification & no discoloration allowed.
- ii) Bake test: Package bases after placed on a heater block at 450 ± 5 degree in air for two minutes (after cooling) shall not show discoloration, visible to the naked eye & peeling or blistering at 10X magnification.
- iii) Gold flash : For plated package bases gold flash on external leads above stand off on brazed pad & on the bar is acceptable.

g) Appearance:

Visual : At 10X magnification, package base shall present a clean appearance, free of loose foreign particles. Foreign particles which can be removed with the blow of nitrogen gas or dry air (30 psi) from a distance shorter than one inch may not be considered as foreign particles.

3. Shelf Life: Package should not have been manufactured more than five years before the date of dispatch. Vendor to provide manufacturer certificate of conformance to specifications along with manufacturer lot no. and date of manufacture with the supplied material.

4. Packing requirement:
- a) Bases to be packed in plastic trays and then in air-tight (vacuum sealed) aluminium foil packing during transportation.
- b) The container containing these bases should protect these against oxidation, dust, mechanical damage, spillage etc.
- c) Vendor shall provide the test methods followed and test results of qualification tests conducted at the manufacture's end.

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DATE: 14-9-18

DATE:

FORM NO: DCC/ 09

SECTION 1: TO BE SENT TO THE SUPPLIER

**SEMI-CONDUCTOR LABORATORY**DEPARTMENT OF SPACE, GOVT. OF INDIA
SECTOR - 72, S.A.S NAGAR - 160071**MATERIAL CODE**

As per table-1

DRG NO.

As per table-1

ISSUEREV.
HPAGE
5 of 7**MATERIAL SPECIFICATIONS****TITLE: CERAMIC SIDE BRAZED PACKAGE BASE**

- 5. Safety/Handling:** Package bases should not be exposed to dust & should never be touched with bare hands.
- 6. Storage Condition:** Packages should have been stored in manufacturer's original vacuum seal packing & these sealed packets should be stored in dry N₂ ambient in dust free environment. Vendor to provide confirmation wrt storage conditions.
- 7. Test Conditions:**
- a) Conformance to specs specified at serial no. 2
 - b) The package after die attach using silver glass epoxy & aluminium wire bonding using ultrasonic wire bonder should be able to withstand the following tests:
 - i) Die shear evaluation - MIL-STD-883, Method 2019.
 - ii) Destructive bond pull - MIL-STD-883, Method 2011.
 - c) The package after sealing with lid preform should be able to withstand the following tests:
 - i) Thermal Shock - MIL-STD-883, Method 1011, Condition C, 15 Cycles.
 - ii) Thermal Cycling - MIL-STD-883, Method 1010, Condition C, 100 Cycles
 - iii) Mechanical Shock - MIL-STD-883, Method 2002, Condition B
 - iv) Vibration - MIL-STD-883, Method 2007, Condition A, 20g.
 - v) Constant Acceleration- MIL-STD-883, Method 2001, Condition E.
 - vi) Stabilization Bake - MIL-STD-883, Method 1008, 150°C, 1000 hrs.
 - vii) Seal Test - MIL-STD-883, Method 1004, Condition A
Fine Condition C
Gross
 - viii) Metal Package Isolation - MIL-STD-883, Method 1003, 600V DC, 100 nA max.
 - ix) Solderability - MIL-STD-883, Method 2003, 245±5°C
 - x) Lead Integrity - MIL-STD-883, Method 2028

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DATE: 6-9-18

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DESIG.: MR

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DESIG.: Don (MIS)

DATE: 14-9-18

DATE:

MATERIAL SPECIFICATIONS

ISSUE

REV.
HPAGE
6 of 7

TITLE: CERAMIC SIDE BRAZED PACKAGE BASE

Table-1

S. No.	Lead Count	Die Attach Cavity size(mils)	Mat. Code No.	Drawing No.	Remarks
1.	14 Pin	180 x 150	230216070	A1542020218	
2.	16 Pin	180 x150	230216055	A1542020187	
3.	16 Pin	350x180	230216041	031202087	
4.	16 Pin	200x170	230216072	031202068	
5.	16 Pin	240x174	230216073	031202056	
6.	18 Pin	320x175	230216043	031202090	
7.	20 Pin	215 x 160	230216071	A1542020217	
8.	22 Pin	250x220	230216074	031202053	
9.	24 Pin	250x250	230216030	031202017	
10.	24 Pin	310x310	230216035	031202086	
11.	28 Pin	220x220	230216045	A1542020411	
12.	28 Pin	310x310	230216047	031202081	
13.	40 Pin	310x310	230216075	031202088	
14.	40 Pin	400x400	230216048	031202089	
15.	48 Pin	310x310	230216037	031202067	
16.	48 Pin	400x400	230216050	031202083	
17.	64 Pin	310x310	230216038	031202069	
18.	64 Pin	400x400	230216076	031202080	
19.	28 Pin	1263x142	230216077	0312020140	

(End of section-1), Section-2 is only for internal circulation.

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DATE: <i>6-9-18</i>	DATE: <i>11/9/18</i>	DATE: <i>11/9/18</i>		

FORM NO: DCC/ 09

SECTION 1: TO BE SENT TO THE SUPPLIER

Material Specification of Multilayer HTCC packages *(Ceramic COFJ-68 pin) Package*

Item	Values	Vendor Response/Offer	Remarks
1. Application:	Packaging of Silicon die using Silver Glass die attach adhesive cured at $\geq 430^{\circ}\text{C}$, aluminium wire bonding using ultrasonic wire bonder and Kovar lid with Au-Sn solder for hermetic seal meeting MIL-STD-883 requirements.		
2. Technical Specifications:			
A Material:			
a) Material of the base	: Ceramic: 90% minimum Alumina.		
b) Metallization	: Tungsten or equivalent (refractory metal).		
c) Lead material	: Kovar, Alloy-42 or equivalent with gold metallization.		
d) Gold Plating	: 99.9% minimum Pure Gold per MIL-G-45204 over Ni plating on all exposed metallization area. Gold plating thickness shall be 60 micro inches minimum over a minimum thickness of 50 micro inches of Nickel plating.		
B. Dimensions:	As Per Package drawing		
C. Physical characteristics:			
a) Ceramic area (other than seal area):			
i. Cracks	: Not allowed		
ii. Chip	maximum 0.030" x 0.030" x 0.060", . Chip should not remove or expose any metallization area.		
iii. Flakes	: maximum 0.10" x 0.100" x 0.100"		
iv. Bumps/ Excess	: On ceramic surface (bottom & top) should not exceed material 0.002" and 0.010" in height on any other surface.		
v. Camber	: should be 0.004"/inch maximum not less than 0.002".		
vi. Foreign Material/ discoloration/stains / Gold on Ceramic surface:	should not exceed 20 mils in size on the top or bottom of package and 50 mils in size on sides.		
b) Die-attach area:			
i) Voids/peeling/blistering/Foreign material:	maximum 0.010" in diameter with not more than 3 defects 0.030" apart in critical die attach area.		
ii) Flatness (excluding perimeter path of 0.015" from cavity wall)	: 0.002" maximum (upto cavity size 0.5" sq) , 0.0035" (for cavity 0.501" to 0.75")		
iii) Bumps/ excess material:	maximum 0.001" in height in critical die attach area.		
iv) Near Shorts (Excess metallization that could cause a short):	Distance between die attach area and bond pad should not reduce more than 50% of ceramic wall height.		
c) Seal Area:			
i) Seal area Flatness:	0.002" maximum for Seal ring area upto 0.5" sq, 0.003" maximum for area 0.501" sq to 0.750"sq; 0.004" maximum for area over 0.750" sq.		
ii) Bumps/ excess material/ depressions/ pits:	0.001" Maximum		
iii) Voids/Chips/peeling/blistering /foreign material:	On the seal area no larger than 0.010" or 25% of the width of the seal ring (whichever is smaller).		

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Item	Values	Vendor Response/Offer	Remarks
d) Wire bond finger area:			
i) Bumps/ excess material/ of depression:	Not allowed in critical bond area (square area 2/3 the bond pad width, starting at 5 mil from tip of bond pad). In non critical bond area 0.002" maximum.		
ii) Voids/ Chips/peeling/bond blistering/foreign material/scratches:	Not allowed in critical bond area. In non critical area it should not be more than half of the bond pad width.		
e) Lead/Pin Attachment:			
i) Pits/ Scratches/gouges/rough gold	Burrs/ a) Pits/ Gouges/scratches max. 2 mil in depth & burrs/Rough Gold not more than 2 mil in height. b) Pits,Gouges or Scratches expose the nickel underplate or base metal		
ii) Lead/ Pad alignment (For CQFP/CQFJ)	: The leads should not overhang the braze pads by more than 25% of the lead width.		
ii) Pin/ Pad alignment (For CPGA)	: The leads should not overhang the braze pads. Whole 100% of entire diameter of the pin to be on braze pad.		
iii) Lead alignment (For CQFP/CQFJ)	: Opposite leads offset not greater than a total of 10 mils.		
iv) Braze Fillet	: Braze fillet should be visible around at least 75% of the lead area brazed on metalized pad.		
v)Braze Pad Near Shorts	: Space between braze pads should not reduce by 50% due to metallization smear.		
f) Castellation Area (If present)			
i) Castellation Near Shorts	: Distance between any two castellation should not reduce by 50% of the space.		
g) Gold Plating:			
i) Blister/ flaking/Discoloration	On bare package, it shall not be there when viewed under 10X magnification & no discoloration allowed visible to naked eye.		
ii) Adhesion	: Gold plating shall withstand peel off test using scotch tape.		
iii) Solderability	: Leads with gold plating shall withstand solderability test.		
iv)Bake test	: Package bases after placing on a heater block at 450± 10°C in air for one minute. Gold plating shall not show discoloration after cooling, visible to the naked eye & blisters, peeling or flaking at 10X		
h) Appearance:			
i)Visual	: At 10X magnification, package base shall present a clean appearance, free of loose foreign particles. Foreign particles which can be removed with the blow of Nitrogen gas or dry air (30psi) from a distance shorter than one inch may not be considered as foreign particles.		
3. Shelf Life	: Package base should have not been manufactured more than five years before the date of dispatch. Vendor to provide manufacturer certificate of conformance to specifications along with manufacturer lot no. and date of manufacturer with the supplied material.		
4. Packing requirement: a)	Package to be packed in trays and then in air-tight (vacuum sealed) aluminum foil packing.		

Item	Values	Vendor Response/Offer	Remarks
b) The container containing these package bases	Should protect these against oxidation, dust, mechanical damage, spillage etc.		
5. Safety/Handling	: Package bases should not be exposed to dust & should never be touched with bare hands.		
6. Storage Condition	: Packages should be stored in manufacturer's original vacuum seal packing & these sealed packets should be stored in dry N2 ambient in dust free environment. Vendor to provide confirmation with respect to storage conditions.		
7. Test Conditions:			
a) Conformance to specs :	Specified at serial no. 2		
b) The package after die attach using silver glass epoxy & aluminum wire bonding using ultrasonic wire bonder	Should be able to withstand the following tests:		
i. Die shear evaluation	- MIL-STD-883, Method 2019.		
ii. Destructive bond pull	- MIL-STD-883, Method 2011.		
c) The package after sealing with lid preform	Should be able to withstand the following tests:		
i. Thermal Shock	- MIL-STD-883, Method 1011, Condition C, 15 Cycles.		
ii) Thermal Cycling	-MIL-STD-883, Method 1010, Condition C, 100 Cycles		
iii) Mechanical Shock	- MIL-STD-883, Method 2002, Condition B		
iv) Vibration	-MIL-STD-883, Method 2007,Condition A, 20g.		
v) Constant Acceleration	- MIL-STD-883, Method 2001, Condition D.		
vi) Stabilization Bake	-MIL-STD-883, Method 1008, 150oC, 1000 hrs.		
vii) Seal Test-	MIL-STD-883, Method 1014,Fine leak-Condition A; Gross leak -Condition C		
viii) Metal Package Isolation (If applicable)	- MIL-STD-883, Method 1003, 600V DC, 100 nA max.		
ix) Solderability-	MIL-STD-883, Method 2003,		
x) Lead Integrity	- MIL-STD-883, Method 2004		
8. Acceptance Criteria:	The Packages should meet all the above mentioned specifications and test conditions during evaluations at SCL after assembly.		

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Technical Specification Sheet

A. Material Specification for Sealing Lids

(v) Sealing Lids 493x493 mils
(w) Sealing Lids 590x590 mils

Item	Values	Vendor Response	SCL Remarks
1. Purpose:	The LID with PREFORM is used for hermetic sealing of ceramic package base.		
2. Technical data:			
I Material:			
a) Material of Lid	: KOVAR / ALLOY-42		
b) Preform	: Gold Tin Alloy (Gold 80%±1%, Tin 20%)		
II. Dimensions:	As specified in Part Drawing		
III. Product Design			
a) Ni plating	As per MIL-M-38510H		
b) Gold Plating (min.99.7% pure)	As per MIL-G45204B Type III, Grade A		
Plating Option I: 2 layers	1st Layer 50 to 350 micro inches of Ni, 2nd Layer 50 micro inches minimum of Au.		
Plating Option II: 4 layers:	1st Layer 50 to 350 micro inches of Ni, 2nd Layer 25 micro inches minimum of Au, 3rd Layer 50 to 350 micro inches of Ni, 4 th Layer 25 micro inches minimum of Au. Total of Ni layer thickness ≤ 450 micro inches and total Au layer thickness ≥ 50 micro inches.		
IV. Physical characteristics:			
a.	Parts shall not have any burrs greater than 0.001" per ½ inch TIR (Total indicator reading).		
b.	There shall be no burrs greater than 0.001" on the lid or preform.		
c.	Voids or bare spots in gold plating must not exceed 0.003" in diameter.		
d.	Preform should be aligned on the lid within 0.005" of true position.		
e.	Radius mismatch between lid & preform shall not exceed 0.005".		
f.	The preform shall not be chipped more than 1/5 inch, the width of the frame.		
g.	Lids may exhibit a maximum of 5% corrosion over the finish area.		

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Item	Values	Vendor Response	SCL Remarks
h.	Parts shall be free of foreign material which cannot be removed by blowing dry air or Nitrogen at 50 psi (such as strains, finger prints, dirt, dust or other materials not required for fabrication of the LID with PREFORM assembly), either on the surface of the assembly or protruding from underneath the preform.		
i.	Pits, grooves, voids or scratches shall not expose lid's base material.		
j.	Preforms shall be attached to the lid on at least three corners & the attach mark shall not be visible on the lid surface, opposite the preform.		
k.	The parts should pass the bake test, wherein, the lids shall be heated at a temperature of $400^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 3 minutes ± 0.5 minutes in the atmosphere. After heating they shall not exhibit:		
	i) Blistering of gold shall not be permitted on plating. Surface imperfections smaller than 0.005" in diameter (such as nodules or high spots) shall not be cause for rejections unless they are confirmed as blisters by means of puncturing or lifting the localized area.		
	ii) Peeling & cracks.		
l.	The parts should pass solder melt test, wherein, combo will be clipped into a package with the preform facing up. The packages will be run through belt furnace at the sealing temperature profile (in Nitrogen ambient) to reflow the solder. The reflowed solder shall appear smooth & shiny, with no discontinuity. An irregular edge appearance is allowed & small voids are allowed as long as there is no break in continuity.		
3. Shelf Life	: LID with PREFORM should have not been manufactured more than 3 months before the dispatch.		
4. Packing requirements:-	a) LID with PREFORM to be packed in proper vacuum sealed plastic trays to avoid any mechanical damage or contamination during transportation.		
	b) Vendor to provide lot nos. & manufacturing dates.		
5. Certificate of conformance:-	Vendor to supply certificate of conformance. Vendor shall also provide the test method followed		

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Item	Values	Vendor Response	SCL Remarks
	and test results of qualification tests conducted at the manufacture's end.		
6.Safety/Handling:	LID with PREFORM should not be exposed to dust & should never be touched with bare hands.		
7.Storage conditions at Vendor's facility :	LID with PREFORM should be stored in vacuum / dry N ₂ ambient in a dust free environment.		
8.Test Conditions:			
a)	Conformance to specifications specified in section 2.		
b)	The LID with PREFORM after sealing with package should be able to withstand the following tests:		
i.	Thermal Shock- MIL-STD-883, Method 1011, Condition C, 15 Cycles.		
ii.	Thermal Cycling- MIL-STD-883, Method 1010, Condition C, 100 Cycles.		
iii.	Mechanical shock- MIL-STD-883, Method 2002, Condition B.		
iv.	Vibration- MIL-STD-883, Method 2007, Condition A, 20g.		
v.	Constant acceleration- MIL-STD-883, Method 2001, Condition D.		
vi.	Stabilization Bake - MIL-STD-883, Method 1008,		
vii.	Seal Test: MIL-STD-883, Method 1014, Fine Condition A Gross Condition C		

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