

JEDEC MANUAL

JEDEC Committee Specific Additional Policies

JM12B

(Revision of JM12A, May 2016)

JUNE 2022

JEDEC SOLID STATE TECHNOLOGY ASSOCIATION



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JEDEC COMMITTEE SPECIFIC ADDITIONAL POLICIES

(From JEDEC Board Ballot, JCB-09-73, JCB-09-82, JCB-09-86, JCB-10-15, JCB-10-20, JCB-11-42, JCB-11-43, JCB-11-89, JCB-11-93, and JCB-16-11, formulated under the cognizance of the JEDEC Board of Directors.)

1 SCOPE

In some cases, JEDEC Committees have established additional policies and guidelines to facilitate the operation of a particular committee. The additional policies have been approved by the originating committee and the JEDEC Board of Directors.

This manual contains the committees currently operating with supplemental policies and guidelines. Those supplemental policies and guidelines are included here in their entirety. These policies are considered to be an addition to the requirements set in JM21, and in no case shall these additions contradict or supersede the requirements set in JM21. If conflicts arise, and cannot be settled, the JEDEC Legal Department will be consulted for final resolution.

Some formatting changes have been made for incorporation into this document.

2 ADDITIONAL POLICIES

2.1 JC-11 Committee

1 NEW BUSINESS

JC-11 and or subcommittee chairs shall be advised of any new business at least 14 calendar days prior to the next JC-11 meeting. The manner of notification is listed in order of preference: E-mail, Phone, Fax or US Mail. The JC-11 or subcommittee Chair shall determine whether the new business including the background statement (justification) is editorially correct and/or otherwise ready for consideration by the committee. If the proposal is a new outline family, samples need to be made available to the committee at the time of presentation to show that the outline proposal has been reduced to practice.

2 QUORUM

As defined in JM21: The JEDEC Office shall maintain a list of active members for the sole purpose of determining the quorum requirements for a committee meeting. An active member is defined as a member company that has been represented at either or both of the previous two consecutive regular meetings of the committee. Special meetings shall not be considered for the purpose of determining "active" member status. The quorum requirements shall be 50% by count of a committee's active member list, but in no case shall the quorum requirement be greater than 20 member companies regardless of committee size. All committee member companies present at a meeting are counted toward quorum requirement.

2.1 JC-11 Committee (cont'd)

3 JC-11 REGISTRATION AND STANDARDS

3.1 Publication Types and Descriptions

JC-11 has 6 types of publications that are balloted and published. The registrations are:

Registered outlines drawings (such as MO, TO, UO, etc.), and Standard drawings (MS, GS, TS, etc.): These publications contain mechanical drawings that show all of the physical characteristics and dimensions of the features present on the outside of the package. These are the features that would be considered critical in mating the package to the next level of interconnect, i.e., sockets or pc boards.

Design Registrations (DR), and Design Guide Standards: These publications contain all physical features and mechanical algorithms needed when designing a package that conforms to a particular package family, i.e., BGA, QFN, PLCC, etc.

Interim Procedures and Practices (IPP), and Standard Procedures and practices (SPP): These publications contain specific procedures or practices that may be applicable to various package families. Instead of adding this information to every design guide, it is published as a document that is considered "general" in nature and may supplement the information in various design guides. It also may be applicable to older package outlines that do not have a design guide associated with them. In some cases, an IPP or SPP may be needed prior to a Design Registration or Design Guide.

In each of the cases, the registrations and the IPP's, once determined to be widely used and stable in content, can be balloted for elevation to "standards".

4 BALLOT VOTING PERIOD

The voting period for all survey, registration and standardization ballots shall be a minimum 21 days, unless a longer period has been authorized by the JC-11 Chair. All JC-11 ballots should have expired by midnight on the day prior to the first day of the JC-11 meeting in order to have time to address any concerns brought up in the balloting cycle.

5 SURVEY BALLOTS

There is no JC-11 Committee vote required for the distribution of a survey ballot; however all survey ballots must be approved in advance by the JC-11 Chair. The JEDEC Office will monitor all ballots for adherence to JEDEC Legal Guidelines. The sponsor is required to upload the complete, unedited survey ballot results to the JEDEC server for the FIRST meeting following expiration of the ballot (see clause 3 for restrictions on ballot consideration).

6 REGISTRATION AND STANDARDS BALLOTING PROCEDURES

Prior to consideration, the proposed outline must be clearly supported by at least two JEDEC Member companies (sponsor/co-sponsor or sponsor/ballot motion second company). An outline proposal that conforms to the JC-11 outline drawing requirements and the JEDEC Publication 95, Section 4 requirements shall be distributed (via the JC-11 upload tool) to the attendees prior to any discussion or voting.

The sponsor shall prepare the presentation using the drawing template and shall include a **cover page** using the correct ballot template, available on the JC-11 members only area. The ballot template shall state the subject, brief background, and name of sponsor. In preparation of a proposal, the requirements as outlined in the "General Guidelines for Committee and Board Ballot Proposal" and the "Check List for Sponsors" shall be followed. The sponsor shall bring 3 hard copies of the material to be presented to the meeting, 1 for each, the committee secretary, committee chair, and subcommittee chair, if hard copies are not supplied the presentation will be postponed until the 3 hard copies are provided.

A sample or other evidence of the producibility of the proposed package shall also be presented at the time the proposal is made (e.g., foreign outlines or design rules, product data sheet or a similar part that in the JC-11 Chair's opinion demonstrates the producibility of the proposed part). This is to show that the outline proposal has been reduced to practice.

2.1 JC-11 Committee (cont'd)

6 REGISTRATION AND STANDARDS BALLOTING PROCEDURES (cont'd)

Upon presentation of a new proposal, the sponsor shall make a MOTION to ballot. A 2/3 majority vote of those member companies present and voting is required before a registration or standards ballot may be issued for balloting. If approval is granted, an item number will be assigned.

All outlines must be provided to the designated JC-11 subcommittee chair for thorough review prior to being uploaded via the JEDEC Voting Machine for ballot distribution. The designated JC-11 subcommittee chair shall be the final approval authority of the conformance of the outline to the Design Guide drawing requirements and ASME Y 14.5M–1994. The committee chair will follow the guidelines as provided on the JC-11 members only area, under Check List for Committee Chairs. Limited ballots or reballots involving minor (simple) dimensional type changes may be approved at the meeting for ballot or reballot at the discretion of the designated JC-11 subcommittee chair without the normal editorial review requirement prior to being placed in the ballot cycle. JC-11 Registrations and IPP's do not have to be balloted to the BoD. All JC-11 Standards must first go through committee ballot and then submitted to the JEDEC Board of Directors for approval.

7 BALLOT RESULTS AND RESOLUTION

7.1 Known patents

The ballot sponsor and all JC-11 members are required to identify outlines that are covered by known patents or could be covered by patent applications.

7.2 Discussion of ballot results

Ballot results may not be discussed at any JC-11 meeting prior to the expiration date of the subject ballot.

7.3 Duplicate voting by company

In the unlikely event of multiple votes from the same company, only the primary member's vote will be considered and counted in the final tally of results.

7.4 Reporting ballot results

The sponsor is required to report results at the JC-11 meeting immediately following the expiration date of the subject ballot. Electronic copies that shall include the following: voting summary, a paraphrased version of all negative vote reasons and yes vote with comments with their proposed resolution, shall be uploaded to the JEDEC server prior to the meeting start time. The sponsor is required to contact the ballot respondent(s) through the voting machine and/or in person and attempt to resolve all comments and negative votes prior to making the report at the JC-11 meeting. Prior to the ballot results presentation, 3 hard copies of the tally, unedited reasons, comments, and proposed resolutions shall be provided, 1 for each, the committee secretary, committee chair, and subcommittee chair, if hard copies are not supplied the presentation will be postponed until the 3 hard copies are provided. In the event of a reballot or significant editorial changes prior to publication, the sponsor is required to present the updated outline to the committee.

7.4.1 Ballot – not passed

If the ballot does not receive the required 2/3 positive votes ("NO" votes will only be counted if they are accompanied by a full explanation of the reasons for the negative vote and abstentions are not counted), the outline shall either be reballoted or withdrawn by its sponsor.

7.4.2 Ballot – passed with comments

If the committee ballot has received the required 2/3 positive votes ("NO" votes will only be counted if they are accompanied by a full explanation of the reasons for the negative vote and abstentions are not counted) and if the no votes are addressed (responded to) in writing during the official voting period (it is required to use the voting machine) the outline may be published if it is a registration, or sent to the JEDEC Board of Directors for approval if it is a standard. Note: Submission of a standard proposal to the JEDEC Board of Directors requires a 2/3 approval vote of the member companies present at that meeting.

2.1 JC-11 Committee (cont'd)

7.4.3 Ballot – passed by acclamation

If the committee ballot has received 100% approval, it is considered approved by acclamation. If all the “approve with comments” and negative votes have been resolved through the voting machine (i.e., voting machine acknowledges approved by acclamation), the ballot sponsor may forward the final tally of votes from the voting machine (.pdf format) and the final (editorial changes only) balloting material ready for publication to the subcommittee chair for their final review, and notification to the JEDEC Office. It is the responsibility of the sponsor to bring one hard copy of the ballot results to the next regular JC-11 meeting for the JC-11 secretary to be included as an attachment to the meeting minutes.

The sponsor will not need to provide presentation materials or copies for the remainder of the JC-11 committee. If the JC-11 or subcommittee chair does not agree with the resolution of the ballot results, or changes are required based on comments, the ballot results will need to be presented at the next JC-11 meeting like any other ballot.

7.5 Motion to rebalot

Any JC-11 member may offer a MOTION to require the outline under consideration to be revised and rebaloted. After a second for the motion is secured and discussion is held, a 2/3 majority vote is required to force a rebalot.

NOTE This procedure may only be utilized to prevent the publication of an obvious error that was observed during the ballot process by less than the number needed to cause the committee ballot to fail.

7.6 Minor technical changes and editorial changes

Minor technical changes (not changes in dimension or tolerance values) may be incorporated into the proposed outline at the meeting. This action requires a 2/3 majority vote to publish or, in the case of a standard, sent on for Board of Directors ballot.

The ballot sponsor is required to contact all companies that voted on the ballot not present at the meeting and offer them the opportunity to vote. All votes will be included in the final ballot totals. If the final vote is unsuccessful (less than 2/3 positive), i.e., the minor technical changes were not approved, the sponsor may either rebalot or revert back to the unchanged outline and publish it as a registered outline or send the standard to the JEDEC Board of Directors for ballot. Editorial changes may be made without any vote or rebalot required. If it is undecided whether a change is technical or editorial, a vote shall be taken at the meeting and recorded in the minutes.

7.7 Changes to dimension and/or tolerance

Any changes to dimension or tolerance values will require a rebalot.

8 PUBLICATION OF JC-11 REGISTERED OUTLINES/STANDARDS

Any ballot that has passed, as stated in 7.4.2 and 7.4.3, can be prepared for publication and sent to the appropriate chair for final review and notification to the JEDEC Office for posting. JC-11 Registered Outlines and Standards will be available on the JEDEC website.

9 IEC-JEDEC ORGANIZATION (IEC/JC-11)

The JC-11.7 chair coordinates activities between JC-11 and the IEC SC-47D committee and reports on the progress of all USA proposals through the IEC voting process. The JC-11.7 Chair shall keep an item log of all USA proposals to IEC

The USA delegation to IEC is headed by the Technical Advisor. The Technical Advisor chairs the Technical Advisory group (TAG) that consists of technical members of JC-11. The TAG normally meets as a task group in conjunction with JC-11 meetings on an as needed basis. The Technical Advisor shall report to JC -11 the USA responses to IEC ballots.

2.1 JC-11 Committee (cont'd)

10 SUBMISSION OF JEDEC OUTLINES FOR IEC CONSIDERATION

After an outline has been issued as a committee ballot and accepted for publication as a registered outline or approved for a standards ballot, the sponsor or any member of JC-11 may propose that the outline be submitted to the appropriate IEC technical committee, subcommittee, or working group for their consideration as an IEC standard.

If 2/3 of the JC-11 members present and voting approve the outline for submission to IEC, a request will be made to the JEDEC Board of Directors for approval to submit to the appropriate IEC committee as a new work item proposal.

If the IEC agrees to consider the outline for standardization, the sponsor is required to prepare the proposed outline according to IEC procedures with assistance from the Technical Advisor.

The Technical Advisor shall ensure that the proposal is presented to the appropriate IEC committee and monitor its progress until the outline is issued as an IEC standard or it is abandoned by the IEC.

The JC-11.7 Chair shall report on all IEC ballot activity to JC-11 at each meeting.

10.1 IEC document voting procedure

- a) IEC ballots will be voted upon by the Technical Advisory Group (TAG).
- b) IEC ballots will be e-mailed to each TAG member by the JEDEC Office.
- c) Ballot responses are returned to the Technical Advisor for consolidation and preparation of the JC-11 response.
- d) If 2/3 of the voting TAG members approve and all comments and negative responses are addressed, the Technical advisor will cast a positive vote. Any obvious technical errors found will result in a negative vote and be brought to the attention of the appropriate IEC committee and reviewed again at the JC-11 meeting.
- e) The TAG shall ensure that JEDEC outlines are technically correct when converted to the IEC format and the ISO dimensioning and tolerancing system.
- f) The Technical Advisor submits the response to the JEDEC Office to be forwarded to the USA National Committee (ANSI) for formal submission to the IEC.

11 ACTION

Action (by the sponsor) on all ballots and outlines that have been approved for publication or for submittal to the Board of Directors shall occur within a 180 day period (i.e., within two meetings) or the item will be subject to termination and removal from the item log.

12 ADDITIONS TO EXISTING OUTLINES

Any sponsor that proposes to revise or add to an existing outline is required to bring the subject outline up to current JC-11 outline documentation, dimensioning and tolerancing requirements. The updating may be accomplished after approval to ballot has been obtained, but before the ballot is distributed.

2.1 JC-11 Committee (cont'd)

13 PROCEDURE FOR EDITORIAL CORRECTION(S) TO RELEASED/PUBLISHED JEDEC JC-11 MECHANICAL OUTLINES AND DOCUMENTS CONTAINED IN JEP95

- 13.1 Editorial changes to JEDEC JC-11 published, mechanical outlines and documents may either be accomplished in accordance with this procedure or by formal balloting. This procedure applies only to editorial errors identified in published mechanical outlines and documents that were created and/or revised by the JEDEC JC-11 committee.
- 13.2 When an editorial error is discovered in any published JEDEC JC-11 document, the person or persons discovering the error are encouraged to bring it to the attention of the JC-11 Chair.
- 13.3 Only the editorial changes identified in the proposal to change (see 13.1) are to be accomplished. There is no stated or unstated requirement that large-scale editorial updating of the entire document is required.
- 13.4 The JC-11 Chair will communicate with the appropriate JC-11 subcommittee chair regarding the identified error. The two Chairs will research the matter and determine if the error is editorial in nature and will document their findings. The designated JC-11 subcommittee chair will present the findings at the next regular or special meeting of the JC-11 Committee.
- 13.5 A 2/3 positive vote of JEDEC JC-11 members present at the meeting is required to accept the findings of the JC-11 Chair and the designated JC-11 subcommittee chair as editorial to implement the approved corrections. If the vote is less than 2/3 positive the material should be prepared for ballot in accordance with the existing JC-11 operating procedures.
- 13.6 If the proposed changes are accepted, the correction will be made under the direction of the JC-11 Chair and/or designated JC-11 subcommittee chair.
- 13.7 When the change is published, the outline will be updated to the next revision letter and the current date of publication will be shown. Or the committee may request to use the JEDEC numbering system for editorial changes, e.g., MO-###A.01.
- 13.8 An "E" will be added to the JC-11 existing item number (e.g., 11-034E) to indicate that an editorial correction has been made to the published outline.

2.2 JC-13 Committee

1 TASK GROUP FORMATION

A new topic is raised either at the JC-13 General Session or at a subcommittee meeting. Topic is briefly discussed as to the merit or need for a task group by the attendees. If a **majority of attendees present** deems that a task group is needed, the task group is formed, given a designation, and scheduled for appearance on the preliminary grid for the next regularly scheduled meeting.

OR

The proposed topic is discussed with or conveyed to the chair between meetings (e.g., between the winter meeting and the spring meeting or between the spring meeting and the fall meeting, etc.). The item is then placed on the agenda for the next committee/subcommittee meeting allowing a 5-minute presentation to justify the formation of a task group. **If a majority of attendees present** deems a task group is needed, the task group is formed, given a designation, and is scheduled for appearance on the preliminary grid for the next regularly scheduled meeting.

1.2 Task Group Arrangements

Task group arrangements must be made, through the appropriate chair/subcommittee chair, 8 weeks in advance of the next regularly scheduled meeting to allow for sufficient advanced notice to the intended audience.

OR

Task group arrangements must be made, through the appropriate chair/subcommittee chair, in time to appear on the preliminary schedule of meetings (preliminary version of the meeting grid) that accompanies the distribution of the meeting notice.

2 PRESENTATION VETTING POLICY

All presentations are to be vetted **at least two weeks prior** to the next meeting's start date with the exception of DLA and Services' status updates that do not contain new issues that require committee discussion.

2.3 JC-42 and by agreement also JC-16, JC-40, JC-45, and JC-63 Committees

1 GENERAL

The general rules governing all JEDEC committees are set forth by JM21. Additional policies and guidelines are established here to facilitate the operation of the particular committees referenced above, and shall be recorded as an addendum to JM21. All policies set forth herein are in addition to the requirements set forth in JM21 and in no case shall these additions contradict or supersede the requirements set forth in JM21.

1.1 Scope

In addition to the rules set forth in JM21, the policies listed herein shall be followed by all participants in the referenced committees without exception unless and until such time as the policies and or organization and procedures have been modified by the process or processes contained within JM21 including this addendum.

1.2 Governance/Interpretation

The JEDEC Committee Secretary in concert with JEDEC legal staff shall have the sole authority to interpret, in whole or in part, these operating policies. In any case where conflict arises from ambiguity or lack of specificity, or misunderstanding within or related to this document, the JEDEC Committee Secretary in consultation with JEDEC legal staff may make temporary rulings to be confirmed or modified by committee ballot. All temporary rulings shall be confirmed by the full committee prior to any resulting action becoming permanent.

1.3 Modifications to the Policies Addendum

Modifications to this addendum may be made in whole or in part, upon approval by the normal ballot process as extended here. The JC-42 Plenary is required to submit changes to operating policies affecting represented committees for a ballot vote. All policy ballots shall be distributed to all member companies of all the affected committees and each member company shall have one and only one vote on a policy ballot regardless of whether that member company is a member of more than one of the affected committees. Ballot approval requires a minimum of 2/3 of votes cast. Abstention votes shall not be considered in the calculation. Editorial changes may be incorporated into existing operating policies without balloting during a Plenary meeting, provided there is no disagreement within the Plenary that the changes are editorial.

1.3.1 Implementation of Modifications

Any changes to this addendum shall be distributed to the JEDEC members from the affected committees at the earliest possible time upon adoption.

2 COMMITTEE MEETING TIMES POLICY

All Regular Committee meetings shall operate in the time zone where the meeting is held and shall start at 8:00am and end at 6:00pm each day unless the committee currently meeting at the time decides otherwise. A 2/3 majority vote to approve extending the start or end time must be taken and duly recorded in the minutes of the affected committee or committees.

3 COMMITTEE PRESENTATION POLICIES

Presentations must be made to the committee. Items shared in a task group shall not be considered as committee presentations in the standards process.

All presentations must be placed on the wireless server at the meeting before they can be presented to the committee during the meeting.

Early notification of items to be discussed at a regular meeting are required by JM21 (section 3.1, 3.2, 3.3). The Committee shall operate by a policy that accepts all currently active items (2nd presentations), plus new presentations (1st presentations) received electronically by all committee members 21 days prior to a regular meeting, and that policy shall be considered as satisfying the early notification requirement in JM21.

2.3 JC-42 and by agreement also JC-16, JC-40, JC-45, and JC-63 Committees (cont'd)

3 COMMITTEE PRESENTATION POLICIES (cont'd)

The terms "1st presentation" and "2nd presentation" are used to designate new (items not seen before by the committee) or old (items seen before by the committee) items respectively. A 1st presentation (new) may be elevated to the classification of 2nd (old) presentation during a meeting by a motion with unanimous affirmative vote of all members present at a meeting.

A motion to authorize a ballot for any 2nd presentation item may occur at a regular meeting, or a special meeting that includes the presentation item in the specific agenda approved for the special meeting. 1st presentations shall not be considered for ballot.

The motion authorizing a ballot of a 2nd presentation may authorize the sponsor or a task group to issue the ballot. Task groups authorized to issue a ballot shall follow all procedures and policies for task groups contained in JM21 and this addendum.

All authorizations to issue ballots expire at the next regular meeting.

3.1 Task Group (TG) Policies

TG chairs should be non-biased facilitators.

Consensus lists of items within a TG may be set up allowing 2/3 vote to put something on the list and 2/3 vote to take something off the list.

TG authorization to issue a ballot expires at the next regular committee meeting.

All Task Groups (TG) are required to use their respective official JEDEC TG website's File Gallery for distributing presentation materials. If a TG does not (or not yet) have a dedicated TG-website, they shall use the File Gallery associated with the committee website under which the TG is organized.

All TG email discussions and announcements shall utilize the TG's e-mail reflector (e.g., TGxxx@list.jedec.org) or when necessary the email reflector of the parent committee (e.g., JCxxx@list.jedec.org).

Discussions in a TG should be referenced to written material (presentations or email). The presentation needs to be posted at the TG's website before the discussion to permit fair participation by non-native English speaking attendees (common courtesy in JEDEC).

TGs authorized to issue a ballot shall do so only upon approval by a 2/3 majority of votes cast by TG members either present or absent (Abstain votes shall not be considered as part of the 2/3 majority calculation). Email votes received by the TG Chair prior to the beginning of TG meeting on the day of voting must be included in the 2/3 majority calculation. Voting must be on the exact ballot material posted on the respective JEDEC TG website in ballot form excluding the cover page.

TGs shall provide a minimum 5 calendar (24 hour) days notice of a vote on material to be balloted. An optional "Instruction Page" may be inserted to clarify and/or define the exact ballot material. The optional "Instruction Page" will be removed prior to publication, but must comply with the 5 day rule prohibiting any changes. Notice must include the date of the vote and a link to the exact ballot material in ballot form including the optional "Instruction Page" must be placed on the respective JEDEC TG website.

If a TG wishes to have an email-only vote or a voting period outside the TG meeting, the voting cutoff deadline must be clearly specified in the meeting minutes. The 2/3 majority as well as the 5 day notice and review period rules above shall be applied.

When ballot material properly noticed to TG members is discussed for consensus in a real time interactive forum, numerical values indicated in the ballot material may be modified (including changes to/from TBD) in the ballot material to reach consensus. Such consensus must be documented in the TG minutes. This exception does not apply to non-numerical text, notes, descriptions, formatting or any additions/deletions. If E-mail votes have been submitted with respect to the unaltered material, the TG must consider these as 'no' votes for any modifications, unless the e-mail vote explicitly approves the modified value.

2.3 JC-42 and by agreement also JC-16, JC-40, JC-45, and JC-63 Committees (cont'd)

4 BALLOT POLICIES

4.1 Ballot Information

Ballots require minimum 21 day review (**no exceptions - JM21 requirement**) and must be posted to remain open for vote through the Wednesday before the meeting and close the Thursday before the meeting - exceptions require committee vote.

By duly recorded authorization vote a ballot may be approved for what the committee considers "fast track" where the ballot will remain open for only the minimum 21 day voting period. Such actions are exceptions and should only be considered when the committee believes there is an exceptional time critical nature to the standard being developed.

Material to be balloted must be provided in editable form to the committee chair for committee ballots and to the JEDEC office for BoD ballots.

All committees require Chair, Vice-chair, and company sponsor to be co-sponsors on ballots posted on the voting machine.

JC-16, JC-42, and JC-45 committees require committee chairs to post ballots on the JEDEC voting machine. JC-40 and JC-63 permit sponsors to post ballots. Ballots must be submitted no later than Wednesday, the day before ballots must be posted on the web allowing the JEDEC staff 24 hours to process and post the ballot on the voting machine.

"Proposed" must be on every page of new ballot material.

4.2 Ballot Handling

Once voting is closed, ballot comments and tally results should be distributed to the entire committee by the Chair or Sponsor so discussion about comments during meetings can be minimized.

Modifications may be made to ballots without re-ballot provided all member companies present at the meeting agree the modifications are only editorial in nature.

Ballots may pass to the BoD by acclamation between committee meetings only if specifically authorized to be fast track ballots.

For these committees, "Pass by acclamation" is specifically limited to ballots that pass without "No" votes. All no votes must be discussed and addressed by the committee before further action can be taken on the material.

Ballots with open patent issues require a committee ballot addressing those issues to move the ballot to the board.

4.3 Survey Ballots

Approval for the posting of survey ballots is given by the committee or subcommittee chairman or vice chairman prior to posting on the Voting Machine.

All survey ballots will be in editable source file format, and when possible the text of the survey questions will be copied into the Background section of the Voting Machine posting to allow easy response.

Survey ballots must be posted to the Voting Machine for a minimum of 21 days. The timing of the voting period is negotiated between the survey sponsor and the approving (vice-)chairman.

Paper survey ballots are not allowed.

The sponsor will post the ballot and receive/count votes except when confidentiality of the responses is required in which case the JEDEC office will receive/ count votes. In all cases, survey ballots will state whether responding company names will be listed in the results and who will see the unfiltered responses.

Committee (or subcommittee) chairman will be "co-sponsor" of all survey ballots.

All survey ballots will include the following statement: "Companies are under no obligation to respond to this survey."

All survey ballot tallies will be distributed electronically as soon as possible after the expiration of the voting period and reviewed at the next full committee meeting.

4.4 Registration Ballots

These are ballots to place a set of files for a PCB design of a DIMM onto the JEDEC server as a reference design.

These are balloted in the same manner as other committee ballots and have the same time requirements and same "Ballot Handling" requirements. A registration ballot will usually be associated with a ballot for an Annex for the same reference design. Registration ballots once approved by the committee are sent to the JEDEC office for posting on a JEDEC server and are not sent to the BoD.

These are the requirements for what must be contained in the file set for the PCB design:

1. Board file in a Cadence format (*.brd)
2. Bill of materials (*.txt, *.xlsx, *.doc)
3. Read me file containing a history of the development. Degree of detail is left to the sponsor or committee or task group to determine.
4. Schematic (*.pdf)
5. Lengths file containing details for the important buses (*.pdf, *.xlsx)
6. DIMM checklist (May be in one file):
 - 6a. Checklist for DIMM design details (*.xlsx).
 - 6b. Checklist for design rules (*.xlsx).
7. Optionally: Assembly drawings (*.pdf)

The file types are suggested. Additional file types may be used if acceptable to the committee. Determination of what is acceptable may be determined through the balloting process as votes or comments to the ballot. These files are to be zipped into a single file. The zipped design file is to be zipped with the Registration Ballot Template into a single file. This single file will be posted to the voting machine.

4.5 Memory Module Design File error fix procedure:

When error found in a Memory Module Design File which is on the JEDEC public web site, the responsible TG and (sub-) committee chair(s) will get the authority to take necessary measures without authorization by the (sub-) committee meeting, but need to report to the next (sub-) committee meeting.

All the related information must be forwarded to the responsible TG and (sub-) committee chair(s), and they should hold a TG meeting as soon as possible and should decide how to handle the issue. If they determine that the situation is urgent, they can execute the measures on their own judgment without a TG meeting.

The responsible TG and (sub-) committee chair(s) can ask the JEDEC office to remove the file from the JEDEC public site, but cannot ask to replace or add a file without authorization by the (sub-) committee meeting.
 Insert section "4.5 Memory Module Design File error fix procedure" after "4.4 Registration Ballots"

2.4 JC-64 Committee

1 GENERAL

The general rules governing all JEDEC committees are set forth by JM21. Additional policies and guidelines are established here to facilitate the operation of the particular committees referenced above, and shall be recorded as an addendum to JM21. All polices set forth herein are in addition to the requirements set forth in JM21 and in no case shall these additions contradict or supersede the requirements set forth in JM21.

1.1 Scope

In addition to the rules set forth in JM21, the policies listed herein shall be followed by all participants in the referenced committees without exception unless and until such time as the policies and or organization and procedures have been modified by the process or processes contained within JM21 including this addendum.

1.2 Governance/Interpretation

The JEDEC Committee Secretary in concert with JEDEC legal staff shall have the sole authority to interpret, in whole or in part, these operating policies. In any case where conflict arises from ambiguity or lack of specificity, or misunderstanding within or related to this document, the JEDEC Committee Secretary in consultation with JEDEC legal staff may make temporary rulings to be confirmed or modified by committee ballot. All temporary rulings shall be confirmed by the full committee prior to any resulting action becoming permanent.

1.3 Modifications to the Policies Addendum

Modifications to this addendum may be made in whole or in part, upon approval by the normal ballot process as extended here. The JC-64 Plenary is required to submit changes to operating policies affecting represented committees for a ballot vote. All policy ballots shall be distributed to all member companies of all the affected committees and each member company shall have one and only one vote on a policy ballot regardless of whether that member company is a member of more than one of the affected committees. Ballot approval requires a minimum of 2/3 of votes cast. Abstention votes shall not be considered in the calculation. Editorial changes may be incorporated into existing operating policies without balloting during a Plenary meeting, provided there is no disagreement within the Plenary that the changes are editorial.

1.3.1 Implementation of Modifications

Any changes to this addendum shall be distributed to the JEDEC members from the affected committees at the earliest possible time upon adoption.

2 COMMITTEE MEETING TIMES POLICY

All Regular Committee meetings shall operate in the time zone where the meeting is held and shall start at 8:00am and end at 6:00pm each day unless the committee currently meeting at the time decides otherwise. A 2/3 majority vote to approve extending the start or end time must be taken and duly recorded in the minutes of the affected committee or committees.

3 COMMITTEE PRESENTATION POLICIES

Presentations must be made to the committee. Items shared in a task group shall not be considered as committee presentations in the standards process.

All presentations must be placed on the wireless server at the meeting before they can be presented to the committee.

Early notification of items to be discussed at a regular meeting are required by JM21 (section 3.1, 3.2, 3.3). The Committee shall operate by a policy that accepts all currently active items (2nd presentations), plus new presentations (1st presentations) received electronically by all committee members 21 days prior to a regular meeting (automatically become 2nd presentations), and that policy shall be considered as satisfying the early notification requirement in JM21.

The terms "1st presentation" and "2nd presentation" are used to designate new (items not seen before by the committee) or old (items seen before by the committee) items respectively. A 1st presentation (new) may be elevated to the classification of 2nd (old) presentation during a meeting by a motion with unanimous affirmative vote of all members present at a meeting.

A motion to authorize a ballot for any 2nd presentation item may occur at a regular meeting, or a special meeting that includes the presentation item in the specific agenda approved for the special meeting. 1st presentations shall not be considered for ballot.

The motion authorizing a ballot of a 2nd presentation may authorize the sponsor or a task group to issue the ballot. Task groups authorized to issue a ballot shall follow all procedures and policies for task groups contained in JM21 and this addendum.

All authorizations to issue ballots expire at the next regular meeting.

2.4 JC-64 Committee (cont'd)

3.1 Task Group (TG) Policies

TG chairs should be non-biased facilitators.

Consensus lists of items within a TG may be set up allowing 2/3 vote to put something on the list and 2/3 vote to take something off the list.

TG authorization to issue a ballot expires at the next regular committee meeting.

All Task Groups (TG) are required to use their respective official JEDEC TG website's File Gallery for distributing presentation materials. If a TG does not (or not yet) have a dedicated TG-website, they shall use the File Gallery associated with the committee website under which the TG is organized.

All TG email discussions and announcements shall utilize the TG's e-mail reflector (e.g., TGxxx@list.jedec.org) or when necessary the email reflector of the parent committee (e.g., JCxxx@list.jedec.org).

Discussions in a TG should be referenced to written material (presentations or email). The presentation needs to be posted at the TG's website before the discussion to permit fair participation by non-native English speaking attendees (common courtesy in JEDEC).

TGs authorized to issue a ballot shall do so only upon approval by a 2/3 majority of votes cast by TG members either present or absent (Abstain votes shall not be considered as part of the 2/3 majority calculation). Email votes received by the TG Chair prior to the beginning of TG meeting on the day of voting must be included in the 2/3 majority calculation. Voting must be on the exact ballot material posted on the respective JEDEC TG website in ballot form excluding the cover page.

3.1 Task Group (TG) Policies

TGs shall provide a minimum 5 calendar (24 hour) days notice of a vote on material to be balloted. An optional "Instruction Page" may be inserted to clarify and/or define the exact ballot material. The optional "Instruction Page" will be removed prior to publication, but must comply with the 5 day rule prohibiting any changes. Notice must include the date of the vote and a link to the exact ballot material in ballot form including the optional "Instruction Page" must be placed on the respective JEDEC TG website.

If a TG wishes to have an email-only vote or a voting period outside the TG meeting, the voting cutoff deadline must be clearly specified in the meeting minutes. The 2/3 majority as well as the 5 day notice and review period rules above shall be applied.

When ballot material properly noticed to TG members is discussed for consensus in a real time interactive forum, numerical values indicated in the ballot material may be modified (including changes to/from TBD) in the ballot material to reach consensus. Such consensus must be documented in the TG minutes. This exception does not apply to non-numerical text, notes, descriptions, formatting or any additions/deletions. If E-mail votes have been submitted with respect to the unaltered material, the TG must consider these as 'no' votes for any modifications, unless the e-mail vote explicitly approves the modified value.

2.4 JC-64 Committee (cont'd)

4 BALLOT POLICIES

4.1 Ballot Information

Ballots require minimum 21 day review (**no exceptions - JM21 requirement**) and must be posted to remain open for vote through the Wednesday before the meeting and close the Thursday before the meeting - exceptions require committee vote.

By duly recorded authorization vote a ballot may be approved for what the committee considers "fast track" where the ballot will remain open for only the minimum 21 day voting period. Such actions are exceptions and should only be considered when the committee believes there is an exceptional time critical nature to the standard being developed.

Material to be balloted must be provided in editable form to the committee chair for committee ballots and to the JEDEC office for BoD ballots.

JC-64 requires Chair, and Vice-chair, to be co-sponsors on ballots posted on the voting machine.

JC-64 permits company sponsor to post ballots. Ballots must be submitted no later than Wednesday, the day before ballots must be posted on the web allowing the JEDEC staff 24 hours to process and post the ballot on the voting machine.

"Proposed" must be on every page of new ballot material.

4.2 Ballot Handling

Once voting is closed, ballot comments and tally results should be distributed to the entire committee by the Chair or Sponsor so discussion about comments during meetings can be minimized.

Modifications may be made to ballots without re-ballot provided all member companies present at the meeting agree the modifications are only editorial in nature.

Ballots may pass to the BoD by acclamation between committee meetings only if specifically authorized to be fast track ballots.

For these committees, "Pass by acclamation" is specifically limited to ballots that pass without "No" votes. All "No" votes must be discussed and addressed by the committee before further action can be taken on the material.

Ballots with open patent issues require a committee ballot addressing those issues to move the ballot to the board.

4.3 Survey Ballots

Approval for the posting of survey ballots is given by the committee or subcommittee chairman or vice chairman prior to posting on the Voting Machine.

All survey ballots will be in editable source file format, and when possible the text of the survey questions will be copied into the Background section of the Voting Machine posting to allow easy response.

Survey ballots must be posted to the Voting Machine for a minimum of 21 days. The timing of the voting period is negotiated between the survey sponsor and the approving (vice-)chairman.

Paper survey ballots are not allowed.

The sponsor will post the ballot and receive/count votes except when confidentiality of the responses is required in which case the JEDEC office will receive/ count votes. In all cases, survey ballots will state whether responding company names will be listed in the results and who will see the unfiltered responses.

Committee (or subcommittee) chairman will be "co-sponsor" of all survey ballots.

All survey ballots will include the following statement: "Companies are under no obligation to respond to this survey."

All survey ballot tallies will be distributed electronically as soon as possible after the expiration of the voting period and reviewed at the next full committee meeting.

Annex A (informative) Differences between JM12B and JM12A

This table briefly describes most of the changes made to entries that appear in this standard, JM12B, compared to its predecessor, JM12A (May 2016). If the change to a concept involves any words added or deleted (excluding deletion of accidentally repeated words), it is included. Some punctuation changes are not included.

Clause	Description of change
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2.3	Added new 4.5
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A.1	Differences between JM12A and JM12 (June 2012)
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Clause	Description of change
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2.3	Clause 3, Committee Presentation Policies, 3 rd para., Changed 30 days to 21 days
2.3	Subclause 3.1, Task Group (TG) Policies, deleted 7 th para.
2.3	Subclause 3.1, Task Group (TG) Policies, update paragraphs 8, 9, and 10, now paragraphs 7, 8, and 9.
2.3	Subclause 4.1, Ballot Information, 1 st para., Added text “and close the Thursday before the meeting” and deleted “(fast track)”.
2.3	Subclause 4.1, Ballot Information, 5 th para., Added second sentence.
2.3	Added Subclause 4.4.
2.4	Clause 3, Committee Presentation Policies, 3 rd para., Changed 30 days to 21 days
2.4	Subclause 3.1, Task Group (TG) Policies, deleted 7 th para.
2.4	Subclause 3.1, Task Group (TG) Policies, update paragraphs 8, 9, and 10, now paragraphs 7, 8, and 9.
2.4	Subclause 4.1, Ballot Information, 1 st para., Added text “and close the Thursday before the meeting” and deleted “(fast track)”.
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The logo features the word "JEDEC" in a bold, italicized, sans-serif font. A red horizontal line is positioned below the text, starting from the left and tapering to the right.