[Document reference]

NEW WORK ITEM PROPOSAL (NP)

PROPOSER:	DATE OF PROPOSAL:
India	**07/02/2024**
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:

IEC TC40

SECRETARIAT:	SECRETARY:
The Netherlands	Ronald Drenthen
NEED FOR IEC COORDINATION:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this NP to the TC/SC secretary

FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ √ QUALITY ASSURANCE ☐ SAFETY

TITLE OF PROPOSAL:

THERMAL RESISTANCE MEASUREMENTS FOR SMD CHIP RESISTORS

☐ √ STANDARD	☐ TECHNICAL SPECIFICATION	☐ PUBLICLY AVAILABLE SPECIFICATION

PROPOSED PROJECT NUMBER:

SCOPE
(AS DEFINED IN ISO/IEC DIRECTIVES, PART 2, 14):

Thermal resistance measurement is a method to evaluate the ability of resistor that can handle the expected power dissipation without overheating, allows to estimate the temperature rise accurately, to optimize the layout and thermal management of the system ensuring that resistor operate within safe temperature limit, to prevent premature failure or degradation of the resistor due to excessive temperatures, to assess thermal performance of resistor and predict long term reliability.

PURPOSE AND JUSTIFICATION
INCLUDING THE MARKET RELEVANCE AND WHETHER IT IS PROPOSED TO BE A HORIZONTAL STANDARD.
MARKET RELEVANCE SHOULD BE ADDRESSED BY INDICATING THE NEED FOR THE CORRESPONDING STANDARDS WORK AND ITS GLOBAL RELEVANCE (SEE ISO/IEC DIRECTIVES, PART 1 ANNEX C)
IF PROPOSED AS A HORIZONTAL STANDARD, IDENTIFY AS POSSIBLE, THE CORRESPONDING APPLICABLE GUIDE(S) AND ASSOCIATED ADVISORY COMMITTEE(S) (SEE GUIDE 108).

Electronics Manufacturing - ensures that these resistors can operate within specified temperature ranges without degradation or failure. **Performance Optimization -** By accurately measuring thermal resistance, engineers can design circuits that operate efficiently and reliably under various operating conditions, **Market**

Demand for High-Performance Electronics: With the growing demand for high-performance electronic devices in various applications, there is an increasing emphasis on thermal management to ensure reliable operation under challenging conditions. As a result, there is a corresponding demand for accurate thermal resistance measurement techniques for SMD resistors to meet stringent performance requirements and quality standards.

PLEASE SELECT ANY UN SUSTAINABLE DEVELOPMENT GOALS (SDGS) THAT THIS DOCUMENT WILL SUPPORT. FOR MORE INFORMATION ON SDGS, PLEASE VISIT OUR WEBSITE AT HTTPS://WWW.IEC.CH/SDG/

☐ GOAL 1: No Poverty	☐ GOAL 10: Reduced Inequalities
☐ GOAL 2: Zero Hunger	☐ GOAL 11: Sustainable Cities and Communities
☐ GOAL 3: Good Health and Well-being	☐ GOAL 12: Responsible Consumption and Production
☐ GOAL 4: Quality Education	☐ GOAL 13: Climate Action
☐ GOAL 5: Gender Equality	☐ GOAL 14: Life Below Water
☐ GOAL 6: Clean Water and Sanitation	☐ GOAL 15: Life on Land
☐ GOAL 7: Affordable and Clean Energy	☐ GOAL 16: Peace, Justice and Strong Institutions
☐ GOAL 8: Decent Work and Economic Growth	☐ GOAL 17: Partnerships for the Goals
☐√ GOAL 9: Industry, Innovation and Infrastructure	

TARGET DATE(S)	FOR FIRST CD:	FOR PUBLICATION:	
ESTIMATED NUMBER OF MEETINGS:	FREQUENCY OF MEETINGS: per year	DATE OF FIRST MEETING:	PLACE OF FIRST MEETING:

RELEVANT DOCUMENTS TO BE CONSIDERED:

RELATIONSHIP OF PROJECT TO ACTIVITIES OF OTHER INTERNATIONAL BODIES:

LIAISONS WITH INTERNATIONAL BODIES:	NEED FOR ISO COORDINATION:

DOCUMENT MATURITY:

☐ A DRAFT IS ATTACHED FOR COMMENT* ☐ AN OUTLINE IS ATTACHED

* Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

CONCERNS KNOWN PATENTED ITEMS (SEE ISO/IEC DIRECTIVES, PART 1) ☐ YES ☐ NO

PATENT DESCRIPTION:

RECIPIENTS OF THIS DOCUMENT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY LOCAL REGULATIONS OR TECHNICAL REASONS THAT MAY EXIST AND SHOULD BE CONSIDERED SHOULD THIS PROPOSAL PROCEED, RECOGNIZING THAT FAILURE TO ADDRESS SUCH REQUIREMENTS COULD RESULT IN THE NEED FOR "IN SOME COUNTRIES" CLAUSES.

CONCERNS LOCAL REGULATIONS OR TECHNICAL DIFFERENCES (SEE AC/22/2007) ☐ YES ☐ NO

DESCRIPTION:

WE NOMINATE A PROJECT LEADER IN ACCORDANCE WITH ISO/IEC DIRECTIVES, PART 1

LAST NAME:	FIRST NAME:	E-MAIL:	COUNTRY:
SINNARKAR	MANDAR	Mandar.sinnarkar@vishay.com	India

COMMENTS AND RECOMMENDATIONS FROM TC/SC OFFICERS:

WORK ALLOCATION:

☐ NEW PROJECT TEAM ☐ NEW WORKING GROUP ☐ EXISTING WORKING GROUP:

IF APPROVED, THE NEXT STAGE SHOULD BE:

☐ CD ☐

REMARKS FROM TC/SC OFFICERS:

APPROVAL CRITERIA

- Approval of the new work item proposal by a 2/3 majority of the P-members voting;
- At least 4 P-members in the case of a committee with 16 or fewer P-members, or at least 5 P-members in the case of committees with more than 17 P-members, have nominated or confirmed the name of an expert and approved the new work item proposal.