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IN REPLY
REFER TO

DSCC-VAC (Mr. Barone/DSN 850-0510 / (614)692-0510)

MEMORANDUM FOR VSS (Mr. Art Hudson)

SUBJECT: Dated Engineering Practices (EP) Study to Determine the Optimal Thermal Format
Requirements - Project Number: 5961- 2363

Findings and recommendations Engineering Practices (EP) Study, dated 30 July 2001, and
attachments are enclosed.

It is requested that your office take the necessary electronic action to reflect completion of this
project.

Enclosure

TOM HESS
Chief
Active Devices Team



ENGINEERING PRACTICES STUDY

TITLE: Problems in the Standardization on Thermal Format Requirements

30 July 2001

STUDY PROJECT (SEE ATTACHMENT 1)

FINAL REPORT

Study Conducted by Alan Barone

Prepared by

Alan Barone

I. OBJECTIVE: The objective of this study is to determine the most optimal thermal format for semiconductors.

II. BACKGROUND: A JEDEC task group was formed to study this issue. The content of this proposal was derived from supplier complaints

DSCC has encounter some confusion and inconsistencies in thermal impedance testing.

Some specifications particularly MOSFETs perform thermal screening, and thermal endpoint measurements. Group A thermal testing is omitted. Suppliers feel the group A is redundant and burdensome for no good reason.

A few diode specifications perform thermal screening, and group A only, omitting thermal endpoint measurements. Some complaints against thermal endpoint measurement were received claiming end point measurements are redundant and burdensome for no good reason.

Most specifications impose thermal screening, group A, and endpoint measurements.

A few older specification and unique products do not perform any thermal testing.

III. RESULTS: The applicable specifications are being revised.

IV. CONCLUSION DSCC will continue to include thermal screening which is statistically imposed, Group A and thermal endpoints will be a fixed limit.

V. RECOMMENDATIONS: None