

NOVEMBER, 1969
(Reaffirmed 2/84)



EIA STANDARD

for

**PERFORMANCE TEST PROCEDURE
FOR SOLAR CELLS AND
CALIBRATION PROCEDURE FOR
SOLAR CELL STANDARDS
FOR SPACE VEHICLE SERVICE**

ELECTRONIC INDUSTRIES ASSOCIATION
STANDARD RS-365

Formulated by

JEDEC Semiconductor Device Council



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Published by

ELECTRONIC INDUSTRIES ASSOCIATION

Engineering Department

2001 Eye Street, N. W., Washington, D. C. 20006

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Printed in U.S.A.

PERFORMANCE TEST PROCEDURE FOR SOLAR CELLS AND CALIBRATION PROCEDURE FOR SOLAR CELL STANDARDS FOR SPACE VEHICLE SERVICE

*(From Standards Proposal No. 997, formulated under the cognizance of JEDEC Committee JS-4 on
Photosensitive Semiconductor Devices. This Standard Supersedes JEDEC Publication No. 58)*

PERFORMANCE TEST PROCEDURE FOR SOLAR CELLS FOR SPACE VEHICLE SERVICE

I. PURPOSE

To test and classify the output of solar cells for space vehicle service in accordance with the requirements of EIA Format JS4-RDF4. (See Appendix)

II. PREPARATION FOR TEST

A. Spectral Response

The mean spectral response and the range of spectral response variation of the population to be tested should be known in order to decide on the applicable test method.

III. TEST PARAMETERS

- A. *Temperature on the active area of the solar cell during the test shall be $28^{\circ} \pm 2^{\circ}\text{C}$, unless specified differently.*
- B. When short circuit current is measured the terminal voltage shall not exceed 100 mV.
- C. Irradiance is to be adjusted to that magnitude necessary to generate output characteristics in the solar cells under test comparable to those obtained in normal near earth space sunlight as determined by application of standard cells (See Calibration Procedure for Solar Cell Standards).

If a light source with non-adjustable irradiance (like sunlight as received on the earth's surface) is used, the short circuit current $I_{(SC)T}$ (expol) under near earth space conditions of the cell under