ISO 23038:2018-02 (E)

Space systems - Space solar cells - Electron and proton irradiation test methods

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Symbols and abbreviated terms 2

5 Space radiation environments 2
5.1 Space radiation 2
5.2 Shielding effects 3

6 General radiation effects in solar cells 3
6.1 Solar-cell radiation damage 3
6.2 Radiation effects on solar cell cover materials 3

7 Radiation test methods 4
7.1 General 4
7.2 Electron irradiation 5
7.2.1 Vacuum 5
7.2.2 Temperature 5
7.2.3 Coverage area 5
7.2.4 Irradiation beam uniformity 6
7.2.5 Flux levels 6
7.2.6 Dosimetry 6
7.2.7 Other practical test considerations 6
7.3 Proton irradiation 7
7.3.1 General 7
7.3.2 Vacuum 7
7.3.3 Coverage area 7
7.4 Post irradiation annealing phenomena 7

8 Test report guidelines 7

Bibliography 9