# DOCUMENT CHANGE REQUEST

| | | | |
|---|---|---|---|
| DCR number 512 | Changes required for: General | Originator: S Jeffery - ESCC |
| Date: 2009/05/06 | Date sent: 2009/05/06 | Organisation: ESA/ESTEC |
| Status: IMPLEMENTED | | |

| | | | |
|---|---|---|---|
| Title: | Transistors Low Power NPN, based on types 2N3498 thru 2N3501 | | |
| Number: | 5201/013 | Issue: | 2 |

Other documents affected:

Page:

See attachment

Paragraph:

See attachment

Original wording:

Proposed wording:

Update the Maximum Ratings table (see the attachment for details) so that this detail spec is clear, complete and the content and format is in-line with other detail specifications for similar Part Types.

Justification:

Improve the content and clarity of the spec.

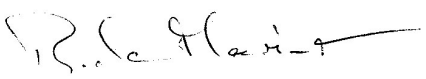
Attachments:

5201013_Issue_3_-_Draft_A.pdf, null

Modifications:

Page 6: Original Note 2 to Maximum Ratings – add “, and any handling,” between “testing” and “performed”.

Approval signature:



Date signed:

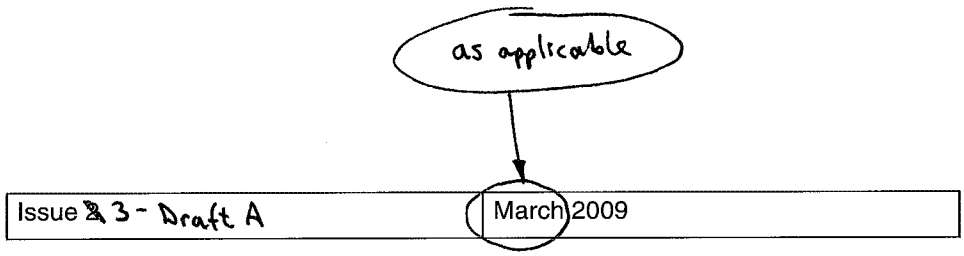
2009-05-06

Pages 1 to 15

# TRANSISTORS, LOW POWER, NPN

## BASED ON TYPE 2N3501

## ESCC Detail Specification No. 5201/013




Document Custodian: European Space Agency - see https://escies.org

as applicable

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## DOCUMENTATION CHANGE NOTICE

(Refer to https://escies.org for ESCC DCR content)

| DCR No. | CHANGE DESCRIPTION |
|---|---|
| tbd | Specification up issued to incorporate editorial and technical changes per DCR. |

| Characteristics | Symbols | Maximum Ratings | Unit | Remarks |
|---|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 150 | V | Over entire operating temperature range |
| Collector-Emitter Voltage | $V_{CEO}$ | 150 | V | |
| Emitter-Base Voltage | $V_{EBO}$ | 6 | V | |
| Collector Current | $I_C$ | 300 | mA | |
| Power Dissipation | $P_{tot1}$ | 1 | W | At $T_{amb} \leq +25^oC$ ~~Note 1~~ |
| | $P_{tot2}$ | 5 | W | At $T_{case} \leq +25^oC$ ~~Note 1~~ |
| Operating Temperature Range | $T_{op}$ | -65 to +200 | $^oC$ | Note ~~2~~ 1 |
| Storage Temperature Range | $T_{stg}$ | -65 to +200 | $^oC$ | Note ~~2~~ 1 |
| Soldering Temperature | $T_{sol}$ | +260 | $^oC$ | Note ~~3~~ 2 |

see attached

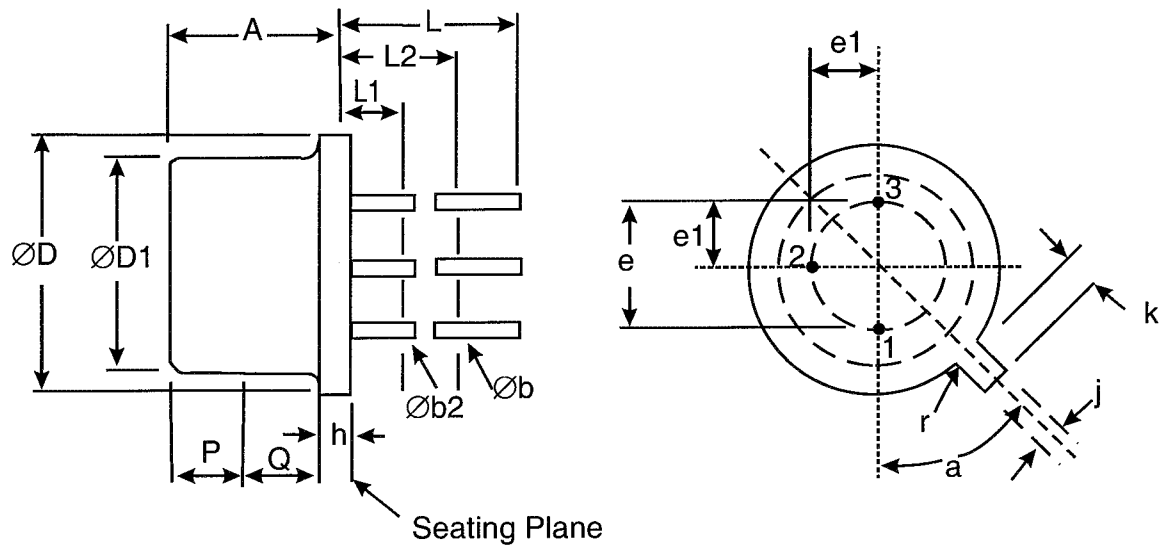
**NOTES:**

~~1. For $T_{amb}$ or $T_{case} > +25^oC$, derate linearly to 0W at $+200^oC$.~~

1. ~~2.~~ For Variants with tin-lead plating or hot solder dip lead finish all testing performed at $T_{amb} > +125^oC$ shall be carried out in a 100% inert atmosphere.
2. ~~3.~~ Duration 10 seconds maximum at a distance of not less than 1.5mm from the device body and the same lead shall not be resoldered until 3 minutes have elapsed.

1.6 PHYSICAL DIMENSIONS AND TERMINAL IDENTIFICATION

1.6.1 Metal Can Package (TO-5) - 3 lead



| | | | | |
|---|---|---|---|---|
| Thermal Resistance, Junction-to-Ambient | $R_{th(j-a)}$ | 175 | °C/W | |
| Thermal Resistance, Junction-to-Case | $R_{th(j-c)}$ | 35 | °C/W | |