



## DOCUMENT CHANGE REQUEST

DCR number 512 Changes required for: General

Date: 2009/05/06

Date sent: 2009/05/06

Originator: S Jeffery - ESCC

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

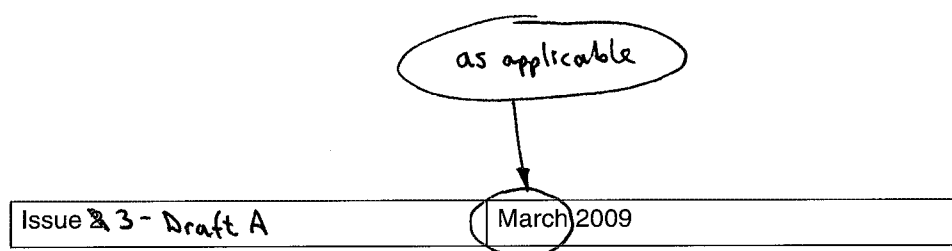


Pages 1 to 15

## 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
002	Specification up issued to incorporate editorial and technical changes per DCR.

tbd

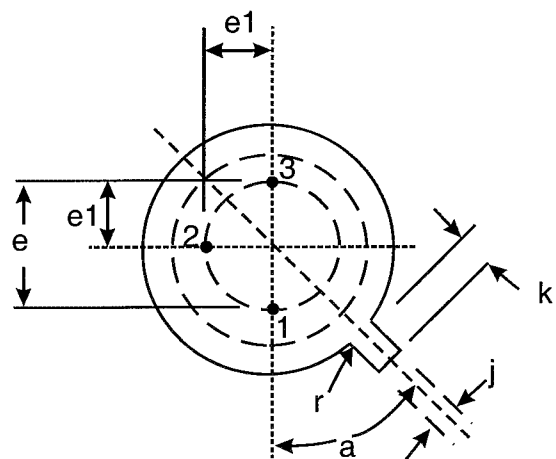
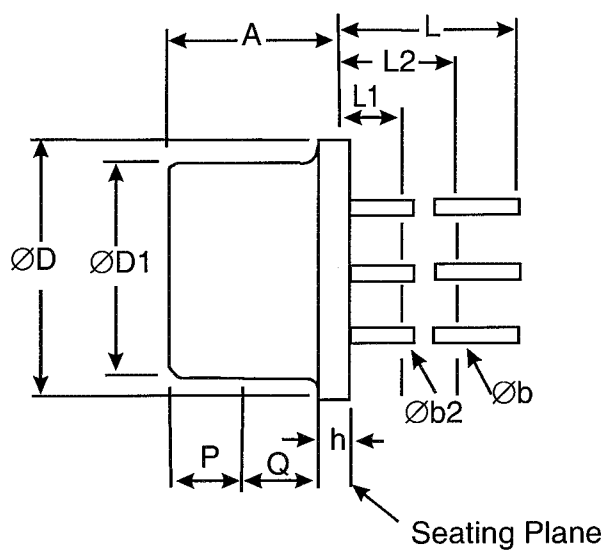
Characteristics	Symbols	Maximum Ratings	Unit	Remarks
Collector-Base Voltage	$V_{CBO}$	150	V	Over entire operating temperature range
Collector-Emitter Voltage	$V_{CEO}$	150	V	
Emitter-Base Voltage	$V_{EBO}$	6	V	
Collector Current	$I_C$	300	mA	
Power Dissipation	$P_{tot1}$	1	W	At $T_{amb} \leq +25^{\circ}C$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

#### NOTES:

1. ~~For  $T_{amb}$  or  $T_{case} > +25^{\circ}C$ , derate linearly to 0W at +200 $^{\circ}C$ .~~
1. ~~For Variants with tin-lead plating or hot solder dip lead finish all testing performed at  $T_{amb} > +125^{\circ}C$  shall be carried out in a 100% inert atmosphere.~~
2. ~~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	