DOCUMENT CHANGE REQUEST

DCR number 511	Changes required for: General	Originator: S Jeffery - ESCC
Date: 2009/05/06	Date sent: 2009/05/06	Organisation: ESA/ESTEC
Status: IMPLEMENTED		

Title:	Transistors Power NPN, based on type 2N2880		
Number:	5203/025	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.

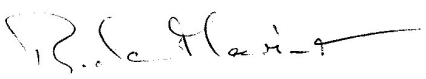
Attachments:

5203025_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

European Space Components Coordination

Pages 1 to 18

TRANSISTORS, HIGH POWER, NPN

BASED ON TYPE 2N2880

ESCC Detail Specification No. 5203/025

as applicable

Issue ~~2~~ 3 - Draft A	~~May 2008~~

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

Hbd

1.5 MAXIMUM RATINGS

The maximum ratings shall not be exceeded at any time during use or storage.

Maximum ratings shall only be exceeded during testing to the extent specified in this specification and when stipulated in Test Methods and Procedures of the ESCC Generic Specification.

Characteristics	Symbols	Maximum Ratings	Unit	Remarks
Collector-Base Voltage	V_{CB}	110	V	Over T_{op}
Collector-Emitter Voltage	V_{CE}	80	V	Over T_{op}
Emitter-Base Voltage	V_{EB}	8	V	Over T_{op}
Collector Current	I_C	5	A	Continuous Note 2
Base Current	I_B	500	mA	Continuous
Power Dissipation	P_{tot}	20	W	At $T_{case} \leq +100^{o}C$ Note 1
Operating Temperature Range	T_{op}	-65 to +200	^{o}C	Note 1
Storage Temperature Range	T_{stg}	-65 to +200	^{o}C	Note 1
Soldering Temperature	T_{sol}	+260	^{o}C	Note 3
Thermal Resistance, Junction-to-Case	$R_{th(j-c)}$	5	$^{o}C/W$	

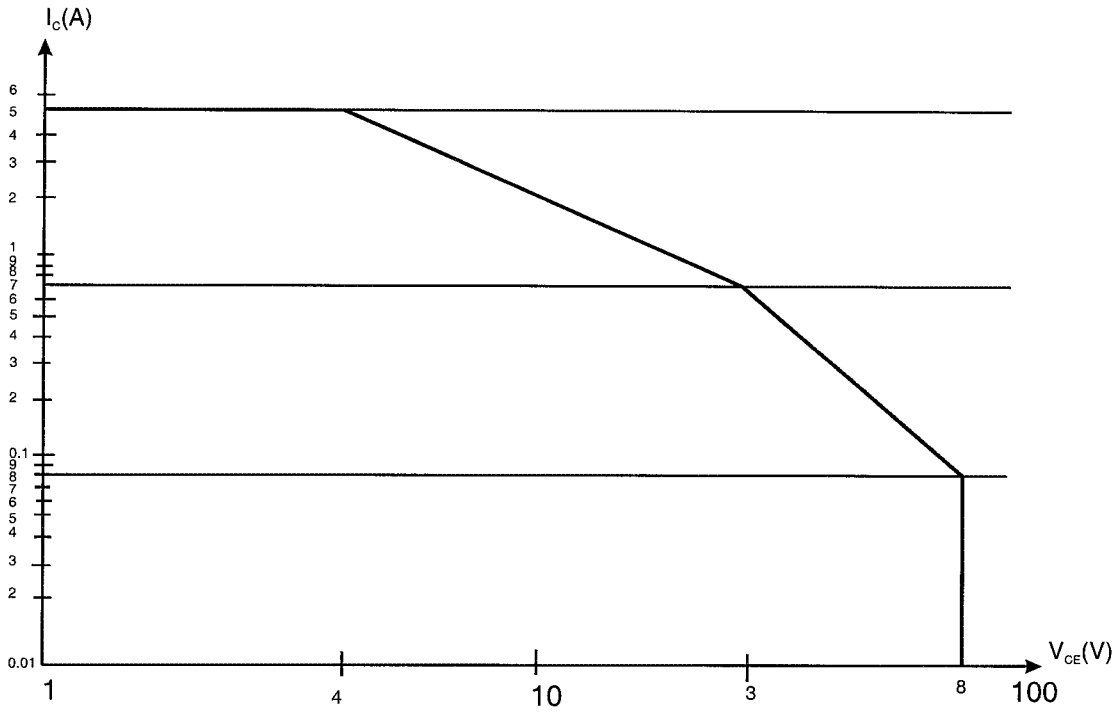
NOTES:

1. ~~For $T_{case} > +100^{o}C$, derate linearly to 0W at $+200^{o}C$.~~
2. For Variants with tin-lead plating or hot solder dip lead finish all testing performed at $T_{amb} > +125^{o}C$

shall be carried out in a 100% inert atmosphere.

2. Safe operating area (continuous DC) applies as follows:

MAXIMUM SAFE OPERATING AREA GRAPH



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 HANDLING PRECAUTIONS

The TO-257 packages specified herein contain Beryllium Oxide (BeO) and therefore they must not be ground, machined, sandblasted or subjected to any mechanical operation which will produce dust. Their cases must not be subjected to any chemical processes (e.g. etching) which will produce fumes.

1.7 PHYSICAL DIMENSIONS AND TERMINAL IDENTIFICATION

Consolidated notes follow the case drawings and dimensions.