

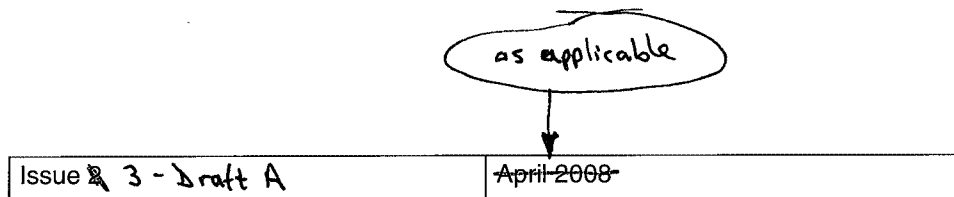


Pages 1 to 17

## TRANSISTORS, POWER, MOSFET, P-CHANNEL

BASED ON TYPE 2N6849

ESCC Detail Specification No. 5206/003



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



as applicable

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DCR No.	CHANGE DESCRIPTION
<del>376</del>	Specification up issued to incorporate editorial and technical changes per DCR.

tbd



Characteristics	Symbols	Maximum Ratings	Unit	Remarks
Drain-Source Voltage	$V_{DS}$	-100	V	Over $T_{op}$ Note <del>4</del> 3
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V	Over $T_{op}$
Drain-Gate Voltage	$V_{DG}$	-100	V	Over $T_{op}$
Drain Current	$I_D$	-6.5	A	Continuous At $T_{case} = +25^\circ C$ Notes 2, 3, <del>4</del>
Source Current	$I_S$	-6.5	A	Continuous At $T_{case} = +25^\circ C$ Note <del>2</del> 1
Drain Current Pulsed	$I_{DM}$	-25	A	Peak Note <del>2</del> 1
Power Dissipation	$P_{tot}$	25	W	At $T_{case} \leq +25^\circ C$ <del>Notes 1</del>
Operating Temperature Range	$T_{op}$	-55 to +150	$^\circ C$	Note <del>5</del> 4
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ C$	Note <del>5</del> 4
Soldering Temperature	$T_{sol}$	+300	$^\circ C$	Note <del>6</del> 5
Thermal Resistance, Junction-to-Case	$R_{th(j-c)}$	5	$^\circ C/W$	

**NOTES:**

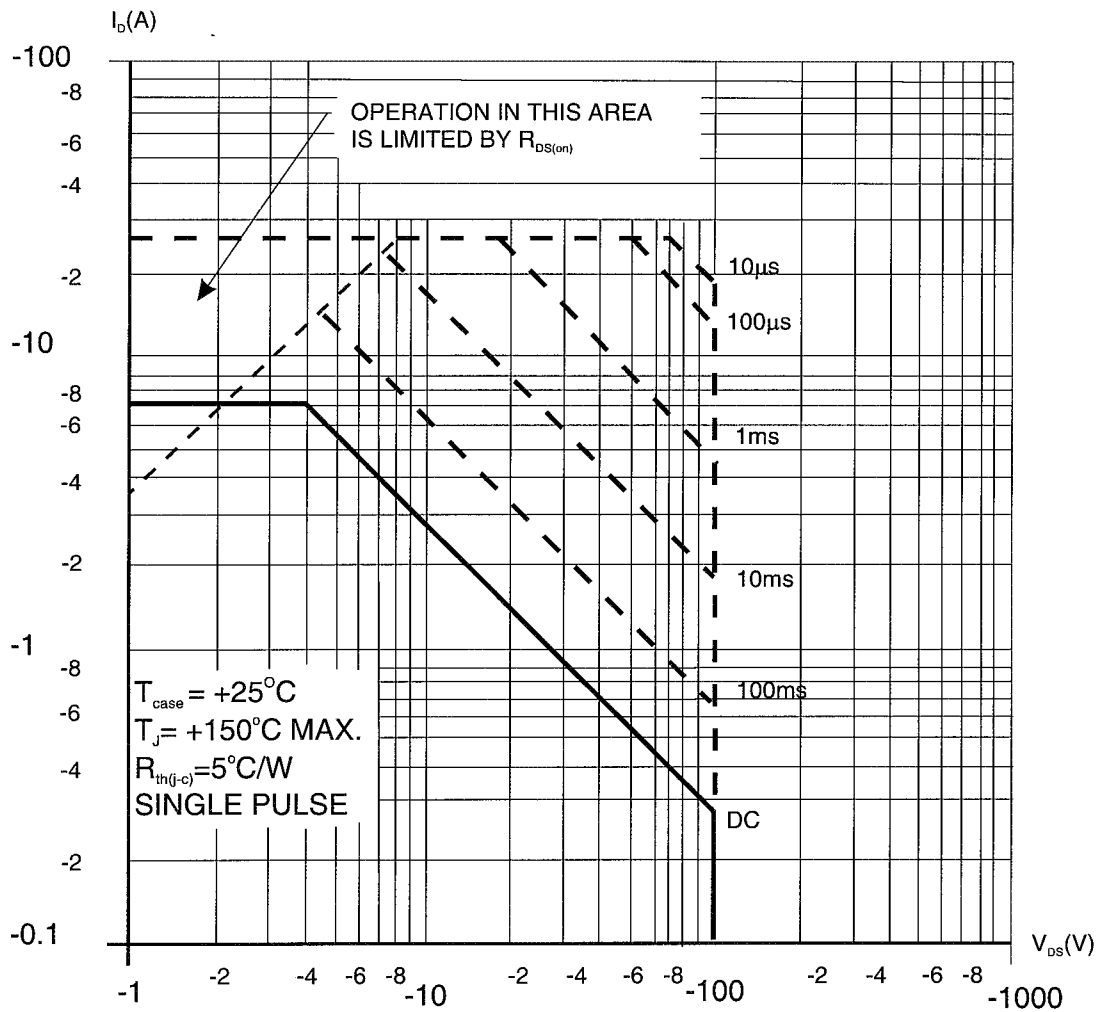
- ~~For  $T_{case} > +25^\circ C$ , derate linearly to 0W at +150 $^\circ C$~~
- These ratings apply at the case. Leads are not capable of carrying maximum drain or source

2. For  $T_{case} > +25^{\circ}C$ ,  $I_D$  is derated using the following formula:

$$-I_D(A) = \sqrt{\frac{P_{rated}(W)}{0.6}}, \text{ where } P_{rated}(W) = 25 - (0.2 \times (T_{case} - 25))$$

3. Safe Operating Area applies as follows:

Maximum Safe Operating Area Graph



4. 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.
5. 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.