European Space Components Coordination

Pages 1 to 17

TRANSISTORS, POWER, MOSFET, P-CHANNEL

BASED ON TYPE 2N6849

ESCC Detail Specification No. 5206/003

as applicable

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

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

as applicable

LEGAL DISCLAIMER AND COPYRIGHT

DOCUMENTATION CHANGE NOTICE

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

DCR No.	CHANGE DESCRIPTION
~~376~~ tbd	Specification up issued to incorporate editorial and technical changes per DCR.

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

NOTES:

1. ~~For T_{case} > +25°C, derate linearly to 0W at +150°C.~~
1. 2 These ratings apply at the case. Leads are not capable of carrying maximum drain or source

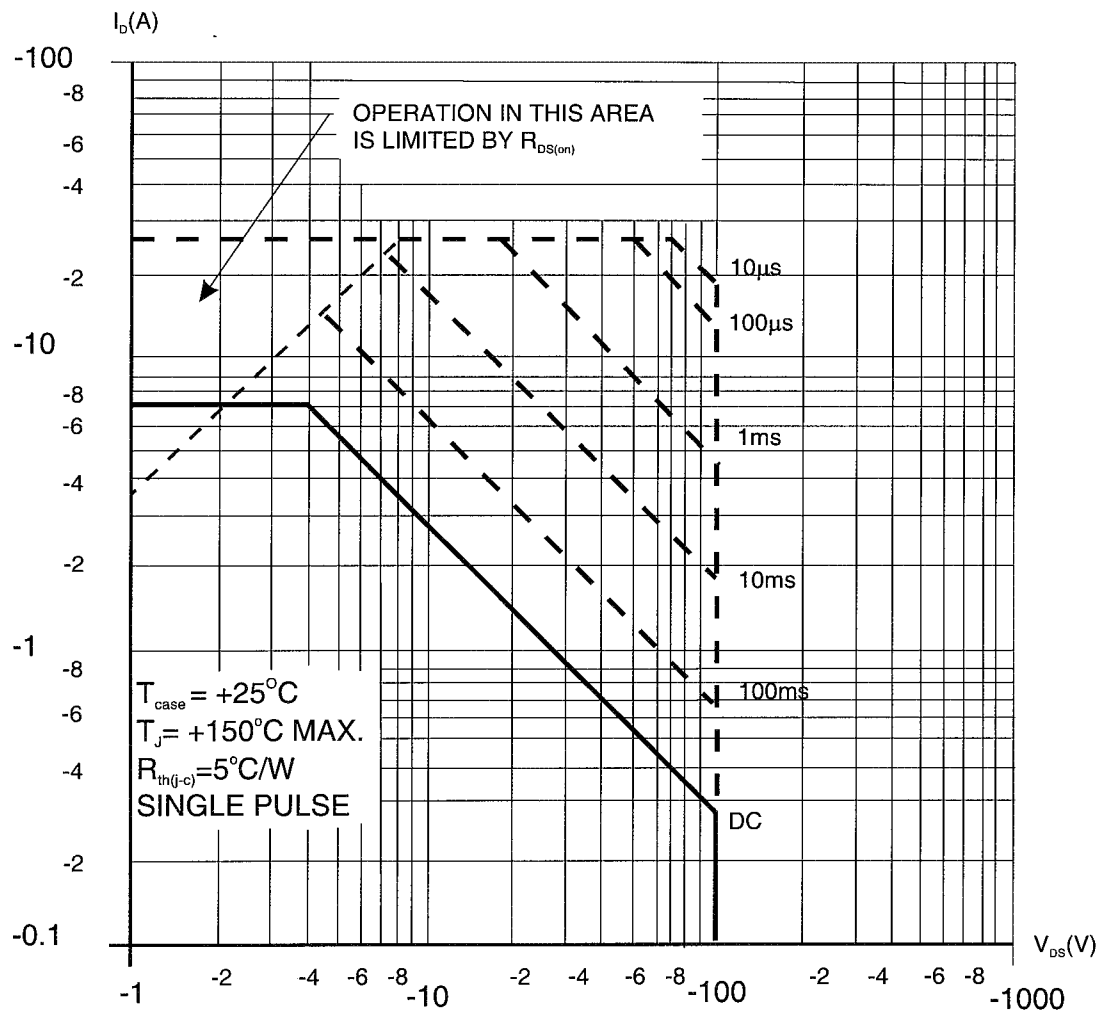
currents beyond 2mm from the case without heatsink.

2. For T_{case} > +25°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°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.