



DOCUMENT CHANGE REQUEST

DCR number	1519	Changes required for:	General	Originator:	Steve Thacker
Date:	2022/10/20	Date sent:	2022/07/29	Organisation:	ESCC Executive Secretariat
Status:	IMPLEMENTED				

Title: TRANSISTORS, POWER, MOSFET, P-CHANNEL, RAD-HARD BASED ON TYPE STRH12P10

Number: 5205/029 Issue: 7

Other documents affected:

Page:

12

Paragraph:

Para. 2.6.1 Room Temperature Electrical Measurements

Original wording:

For the following characteristics in Para. 2.6.1:

Turn-on Delay Time [$t_{d(on)}$] maximum limit was: 13ns

Turn-off Delay Time [$t_{d(off)}$] maximum limit was: 42ns

Reverse Recovery Time (t_{rr}) test conditions and maximum limit were:

VDS = -60V, ISD = -12A, di/dt = 40A/s, Tj = +25 ±3°C

Maximum limit: 258ns

Proposed wording:

Amend the following characteristics as follows (see also attached spec mark-up: Draft 8A with changes highlighted yellow):

Turn-on Delay Time [$t_{d(on)}$] maximum limit to be: 15.6ns

Turn-off Delay Time [$t_{d(off)}$] maximum limit to be: 50.4ns

Reverse Recovery time (t_{rr}) test conditions and maximum limit to be:

VDD = -50V, ISD = -6A, di/dt = 50A/μs, Tcase= +22 ±3°C

Maximum limit: 310ns

Justification:

This DCR is raised on behalf of Manufacturer STM. STM provided the following explanation/justification:

.....

A recent dynamic characterization has been performed on a significant quantity of devices.

This has detected poor marginality and unstable measurements vs. the conditions and limits specified in ESCC5205/029 issue 7.

Accordingly, new limits and conditions have been defined to reflect the product's actual characteristics.

See also attached: STM dynamic test results paper on this subject.



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Note: No diffusion process has been changed since the initial ESCC qualification.

Attachments:

esc5205029iss_draft_8a_in_review.docx, dcr_attachment_for_5209029.pdf

Modifications:

N/A

Approval signature:

Date signed:

2022-10-20