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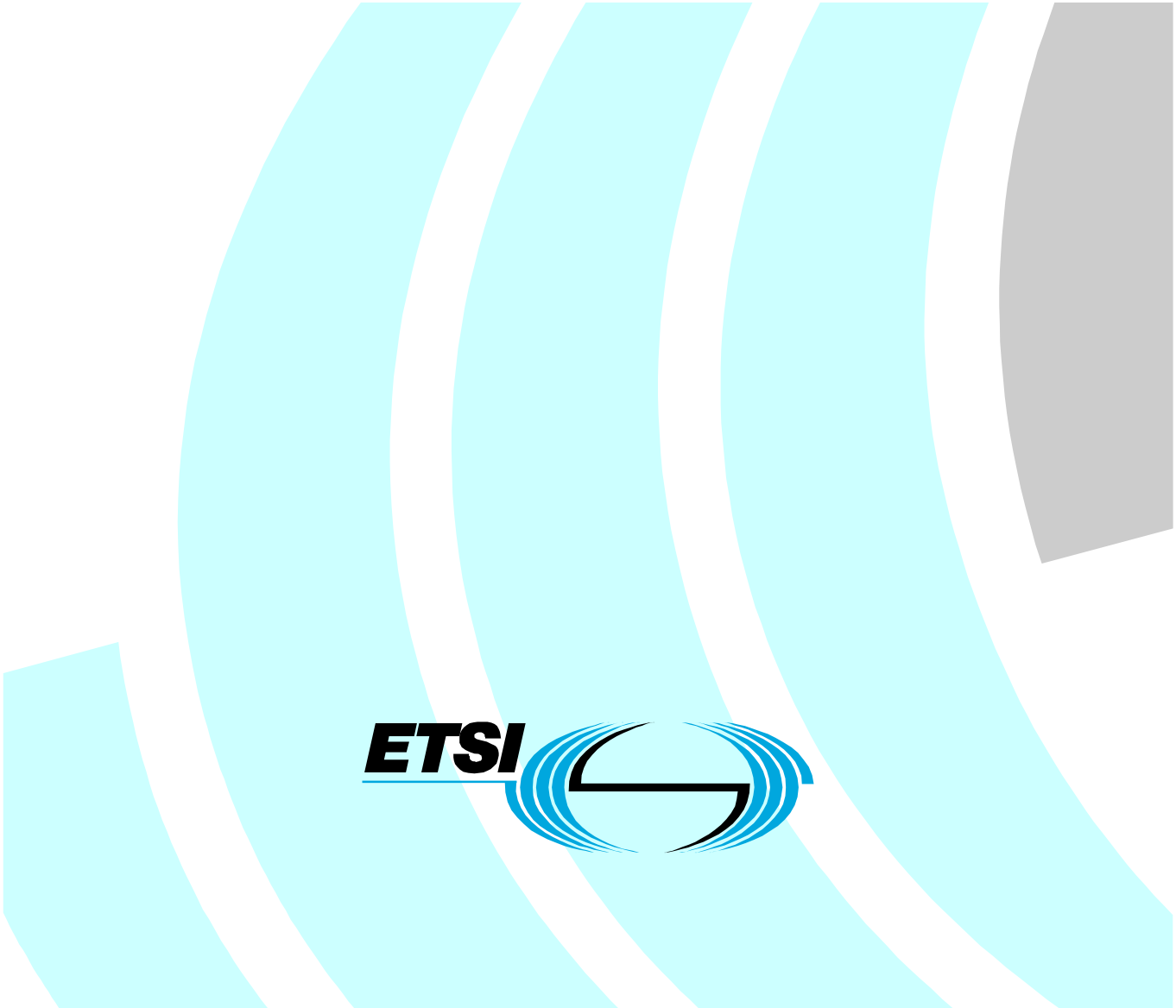
Technical Report

Access and Terminals (AT);
Analogue Access to Public Network;
Advisory Notes to Standards harmonizing terminal interface;
Part 4: Information arising from CEC decisions;
Sub-part 1: General loop steady state requirements



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Contents

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Access and Terminals (AT).

The present document is part 4 of a multi-part deliverable covering the standards harmonizing terminal interface, as identified below:

Part 1: "List of all Advisory Notes";

Part 2: "Generally applicable Advisory Notes";

Part 3: "Country Specific Advisory Notes;"

Part 4: "Information arising from CEC decisions":

Sub-part 1: "General loop steady state requirements".

Introduction

The present document is applicable to all Terminal Equipment within the scope of TBR 021 [1] and EN 301 437 [3].

1 Scope

The present document gives guidance on the application of TBR 021 and is, therefore, applicable to Terminal Equipment falling within the scope of TBR 021.

The present document deals with the changes in the loop steady states requirement arising from the Commission Decision of 26 May 2000 L135/25 [2].

2 References

For the purposes of this Technical Report (TR) the following references apply:

[1] ETSI TBR 021(1998): "Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting the voice telephony service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling".

[2] Commission Decision of 26 May 2000 L135/25 concerning the request by France to maintain pursuant to Article 18(3) of Directive 1999/5/EC of the European Parliament and of the Council (the "R&TTE Directive") a requirement for telecommunications terminal equipment intended for connection to the analogue public switched telephone network of France Telecom.

[3] ETSI EN 301 437: "Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE supporting the voice telephony service in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling".

[4] ETSI EG 201 121:"A guide to the application of TBR 21".

3 Definitions

For the purposes of the present document, the terms and definitions given in TBR 021 [1] apply.

4 General loop steady state requirements

4.1 Background information

The Commission Decision of 26 May 2000 L135/25 [2] allowed the continuation of the requirement for terminals to limit the DC current to 60 mA for a period of 30 months starting April 8 2000. As this period expired on October 8 2002 a number of changes are required in TBR 021 and EN 301 437 [3].

4.2 DC characteristics

Clause 4.7.1 of TBR 021 requires terminals to limit the DC current to 60 mA for a given range of feeding conditions as shown in table 1 and figure 1 as reproduced below. The original table 5 and figure 5 of TBR 021 are now no longer applicable and should be replaced by the new table 2 and figure 2.

Table 1: Original table 5 of TBR 021 TE voltage/current characteristics

Point	Voltage (V)	Current (mA)
A	9,0	0
B	9,0	20,0
C	14,5	42,0
D	40,0	50,0
E	40,0	60,0
F	0	60,0
G	0	0
NOTE: Limits for intermediate currents can be found by drawing a straight line between the break points on a linear voltage/current scale.		

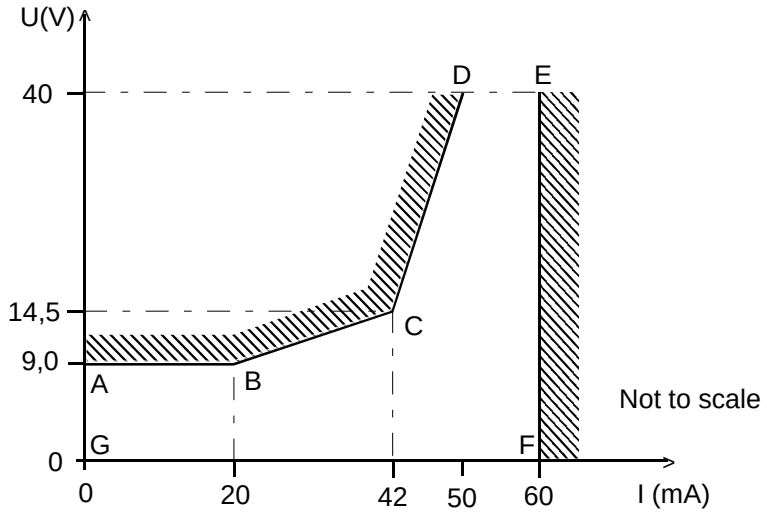

Figure 1: Original figure 5 of TBR 021 TE voltage/current characteristics

Table 2: New table 5 of TBR 021 TE voltage/current characteristics

Point	Voltage (V)	Current (mA)
A	9,0	0
B	9,0	20,0
C	14,5	42,0
D	40,0	50,0
NOTE: Limits for intermediate currents can be found by drawing a straight line between the break points on a linear voltage/current scale.		

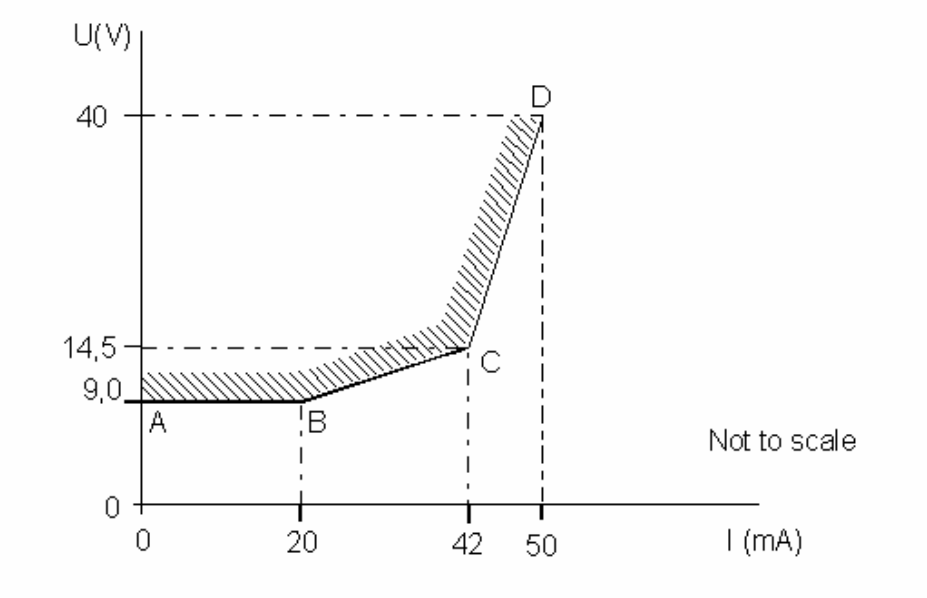

Figure 2: New figure 5 of TBR 021 TE voltage/current characteristics

4.3 Other requirements

4.3.1 Loop current characteristics

In clause 4.6.2 of TBR 021 table 4 the 230 Ω feeding resistance should be changed to a 400 Ω and If1 and If2 should change from 49,6 to 47,2 as shown below.

Table 3: Original table 4 of TBR 021 TE current characteristics with feeding resistors which are used during the loop steady state

Condition		Requirements				
Feeding voltage	Feeding resistance	Time (ms)			Current (mA)	
Vf	Rf	t1-t0	t2-t01	t3-t01	If1	If2
50 VDC	3,2 kΩ	30	500	1 200	13,1	12,8
50 VDC	230 Ω	20	500	1 200	49,6	49,6

Table 4: New table 4 of TBR 021 TE current characteristics with feeding resistors which are used during the loop steady state

Condition		Requirements				
Feeding voltage	Feeding resistance	Time (ms)			Current (mA)	
Vf	Rf	t1-t0	t2-t01	t3-t01	If1	If2
50 VDC	3,2 kΩ	30	500	1 200	13,1	12,8
50 VDC	400 Ω	20	500	1 200	47,2	47,2

4.3.2 General loop steady state requirements

In clause 4.7 of TBR 021 the 230 Ω feeding resistor should be changed to a 400 Ω feeding resistor.

4.4 Test methods

The test method for TBR 021 and EN 301 437 [3]specify a 230 Ω feeding resistor for the highest current feed condition, this could result in damage of terminals that are not current limiting.

Therefore it is necessary to change the 230 Ω feeding resistor in the clauses shown in table 5 to a 400 Ω feeding resistor.

Table 5: Clauses of TBR 021 eeding 400 Ω resister

A.4.4.3	A.4.4.4	A.4.6.2	A.4.7.1
A.4.7.2	A.4.7.3.1	A.4.7.3.2	A.4.7.3.3
A.4.7.3.4.1	A.4.7.3.4.2	A.4.7.4.1	A.4.7.4.2
A.4.7.5	A.4.8.2.2	A.4.8.2.3	

4.5 Advisory notes

In many of the requirements and test methods in the advisory notes listed in EG 201 121 [4] DC characteristics are specified which include the 60 mA current limitation and test conditions using a 230 Ω feeding resistance. It is not possible to change these advisory notes at present but it is suggested that they be applied using the same feeding condition as described in the present document and that 60 mA current limitation requirement be removed.

NOTE: In each case the relevant authority should be consulted for final confirmation of such changes.

History

Document history		
V1.1.1	June 2003	Publication