

ETSI TS 102 874-5 V1.2.1 (2012-03)



Access, Terminals, Transmission and Multiplexing (ATTM); External Common Power Supply for Customer Premises Network and Access Equipment; Part 5: CPS Type 2.c implementation details

[ETSI TS 102 874-5 V1.2.1 \(2012-03\)](https://standards.iteh.ai/catalog/standards/etsi/53ef320d-4c0e-4cec-9ef1-66d0091ab579/etsi-ts-102-874-5-v1-2-1-2012-03)

<https://standards.iteh.ai/catalog/standards/etsi/53ef320d-4c0e-4cec-9ef1-66d0091ab579/etsi-ts-102-874-5-v1-2-1-2012-03>

ReferenceRTS/ATTM-02015

Keywordsconnector, customer premises networks, EMC,
LAN, power supply, terminal**ETSI**650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2012.
All rights reserved.

DECTTM, PLUGTESTSTM, UMTSTM and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPPTM and LTETM are Trade Marks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.
GSM[®] and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	7
Foreword.....	7
Introduction	7
1 Scope	9
2 References	9
2.1 Normative references	9
2.2 Informative references.....	11
3 Definitions and abbreviations.....	11
3.1 Definitions.....	11
3.2 Abbreviations	12
4 Electrical Specifications.....	12
4.1 Input Requirements	12
4.2 Output Requirement	13
4.2.1 Output Voltage, Current And Ripple.....	13
4.2.2 Short Circuit Protection And Over Current Protection	13
4.2.3 Output Over Voltage Protection	13
4.3 Performance Requirement.....	13
4.3.1 Efficiency.....	13
4.3.2 Turn On Delay Time.....	14
4.3.3 Hold-up Time.....	14
4.3.4 Brown-out and recovery	14
4.3.5 Dynamic Load	14
4.3.6 Max Open Circuit Voltage.....	14
4.3.7 Overshoot at turn on/Turn off.....	14
4.3.8 Output transient response/Transient load slew	15
4.3.9 Rise time	15
5 Operational, Storage and Transportation Requirements.....	15
5.1 Temperature And Humidity	15
6 EMC, safety and Environmental requirements	15
6.1 Product EMC.....	15
6.2 Product Safety	16
6.3 Environmental and Eco-Design Requirements.....	16
7 Reliability	17
7.1 Burn-in	17
7.2 MTBF Calculation.....	17
8 Mechanical Specification	17
8.1 AC plug	17
8.2 DC cord.....	17
8.3 Label specification	17
Annex A (informative): Details on Test Procedures.....	18
A.0 Overview of Tests	18
A.0.1 Test Equipment	18
A.1 Performance test.....	19
A.1.1 Test purpose	19
A.1.2 Test Condition	19
A.1.3 Test Criteria.....	19
A.1.4 Results report examples.....	19
A.2 Switcher Loop Stability Test.....	21

A.2.1	Test Purpose	21
A.2.2	Test Condition	21
A.2.3	Test Criteria	22
A.2.4	Results report example	22
A.3	Life test	22
A.3.1	Test Purpose	22
A.3.2	Test Condition	22
A.3.3	Test Criteria	22
A.3.4	Results report example	23
A.4	Dynamic load switching test	23
A.4.1	Test Purpose	23
A.4.2	Test Condition	23
A.4.3	Test Criteria	23
A.4.4	Results report example	24
A.5	Output trans response-load slew and step	24
A.5.1	Test Purpose	24
A.5.2	Test Condition	24
A.5.3	Test Criteria	24
A.5.4	Results report example	24
A.6	AC input inrush current test	24
A.6.1	Test Purpose	24
A.6.2	Test Condition	24
A.6.3	Test Criteria	25
A.6.4	Results report example	25
A.7	Turn on delay test	25
A.7.1	Test Purpose	25
A.7.2	Test Condition	25
A.7.3	Test Criteria	25
A.7.4	Results report example	25
A.8	Output hold-up time test	26
A.8.1	Test Purpose	26
A.8.2	Test Condition	26
A.8.3	Test Criteria	26
A.8.4	Results report example	26
A.9	Rise time and overshoot test	26
A.9.1	Test Purpose	26
A.9.2	Test Condition	26
A.9.3	Test Criteria	27
A.9.4	Results report example	27
A.10	Output transient response deviation test	27
A.10.1	Test Purpose	27
A.10.2	Test Condition	27
A.10.3	Test Criteria	27
A.10.4	Results report example	28
A.11	Dynamic load test	28
A.11.1	Test Purpose	28
A.11.2	Test Condition	28
A.11.3	Test Criteria	28
A.11.4	Results report example	28
A.12	Brown out and recovery test	29
A.12.1	Test Purpose	29
A.12.2	Test Condition	29
A.12.3	Test Criteria	29
A.12.4	Results report example	29
A.13	Temperature storage test	29

A.13.1	Test Purpose	29
A.13.2	Test Condition	29
A.13.3	Test Criteria	30
A.13.4	Results report example	30
A.14	Humidity storage test	30
A.14.1	Test Purpose	30
A.14.2	Test Condition	30
A.14.3	Test Criteria	31
A.14.4	Results report example	31
A.15	Power cycle test	31
A.15.1	Test Purpose	31
A.15.2	Test Condition	31
A.15.3	Test Criteria	31
A.15.4	Results report example	31
A.16	Shipping, single drop, vibration test	31
A.16.1	Test Purpose	31
A.16.2	Test Condition	31
A.16.3	Test Criteria	32
A.16.4	Results report example	33
A.17	Short circuit protection test	33
A.17.1	Test Purpose	33
A.17.2	Test Condition	33
A.17.3	Test Criteria	33
A.17.4	Results report example	33
A.18	Over voltage protection test	34
A.18.1	Test Purpose	34
A.18.2	Test Condition	34
A.18.3	Test Criteria	34
A.18.4	Results report example	34
A.19	Over current protection test	34
A.19.1	Test Purpose	34
A.19.2	Test Condition	34
A.19.3	Test Criteria	35
A.19.4	Results report example	35
A.20	Construction, Appearance and Weight	35
A.20.1	Test purpose	35
A.20.2	Test Condition	35
A.20.3	Test Criteria	35
A.20.4	Results report example	36
A.21	Safety tests	36
A.22	DC cord set and plug test	36
A.22.1	Test Purpose	36
A.22.2	Test Condition 1	36
A.22.3	Test Condition 2	36
A.22.4	Test Criteria	37
A.22.5	Results report example	37
A.23	Energy efficiency test	37
A.23.1	Test Purpose	37
A.23.2	Test Condition	37
A.23.3	Test Criteria	37
A.23.4	Results report example	38
A.24	Capacitive load test	38
A.24.1	Test Purpose	38
A.24.2	Test Condition	38
A.24.3	Test Criteria	38

A.24.4	Results report example	38
A.25	Maximum open circuit voltage test	39
A.25.1	Test Purpose	39
A.25.2	Test Condition	39
A.25.3	Test Criteria	39
A.25.4	Results report example	39
A.26	EMC tests	39
Annex B (informative):	PLT filters to limit interference and improve coexistence	40
B.1	Testing immunity of PLT equipment to CPS disturbances	40
B.1.1	Test Purpose	41
B.1.2	Test Condition	41
B.1.3	Test Criteria	41
B.1.4	Results report example	41
History		42

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI TS 102 874-5 V1.2.1 \(2012-03\)](#)

<https://standards.iteh.ai/catalog/standards/etsi/53ef320d-4c0e-4cec-9ef1-66d0091ab579/etsi-ts-102-874-5-v1-2-1-2012-03>