



90°& 180°Backshell for NTS 20P SPECIFICATION

90°& 180°Backshell for NTS 20P 产品规范

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1. SCOPE 适用范围

1.1 Content 内容

This specification covers the performance, test and quality requirements for 90° & 180° Backshell for NTS 20P (hereinafter referred to as Backshell).

This specification applies to the product as below, but not limited to it.
2357302-1 (180° with notch), 2357302-2 (180° without notch), 2357921-1 (90°)

本规范适用于 20P NTS Backshell (以下简称 Backshell) 的性能, 测试和质量要求。
本规范适用但不仅限于以下零件号:
2357302-1 (180° 带缺口), 2357302-2 (180° 不带缺口), 2357921-1 (90°)

1.2 Qualification 鉴定

When tests are performed, the following specifications and standards shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

本测试规范依照下面的规范及标准执行。所有的检验应依照合适的检验计划及产品图纸执行。

2. APPLICABLE DOCUMENTS 适用文件

2.1 Usable document 使用文件

In the event of conflict between the requirements of this specification and the drawing, the drawing shall take precedent.

In the event of conflict between the requirement of this specification and the referenced documents, this specification shall take precedent.

在本规范的要求与图纸发生冲突时, 以产品图纸为准。在本规范的要求与参考文件发生冲突时, 以本规范为准。

2.2 TE specifications 泰科电子规范

109-1: General requirements for Test Specifications / 测试通用规范

2.3 Other specifications 其他规范

USCAR-2 REVISION 6

IEC 60068-2-1 SIXTH EDITION 03-2007

IEC 60068-2-2 FIFTH EDITION 07-2007

3. REQUIREMENT 要求

3.1 Design and Construction 设计和结构

Products must meet the design, construction and physical dimensions specified in the applicable product drawings.

产品必须满足产品图纸上的设计, 结构和尺寸要求。

3.2 Material 材料

Description of the material sees the related product drawings.

材料描述见相关产品图纸。

Component List	Raw material	Surface Treatment
Backshell	PA6	NA

3.3 Test parameters and tolerances 测试参数与公差

Table 1: Test parameters and tolerances

Requirement 要求	Tolerance 公差
Ambient temperature 环境温度	23°C ± 5°C
Relative humidity 相对湿度	30% to 70%
Atmospheric pressure 大气压力	96kPa ± 10kPa

3.4 Ratings 等级

A. Operating Temperature / 工作温度: -40~125°C

B. Storage Temperature / 储存温度: -40~125°C

C. Rated voltage / 额定工作电压: N/A

D. Application / 产品应用: Fixed wiring harness
固定线束

3.5 General Performance and Test description 通用性能和试验描述

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Para.3.6. All testes must be performed at the test condition of the TE test specification 109-1 unless otherwise specified.

产品应能满足段落 3.6 中的电气，机械和环境等性能要求。所有试验均需按照 TE 规范 109-1 中的测试条件进行，除非另有说明。

3.6 Tests requirement and method summary 测试要求及方法

Para.	Test Item	Requirements	Method
Mechanical Requirement			
3.6.1	Visual inspection	The connector assembly must not show, with the aid of 10X magnification, any evidences of deterioration, cracks, deformities, etc...Connector locking mechanisms must function without breakage.	Visually, Dimensionally and Functionally inspected per applicable inspection plan. USCAR-2 5.1.8
Mechanical Test			
3.6.2	Miscellaneous Component Engage force /Disengage force	1.Engage force $F \leq 50N$ 2.Disengage force $\geq 50N$	USCAR-2 5.4.5.1 Wire Dress features
3.6.3	Connector Drop Test	Meet Visual Inspection acceptance Criteria	USCAR-2 5.4.8 Connector Drop Test
3.6.4	Backshell and connector retention force	Horizontal direction Retention force $\geq 110N$ Vertical direction retention force $\geq 50N$	1.180° Backshell Horizontal direction retention force 2. 90° Backshell Vertical direction retention force Test speed:50mm/min
3.6.5	180° Backshell and 90° Backshell retention force	Retention force $\geq 110N$	test speed:50mm/min.
3.6.6	Backshell with Corrugated tube retention force	Retention force $\geq 100N$	1.Mating with NW17 2.Mating with UFW17 3.Mating with NW16 Test speed:50mm/min.
Environment Test			
3.6.7	High temperature, low temperature	No defect, crack, could not affect their fit and function	High temperature Acc. to IEC 60068-2-2, test Bc 125°C 120Hours low temperature Acc. to IEC 60068-2-1 test Ad -40°C 120Hours

3.7 Test sequence 试验顺序

Test or examination	Test Group					
	1	2	3	4	5	6
3.6.1 Visual Inspection	1,3	1,3	1,3	1,3	1,3	1,4
3.6.2 Miscellaneous Component Engage force /Disengage force	2					3
3.6.3 Connector Drop Test					2	
3.6.4 Backshell and connector retention force		2				
3.6.5 180° Backshell and 90 °Backshell retention force			2			
3.6.6 Backshell with Corrugated tube retention force				2		
3.6.7 High temperature, low temperature						2
Sample Size	3	3	3	3	18	3

4. QUALITY 质量

4.1 Qualification test 鉴定

Samples must be in accordance with drawings and be taken in a random way in the production in progress.

样件必须与产品图纸一致，并且是生产过程中随机选取的。

4.2 Requalification test 重新鉴定

If changes significantly affecting form, fit, or function are made to the product or to the manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by product engineering.

如果产品或者制造过程中有显著影响外观，装配和功能的设变，质保需要协调按照原先工程部定义的测试顺序，重新验证全部或者部分测试项目。

4.3 Acceptance 验收

Acceptance is based on verification that the product meets the requirements of section 3.6. Failures attributed to equipment, test setup, or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before resubmitted.

以符合第 3.6 节的要求验收。归咎于测试设备，样件安装或者操作员的失误的失效不应判定产品不合格。当产品失效发生时，需要有纠正措施以及重新提交样件进行验证。在重新验证前，需确认已有纠正措施。

4.4 Quality conformance inspection 质量合格检验

The applicable TE Connectivity quality inspection plan will specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification

TE Connectivity 的质量检验计划将指定适用的质量标准。尺寸和功能要求，应按照适用的产品图纸和本规范。