



# CE Technical Documents

**Product Name: Cable & Tough Rubber Sheathed Flexible Cables TEBAOFLEX CABLE**

**Applied Directive : Electromagnetic Compatibility Directive 2014/30/EU**

**Document No.: XMT0202600330W/EMC**

**Date: 2025.03.30**

**Revision: V0**

**Tested By:**

**John Chen - Engineer**

**Reviewed By:**

**Amy Zhang - Lab Manager**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                            |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--|
| <b>Applicant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Jiangsu Tebaoflex Special Cable Co.,Ltd                                                                    |  |
| <b>Address</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Room No. 201,Building 3,No.77 Wusongbang Road,Fuqiao Town,Taicang City,Suzhou City,Jiangsu Province China. |  |
| <b>Test Item Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                            |  |
| Product Name :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Cable & Tough Rubber Sheathed Flexible Cables TEBAOFLEX CABLE                                              |  |
| Model/Type Reference :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | See Annex I                                                                                                |  |
| Standard :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EN 55032:2015/A1:2020/A11:2020,<br>EN 55035:2017/A11:2020                                                  |  |
| <b>Test Case Verdicts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                            |  |
| Test case does not apply to the test object :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N(.A .)                                                                                                    |  |
| Test item does meet the requirement :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | P(ass)                                                                                                     |  |
| Test item does not meet the requirement :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | F(ail)                                                                                                     |  |
| <b>General Remarks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                            |  |
| <p>◆ This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>◆ The test results presented in this report relate only to the item tested.</p> <p>◆ Clause numbers between brackets refer to clauses in EN 55032:2015/A1:2020/A11:2020,EN 55035:2017/A11:2020.</p> <p>◆ “(see remark #)”refers to a remark appended to the report.</p> <p>◆ “(see Annex #)”refers to an annex appended to the report.</p> <p>◆ Throughout this report a point is used as the decimal separator.</p> |                                                                                                            |  |

**EN 55032****3.1 Continuous Disturbance Voltage at Mains Terminal.****3.1.1 Test Equipment List and Details**

| Manufacturer                    | Description                      | Model       | Serial Number | Last Cal. Date | Cal. Due Date |
|---------------------------------|----------------------------------|-------------|---------------|----------------|---------------|
| No.2 Radio factory of Changzhou | Screened Room                    | P-22        | No            | 12/6/23        | 12/5/25       |
| AFJ                             | EMI Receiver                     | ER55 CR/2.8 | 55790015165   | 12/6/23        | 12/5/25       |
| AFJ                             | 16A LINE Impedance Stabilization | LS16C       | 16010020077   | 12/6/23        | 12/5/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

**3.1.2 Description of Measurement Conditions**

Temperature: 21°C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

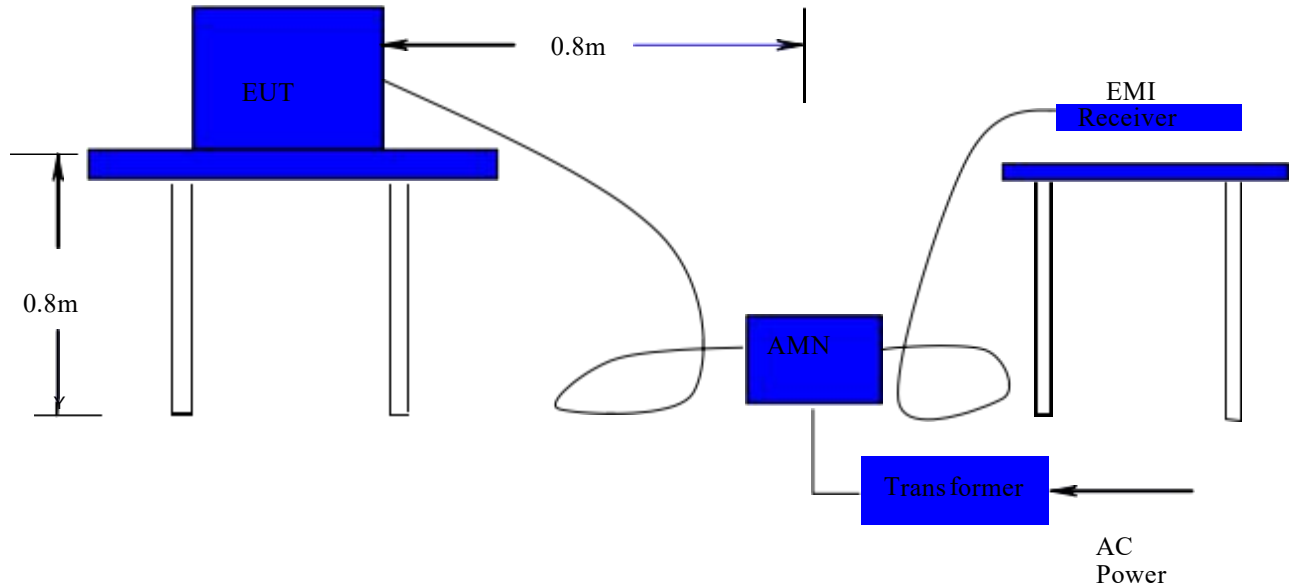
**3.1.3 Limits of Continuous Disturbance Voltage at Mains Terminal.**

| Equipment type                                                    | Frequency range<br>MHz | Limit values<br>dB $\mu$ V |                     |
|-------------------------------------------------------------------|------------------------|----------------------------|---------------------|
|                                                                   |                        | Quasi-peak                 | Average             |
| Household appliance                                               | 0.15 to 0.5            | 66-56 <sup>a</sup>         | 56- 46 <sup>a</sup> |
|                                                                   | 0.5 to 5               | 56                         | 46                  |
|                                                                   | 5 to 30                | 60                         | 50                  |
| <sup>a</sup> Decreasing linearly with logarithm of the frequency. |                        |                            |                     |

Note: If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.

### 3.1.4 Configuration

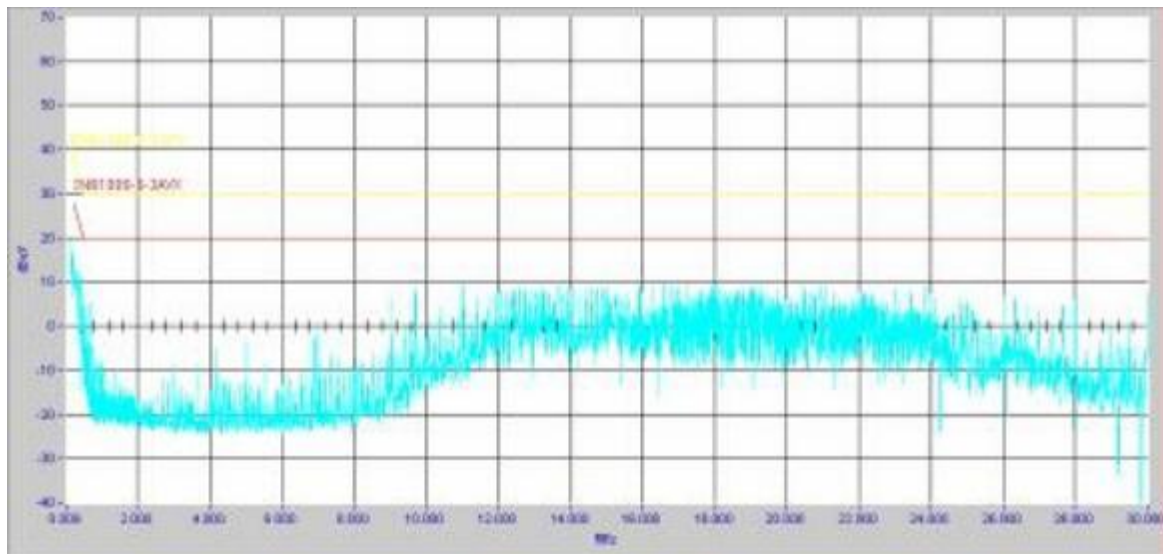
The configuration is in accordance with the requirement in EN 55032, the sketch map as follow:



### 3.1.5 Test Data and Records

| Disturbance Voltage at the Mains Terminal TEST DATA |            |             | EN 55032                                            |
|-----------------------------------------------------|------------|-------------|-----------------------------------------------------|
| Frequency                                           | Amplitude  | Detector    | Limit                                               |
| MHz                                                 | dB $\mu$ V | QP/Ave/Peak | dB $\mu$ V                                          |
| 0.15-0.5                                            | *          | QP          | 66-56                                               |
|                                                     |            |             | Decreasing linearly with logarithm of the frequency |
| 0.50-5                                              | *          | QP          | 56                                                  |
| 5-30                                                | *          | QP          | 60                                                  |

\* Means the continuous disturbance voltage level 10dB lower than limits.



### 3.1.6 Verdict

The EUT met the requirement.

### 3.2 Radiated disturbances

#### 3.2.1 Test Equipment List and Details

| Manufacturer      | Description                              | Model       | Serial Number | Last Cal. Date | Cal. Due Date |
|-------------------|------------------------------------------|-------------|---------------|----------------|---------------|
| SCHAFFNER         | Receive Antenna                          | CBL6112B    | /             | 12/6/23        | 12/5/25       |
| AFJ               | EMI Receiver                             | ER55 CR/2.8 | 55790015165   | 6/23/23        | 6/22/25       |
| Albatross Project | 3Meter Anechoic Chamber                  |             | 9290832       | 12/13/23       | 12/12/25      |
| AFJ               | 16A LINE Impedance Stabilization Network | LS16C       | 16010020077   | 6/23/23        | 6/22/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

#### 3.2.2 Description of Measurement Conditions

Temperature: 20 °C

Humidity: 60%

Pressure: 1033mbar

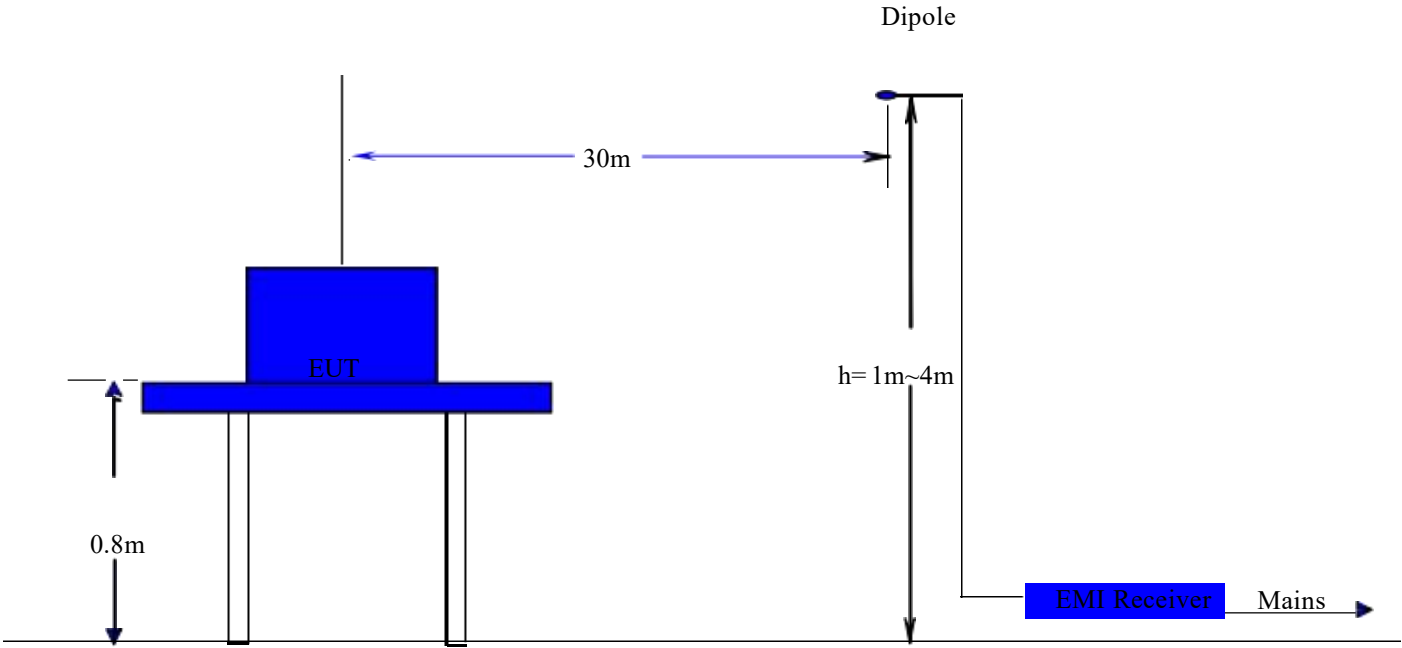
Electromagnetic environment: normal

#### 3.2.3 Limits of radiated disturbances of class B ITE at a measuring distance of 10m.

| Frequency range<br>MHz                                                                                                                             | Quasi-peak limits(10m)<br>dB(μV/m) |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 30 to 230                                                                                                                                          | 30                                 |
| 230 to 1000                                                                                                                                        | 37                                 |
| NOTE: The lower limit shall apply at the transition frequency.<br>NOTE: Additional provisions may be required for cases where interference occurs. |                                    |

#### 3.2.4 Configuration

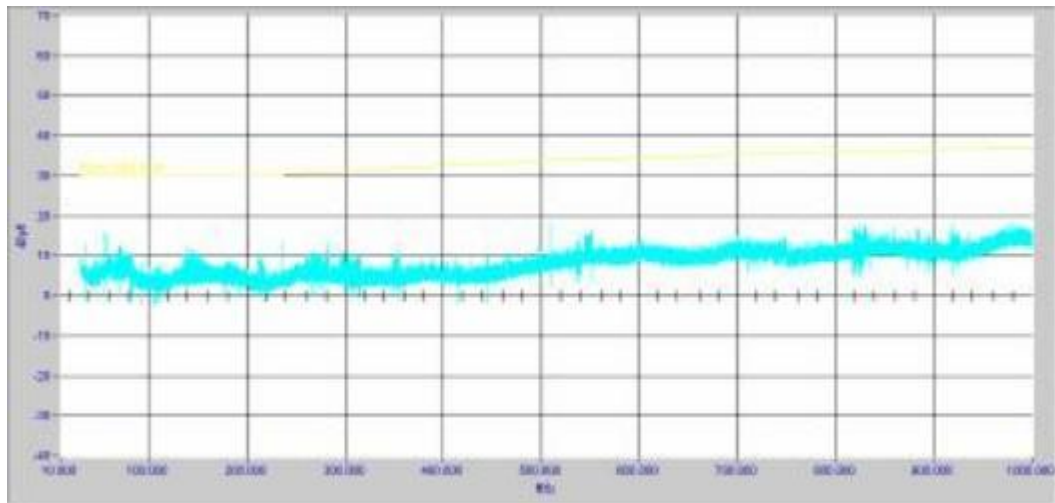
The configuration is in accordance with the requirement in EN 55032, the sketch map as follow:



3.2.5 Test Data and Records

| Radiated disturbances TEST DATA |           |             | EN 55032   |        |
|---------------------------------|-----------|-------------|------------|--------|
| Frequency                       | Amplitude | Detector    | Limit(10m) | Margin |
| MHz                             | dB(μV/m)  | Qp/Ave/Peak | dB(μV/m)   | dB     |
| 30 to 230                       | *         | QP          | 30         |        |
| 230 to 1000                     | *         | QP          | 37         |        |
|                                 |           |             |            |        |
|                                 |           |             |            |        |
|                                 |           |             |            |        |

NOTE: \* Means the radiated disturbance level 10dB lower than limits



### 3.2.6 Verdict

The EUT met the requirement.



### 3.3 Discontinuous Disturbance Voltage at Mains Terminal (Click)

#### 3.3.1 Test Equipment List and Details

| Manufacturer                    | Description                              | Model  | Serial Number | Last Cal. Date | Cal. Due Date |
|---------------------------------|------------------------------------------|--------|---------------|----------------|---------------|
| No.2 Radio factory of Changzhou | Screened Room                            | P-22   | No            | 12/6/23        | 12/5/25       |
| AFJ                             | CLICK Analyzer                           | CL-55C | 55040019044   | 3/7/23         | 3/7/25        |
| AFJ                             | 16A LINE Impedance Stabilization Network | LS16C  | 16010020077   | 6/23/23        | 6/22/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

#### 3.3.2 Description of Measurement Conditions

Temperature: 22 °C

Humidity: 56%

Pressure: 1033mbar

Electromagnetic environment: normal

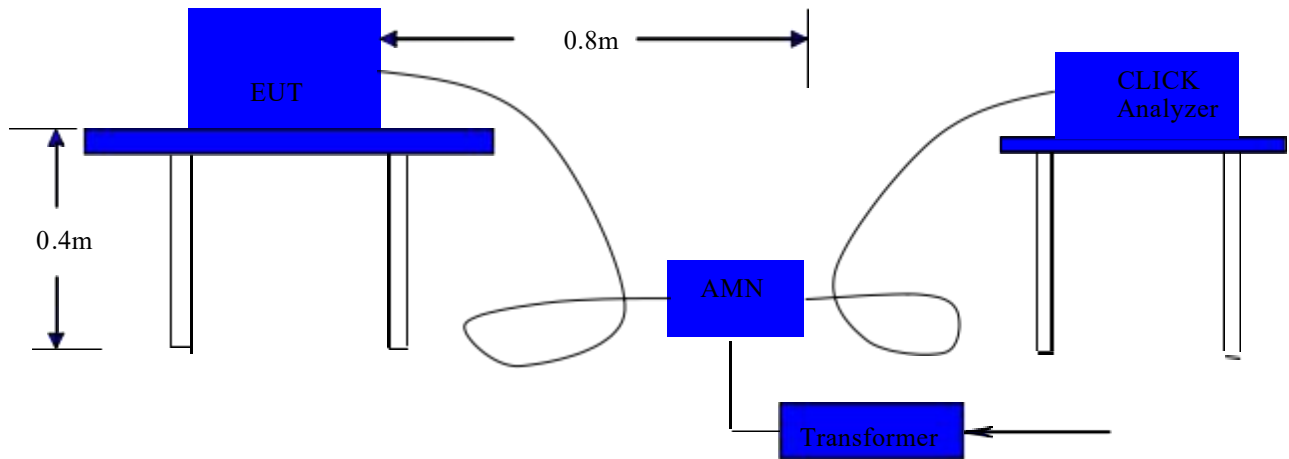
#### 3.3.3 Limits of Click

For discontinuous disturbance, the click limit is attained by increasing the relevant limit of Continuous Disturbance Voltage with:

$$44\text{dB} \quad \text{for} \quad N < 0.2 \quad \text{or} \\ 20\lg(30/N) \text{ dB} \quad \text{for} \quad 0.2 \leq N < 30$$

### 3.3.4 Configuration

The configuration in accordance with the requirement in EN 55032, the sketch map as follow:



### 3.3.5 Verdict

The EUT met the requirement.

## **EN 55035**

### **Description of Performance Criterion ( According with EN 55035 Section 4 )**

#### **Performance Criterion A**

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

#### **Performance Criterion B**

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

#### **Performance Criterion C**

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

## 4.1 SURGES

### 4.1.1 Test Equipment List and Details

| Manufacturer | Description | Model    | Serial Number | Last Cal. Date | Cal. Due Date |
|--------------|-------------|----------|---------------|----------------|---------------|
| Japan        | Surge Lite  | LSS-6030 | 9099E00350    | 10/14/23       | 10/13/25      |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

### 4.1.2 Description of Measurement Conditions

Temperature: 21°C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

### 4.1.3 Configuration

The configuration is in accordance with the requirement in EN61000-4-5.

### 4.1.4 Test Data and Records

| Level | Voltage | Poll  | Path       | Pass | Fail |
|-------|---------|-------|------------|------|------|
| 1     | 1kV     | $\pm$ | L-N        | B    |      |
| 2     | 2kV     | $\pm$ | L-PE, N-PE | B    |      |
| 3     |         |       |            |      |      |
| 4     |         |       |            |      |      |

### 4.1.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

## 4.2 ESD

### 4.2.1 Test Equipment List and Details

| Manufacturer   | Description                    | Model   | Serial Number | Last Cal. Date | Cal. Due Date |
|----------------|--------------------------------|---------|---------------|----------------|---------------|
| Shanghai Sanki | Electrostatic Discharge tester | ESD-320 | 0329501C      | 6/23/23        | 6/22/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

### 4.2.2 Description of Measurement Conditions

Temperature: 21°C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

### 4.2.3 Configuration

The configuration is in accordance with the requirement in EN61000-4-2.

### 4.2.4 Test Data and Records

Air Discharge

| Test Levels                |          |          |          |          |          |          |          |          |           |           |             |             |           |           |           |           |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|
| EN61000-4-2<br>Test Points | -2<br>kV | +2<br>kV | -4<br>kV | +4<br>kV | -6<br>kV | +6<br>kV | -8<br>kV | +8<br>kV | -10<br>kV | +10<br>kV | -12.5<br>kV | +12.5<br>kV | -15<br>kV | +15<br>kV | -20<br>kV | +20<br>kV |
| EUT Front<br>Side          | B        | B        | B        | B        | B        | B        | B        | B        |           |           |             |             |           |           |           |           |
| EUT Top<br>Side            | B        | B        | B        | B        | B        | B        | B        | B        |           |           |             |             |           |           |           |           |
| EUT Back<br>Side           | B        | B        | B        | B        | B        | B        | B        | B        |           |           |             |             |           |           |           |           |
| EUT Left<br>Side           | B        | B        | B        | B        | B        | B        | B        | B        |           |           |             |             |           |           |           |           |
| EUT Right<br>Side          | B        | B        | B        | B        | B        | B        | B        | B        |           |           |             |             |           |           |           |           |

Direct Contact

| Test Levels                |          |          |          |          |          |          |          |          |           |           |             |             |           |           |           |           |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|
| EN61000-4-2<br>Test Points | -2<br>kV | +2<br>kV | -4<br>kV | +4<br>kV | -6<br>kV | +6<br>kV | -8<br>kV | +8<br>kV | -10<br>kV | +10<br>kV | -12.5<br>kV | +12.5<br>kV | -15<br>kV | +15<br>kV | -20<br>kV | +20<br>kV |
| EUT Front<br>Side          | B        | B        | B        | B        |          |          |          |          |           |           |             |             |           |           |           |           |
| EUT Top<br>Side            | B        | B        | B        | B        |          |          |          |          |           |           |             |             |           |           |           |           |
| EUT Back<br>Side           | B        | B        | B        | B        |          |          |          |          |           |           |             |             |           |           |           |           |
| EUT Left<br>Side           | B        | B        | B        | B        |          |          |          |          |           |           |             |             |           |           |           |           |
| EUT Right<br>Side          | B        | B        | B        | B        |          |          |          |          |           |           |             |             |           |           |           |           |

#### 4.2.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

### 4.3 EFT/B

#### 4.3.1 Test Equipment List and Details

| Manufacturer   | Description      | Model | Serial Number | Last Cal. Date | Cal. Due Date |
|----------------|------------------|-------|---------------|----------------|---------------|
| Shanghai Sanki | E.F.TB Generator | 8014  | 069504E       | 6/23/23        | 6/22/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

#### 4.3.2 Description of Measurement Conditions

Temperature: 21°C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

#### 4.3.3 Configuration

The configuration is in accordance with the requirement in EN61000-4-4.

#### 4.3.4 Test Data and Records

| Test Levels (kV)        |       |       |       |      |      |      |      |      |      |
|-------------------------|-------|-------|-------|------|------|------|------|------|------|
| EN61000-4-4 Test Points |       | +0.25 | -0.25 | +0.5 | -0.5 | +1.0 | -1.0 | +2.0 | -2.0 |
| Power Port              | L1    | B     | B     | B    | B    |      |      |      |      |
|                         | L2    | B     | B     | B    | B    |      |      |      |      |
|                         | L1+L2 | B     | B     | B    | B    |      |      |      |      |
| I/O Port                |       | B     | B     | B    | B    |      |      |      |      |

#### 4.3.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

#### 4.4 INJECTED CURRENTS

##### 4.4.1 Test Equipment List and Details

| Manufacturer | Description                     | Model  | Serial Number | Last Cal. Date | Cal. Due Date |
|--------------|---------------------------------|--------|---------------|----------------|---------------|
| FLUKE        | Synthesized RF Signal Generator | 6061A  | 5080312       | 3/23/23        | 3/22/25       |
| QF           | Broadband Power Amplifier       | QF3860 | No            | 4/15/23        | 4/14/25       |
| QF           | Millivoltmeter                  | QF2281 | 92028         | 4/15/23        | 4/14/25       |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

##### 4.4.2 Description of Measurement Conditions

Temperature: 21 °C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

##### 4.4.3 Configuration

The configuration in accordance with the requirement in EN61000-4-6.

##### 4.4.4 Test Data and Records

| EN61000-4-6 Test Points | Frequency range MHz | Levels | Voltage Level (e.m.f.)V | Pass | Fail |
|-------------------------|---------------------|--------|-------------------------|------|------|
| Power Line              | 0.15-230MHz         | 1      | 1                       |      |      |
|                         |                     | 2      | 3                       | A    |      |
|                         |                     | 3      | 10                      |      |      |
|                         |                     | X      | Special                 |      |      |
| I/O Line                | 0.15-230MHz         | 1      | 1                       |      |      |
|                         |                     | 2      | 3                       | A    |      |
|                         |                     | 3      | 10                      |      |      |
|                         |                     | X      | Special                 |      |      |

##### 4.4.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria A.



#### 4.5 VOLTAGE DIPS AND INTERRUPTIONS

##### 4.5.1 Test Equipment List and Details

| Manufacturer | Description           | Model    | Serial Number | Last Cal. Date | Cal. Due Date |
|--------------|-----------------------|----------|---------------|----------------|---------------|
| Japan        | Voltage Dip Simulator | VDS-220B | 2199D00098    | 10/22/23       | 10/21/25      |

**Statement of Traceability:** XMTEST certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCIENTIFIC MEASUREMENT INSTITUTE.

##### 4.5.2 Description of Measurement Conditions

Temperature: 21 °C

Humidity: 58%

Pressure: 1033mbar

Electromagnetic environment: normal

##### 4.5.3 Configuration

The configuration in accordance with the requirement in EN61000-4-11.

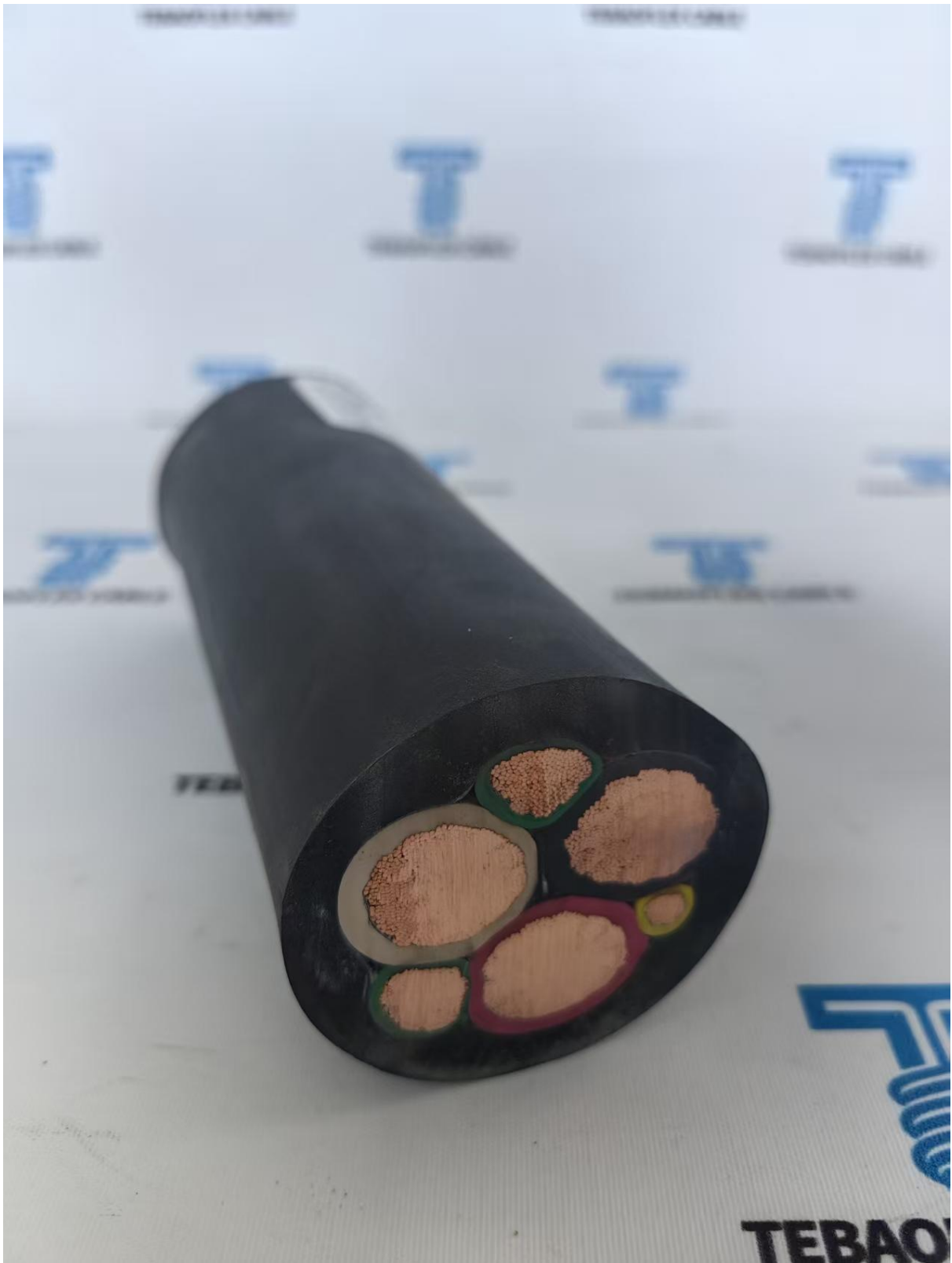
##### 4.5.4 Test Data and Records

| Environmental phenomena |    | Test level in % $U_T$ | Duration (in periods of the rated frequency) | Phase Angle | Pass     | Fail |
|-------------------------|----|-----------------------|----------------------------------------------|-------------|----------|------|
| Interruptions           |    | 0                     | 0.5T                                         | 0/180       | <b>B</b> |      |
| Voltage dips in % $U_T$ | 60 | 40                    | 10T                                          | 0/180       | <b>B</b> |      |
|                         | 30 | 70                    | 50T                                          | 0/180       | <b>B</b> |      |

##### 4.5.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

## **APPENDIX A— TEST PHOTOGRAPH**



## **EC Declaration of conformity**

**Council Directive 2014/30/EU on Electromagnetic Compatibility**

**Jiangsu Tebaoflex Special Cable Co.,Ltd  
Room No. 201,Building 3,No.77 Wusongbang Road,Fuqiao Town,Taicang  
City,Suzhou City,Jiangsu Province China.**

Certify that the product described is in conformity with the Directive 2014/30/EU  
as amended

**Product Name: Cable & Tough Rubber Sheathed Flexible Cables  
TEBAOFLEX CABLE**

**Item No:  
See Annex**

The product has been assessed by the application of the following standards:

**EN 55032:2015/A1:2020/A11:2020,  
EN 55035:2017/A11:2020**

\_\_\_\_\_  
Issue place and date

\_\_\_\_\_  
Company stamp and Signature of authorized personnel

## Annex

**Model :**

300/500V,450/750V,0.6/1kV,1.8/3kV,3.6/6kV,6/10kV,8.7/15kV,12/20kV,18/30kV  
 NSSHÖU,NSSHÖEU,NSHÖU-J,NSHÖU-O,NSSHOU 3E,NSSHOU 3E +ST,  
 2YSLGCGÖU,NSHÖEU  
 NNTSWÖU,NTSWÖU-J,NTSWÖU-  
 O,NTSCEWÖU,NTSCGEWÖU,NTSCGEWÖU+FO,NTSCGECECWÖU  
 NTSCGERLWÖU,NTSKCGERLOEU,NTSCGEWÖEU,NTMCGETMPU,NTMCGCWOU,NTMC  
 GEWÖU  
 NTMCWOU,NTMTWÖEU,NTMCWÖEU,N3GHSSHCH,N3GHSSYCY,NSSHCGEÖEU ,NSSH  
 CGEÖU  
 NTSKCGECWÖU,NTMTWÖU,NTMTWÖEU,NTSKCGEWOU,NTSKCGECWÖEU-  
 CH,NTSFLCGEWÖEU  
 NSHO,NSHOU,NSHTÖU,NSHTÖU-J,NSHTÖU-JK,NSHTÖU-JK-G,NSHTÖU-J-G,NSHTÖU-J  
 -E  
 NSHTÖU-J-F,NSSHOU,NSSHOU-J,NSSHOU-JK,NSHTÖU-JZK,NSHTÖU-JZ,NSGTOEU-  
 J,N3GHSSYCY  
 NSSHTÖU,NSSHOU-J-G,NSSHOU-J-F,NTSCGECWÖU(TSCGEWÖU),NTSCGECWÖU +  
 FO  
 (N) TSCGECWÖU-S ((N)TSCGECWÖU (SM)),NTSCGECWÖU-K  
 SIÖU,SIÖU-J,SIÖU-JK,NSIÖU,NSSIÖU,NSSIÖU-J,NSSIÖU-JK,NHMRGÖU-J,NHMRGÖU-O  
 (N)HMRGÖCU,NHGHCOU  
 NSGAFÖU  
 NYHSSYCY,NYHSSYCY - PVC 3.6/6 kV,N3GHSSYCY - Rubber 3.6/6 kV to 12/20 kV  
 (N)3GHSSHCH  
 NSHXAFÖ,NSHXAFÖE  
 H07RN-F,H05RN-F/H05RNH2-F,A07RN-F,H07RN8-F  
 VDE-0282 Part-16:H07RN8-F  
 VDE 0282 Part-12:H05BN4-F,H07BN4-F  
 VDE-0282 Part-10:H05BQ-F,H07BQ-F,H05BB-F /H07BB-F  
 DIN VDE 0282-14:H03RT-H  
 VDE-0282 Part-15:H05SS-F/H05SST-F  
 VDE 0282 P-11:H05GG-F  
 PUR-HF D12Y11YU11Y  
 PUR-HF D12YST11YU11Y  
 D12Y11Y-J ,D12Y11Y-O