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Believe in dreams

SPECIFICATION

SHEET FOR APPROVAL

（Revision：2017A　Update: 01）

CUSTOMER:

PRODUCT: DYNAMIC RECEIVER

BID　PART NUMBER: R0812R21AS-01

CUSTOMER PART NUMBER:

TITLE: W8.0×L12×H2.1　32 ohms/RoHS

	PREPARED	CHECKED	APPROVED	R&D CHOP
SIGNATURE (CHOP)				
DATE				

CUSTOMER COMMENT:

SIGNATURE: _____

DATE: _____

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NO.	Revision	Update	Comment	Page No.	Date
1	2017A	00	Closed release	All involved sheets	2017-12-20
2	2018A	01	Update the outdrawing	PAGE 7	2018-05-27

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1. SCOPE

This document contains required, electrical, acoustic, mechanical, package and reliability test requirements.

2.Environmental Requirement

This receiverincluding all components, soldering joints and glue must be halogen free, in RoHS requirements and other banned or restricted substances according to customer's requirements.

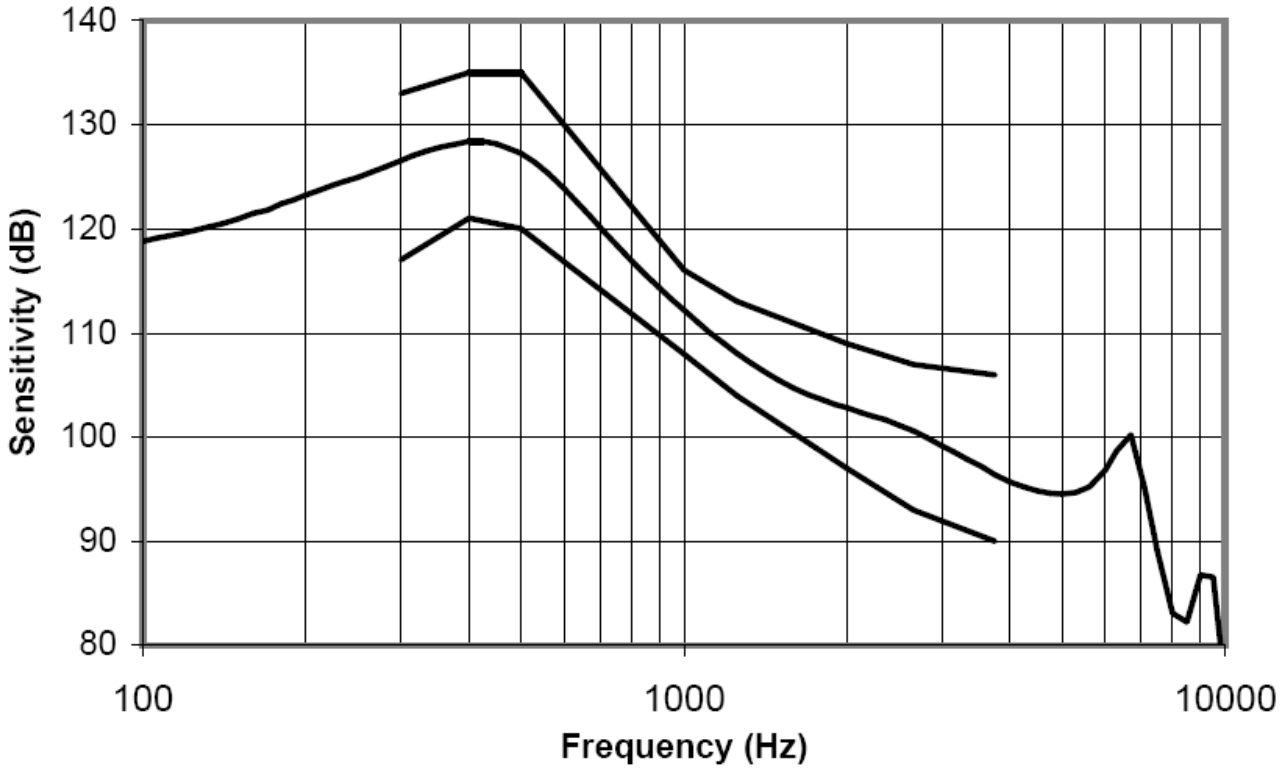
3.Electrical Requirements

3.1 DC Resistance	29±10% ohms
3.2 Rated Impedance(in free air)	32±15% ohms @2KHz,1Vrms input
3.3 Power Rating	5mW
3.4 Short Term Max. Power	20mW

4.Acoustical Requirements

4.1 Sound Pressure Level	111±3dB @179mVrms@1KHz
4.2 Bass Resonance Frequency	350 ±100Hz in free air
4.3 Rated Frequency Range	300Hz~7KHz
4.4 Frequency Response	See Figure1
4.5 THD	<10%(300Hz~3.4kHz)

Typical frequency response(at IEC318Ear 179mVrms)



FREQUENCY(Hz)	UPPER LIMIT(dB)	LOWER LIMIT(dB)
300	21	5
400	23	9
500	23	8
1000	4	-4
1250	1	-8
2000	-3	-15
2650	-5	-19
3750	-6	-22

Figure 1 ,Tolerance Limits Data for FR

4.6 Magnetic field intensity

Typical Axial HAC Curve Axial field intensity 8±3dB @179mVrms,1KHz

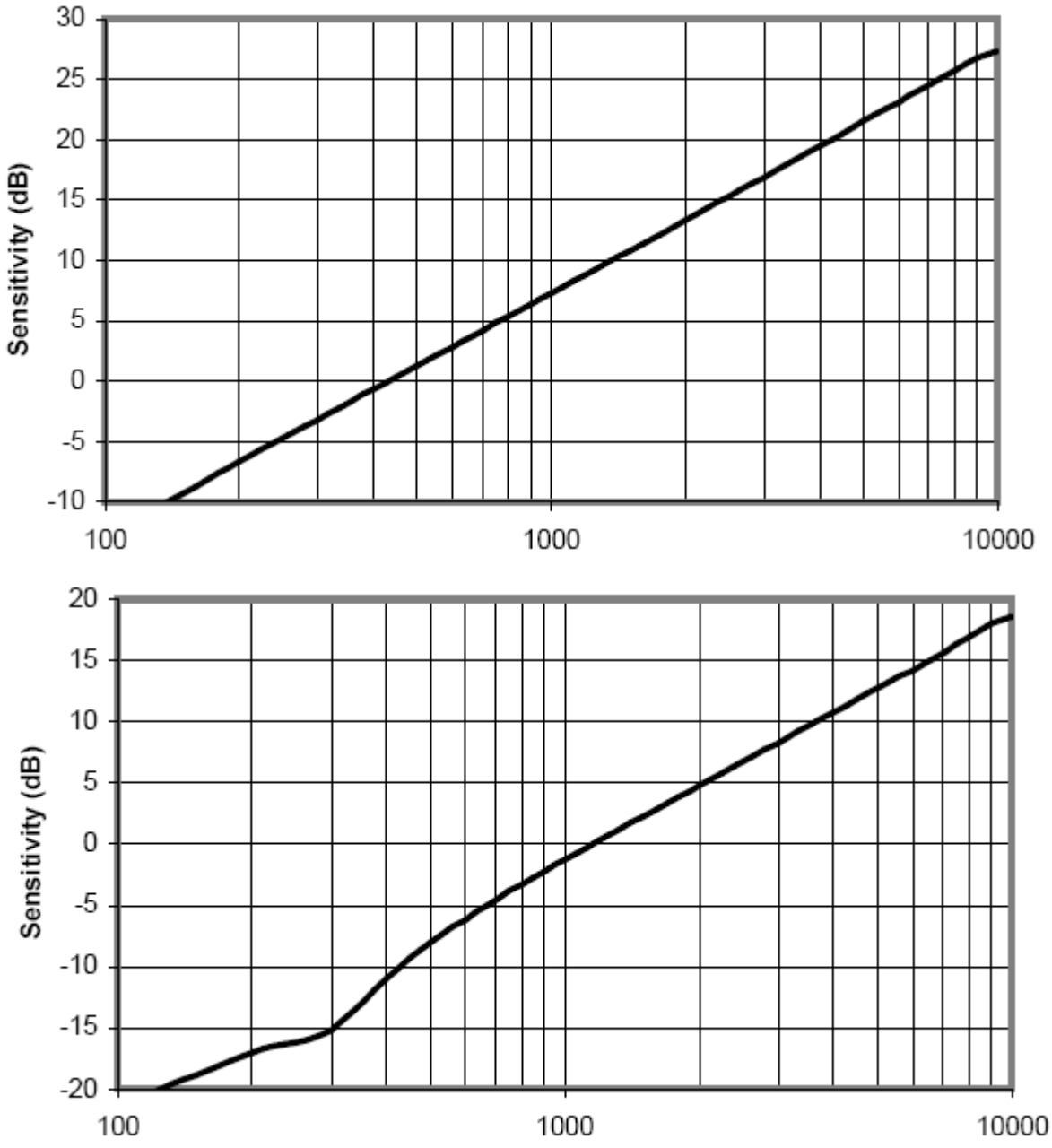


Figure 2

4.7 Rub & Buzz

A sine sweep among 300-4000Hz 1 S/cycle at 400mVrms will not result in any buzzing or extraneous sound .

5. Test Climatic Condition

Ambient temperature:15℃～35℃,preferably at 23℃

Relative humidity:25%～75%, preferably at 50%

Air pressure:86KPa～106KPa

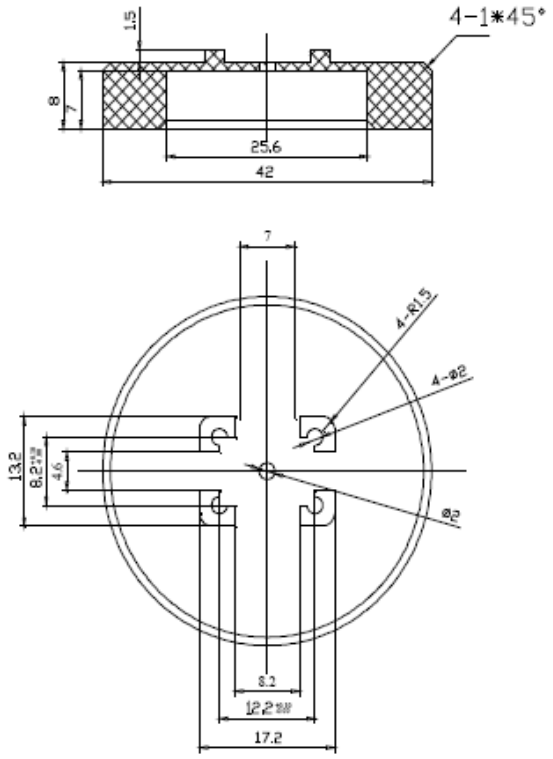
6.Test Method

6.1 Sensitivity and Frequency Response Curve:

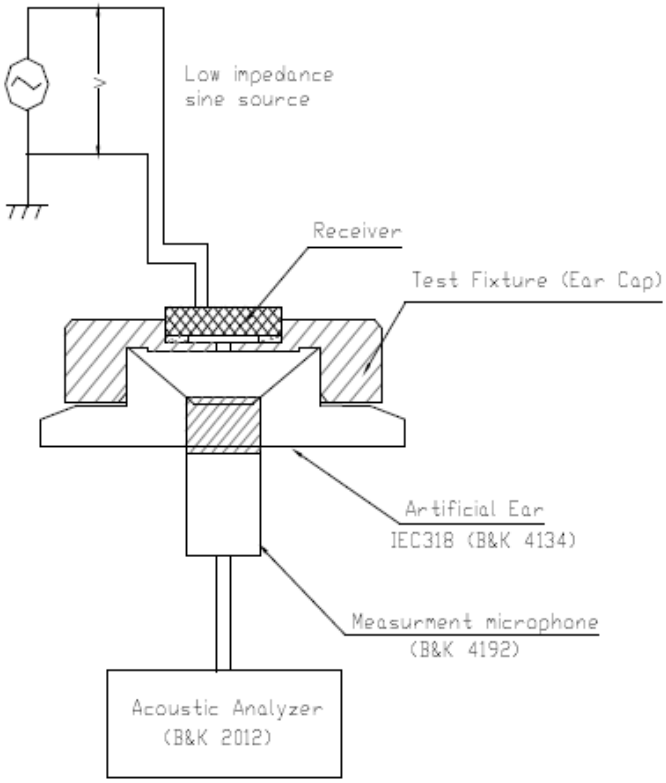
The receiver shall be mounted in a fixture shown in Figure3. And the recommended acoustic measuring devices are shown below in fixture3. The swept sine-wave frequency range is 100Hz~10kHz.(Input179mVrms).

6.2 T.H.D:

The receiver shall be mounted in a fixture shown in Figure3. And the recommended acoustic measuring devices are shown below in fixture. The swept sine-wave frequency range is 100Hz~10kHz.(Input179mVrms). Figure3 Test Fixture



Test Fixture



Test Flowchart

Figure3 receiver testing setup

6.3 MAGNETIC FIELD INTENSITY MEASURING DIAGRAM

Axial field intensity

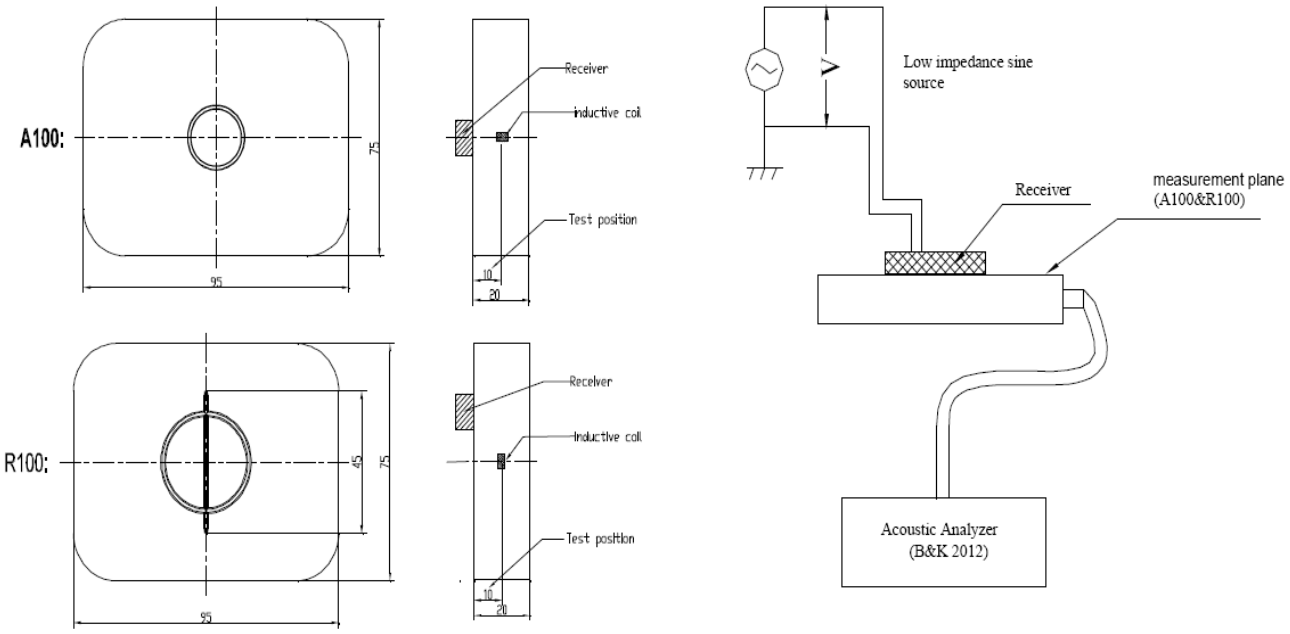
the axial component of the magnetic field, directed along the measurement axis and

located at the measurement plane in 1/3 octave band filter.(input 179mV)

radial field intensity

the radial component of the magnetic field, as measurement at all radial measurement

max point in 1/3 octave band filter.(input 179mV)



Test Fixture **Test Flowchart**

Figure4 **Magnetic field intensity measuring diagram**

7.General Requirements

7.1 Operation temperature range: -20℃ to +70℃

7.2 Storage temperature range: -40℃ to +85℃

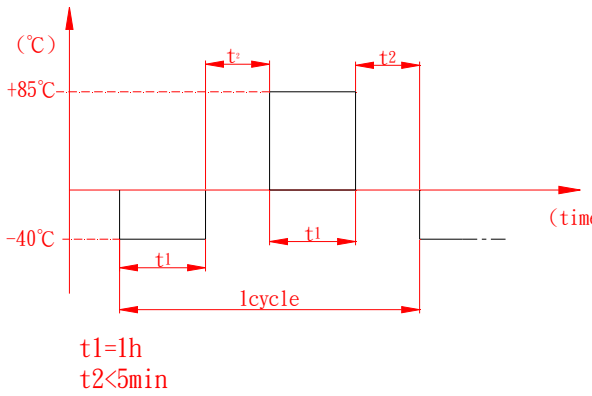
8.Gener7l Reliability

After test, the samples should be removed from testing chamber to lab environment with normal test climatic condition. Unless otherwise, the recovery period should be 2 hours at least before 2nd-measurement.

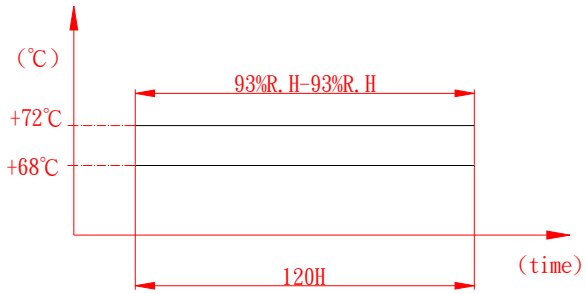
After reliability test, all samples must be meet the requirements specified in section 3 & 4. The sensitivity offset shall be ±3dB less than initial value.

8.1 Thermal shock

Testing condition as below: (transition <5min, total 50 cycles)



t1=1h
t2<5min



8.2 Humidity heat cycle test

Testing condition as above:

8.3 Drop test

receivers shall be assembled in a 100g fixture, drop samples 1.5m high, 3 times in each direction, total 18 times.

8.4 Vibration Test

receivers shall be assembled in a 100g fixture, Frequency 5~55Hz Amplitude 0.35mm 30 Minutes per Axis(X, Y and Z axis)

8.5 Roller Test

receivers shall be assembled in a 100g fixture, height 1m, frequency 10cycles /min , total 100 cycles , each after 20 cycles test

8.6 Salt spray test

Salt spray ： NaCl 5% temperature range: 33℃ to 37℃ Time :48H

8.7 Low temperature operation life test

This test is conduct with the receiver in free air, temperature range 18℃ to 22℃ ， Test signal pink noise，rated power 20mW 24 hours

8.8 High temperature operation life test

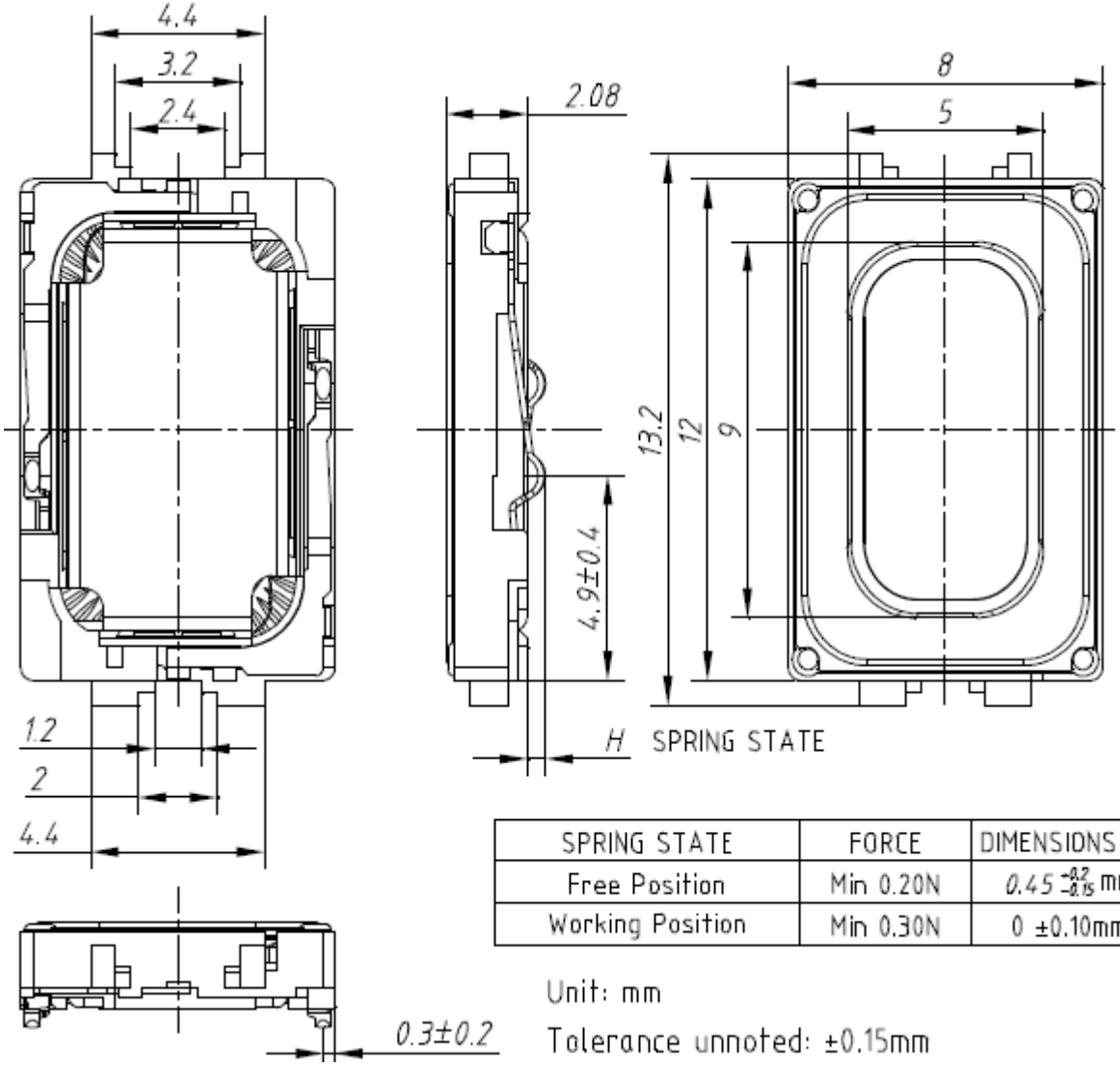
This test is conduct with the receiver in free air, temperature 50℃ ， sine wave 200-10KHz 2.5S/cycle，rated power 20mW 96 hours .

8.9 Short term max. Power

This test is conduct with the receiver in free air, temperature 25℃ ，
sine wave 300-3.4KHz 2.5S/cycle Max power 20mW, the duration will be 1second ON, 59 seconds . OFF, The test shall be repeated 60times.

9. Mechanical Layout and Dimensions

9.1 Mechanical layout for receiver (see Figure 5)



SPRING STATE	FORCE	DIMENSIONS (H)
Free Position	Min 0.20N	$0.45^{-0.2}_{-0.15}$ mm
Working Position	Min 0.30N	0 ±0.10mm

Figure5, Receiver layout profile

Note:

1、General unless otherwise noted : ±0.2mm

2、The minimum force of each spring shouldn't be smaller than 0.3N under working height.

10. Packing details

TBD

TBD