



Receiver

8x15x1.5 mm

BR815S15YN32

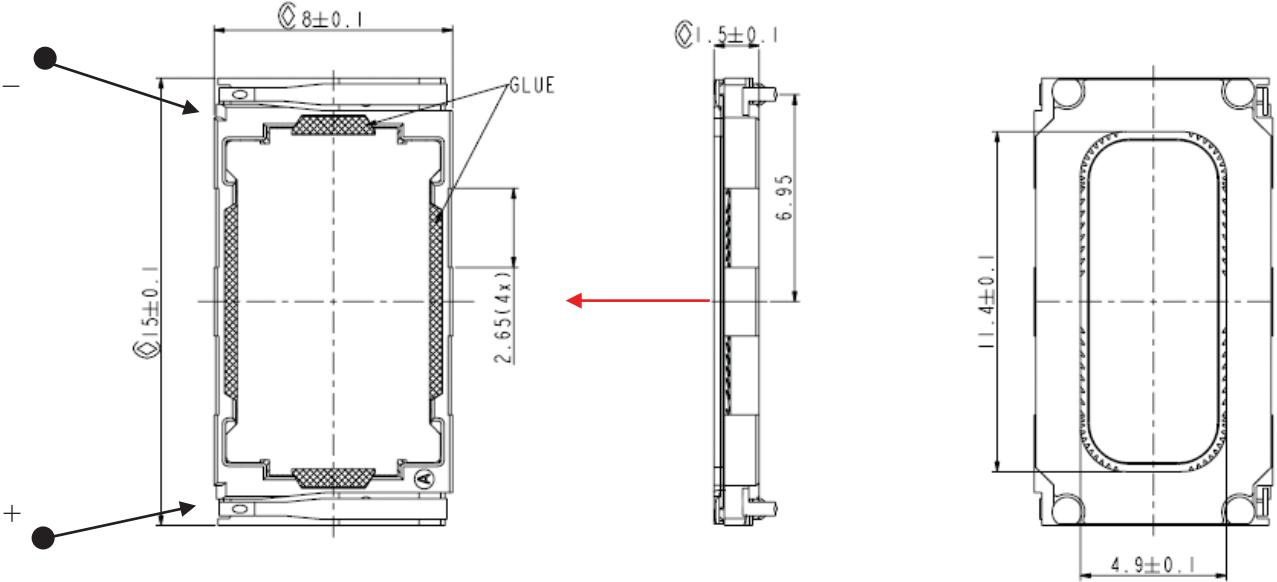


Revision

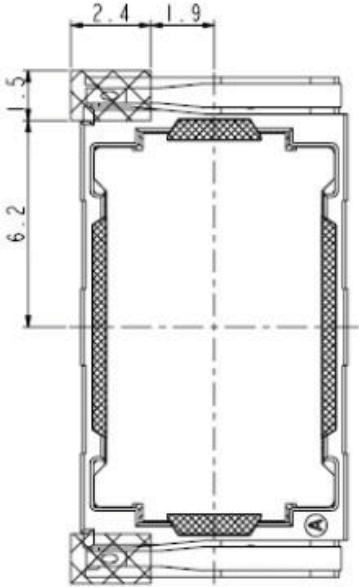
Date	Version	Status	Changes	Approver
2015/05/10	V0.1	Draft	First release	Shengtao Xia
2016/08/10	V1.0	Release	Add HAC info	Shengtao Xia
2017/08/01	V1.0	Released	New logo	LD

1. Mechanical Characteristics

1.1. Main Dimensions

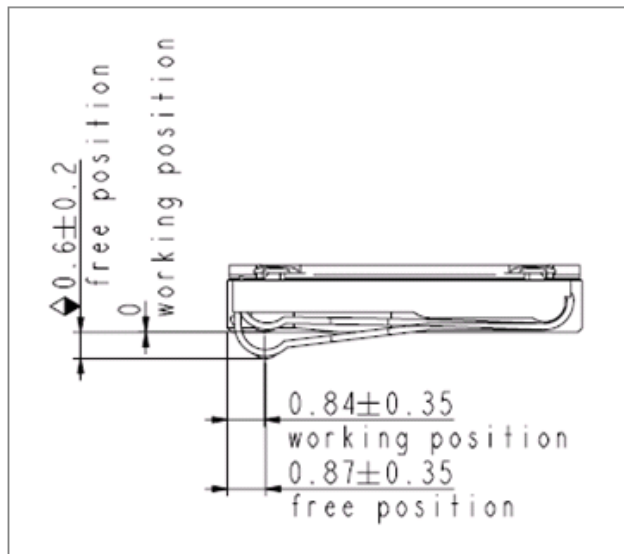
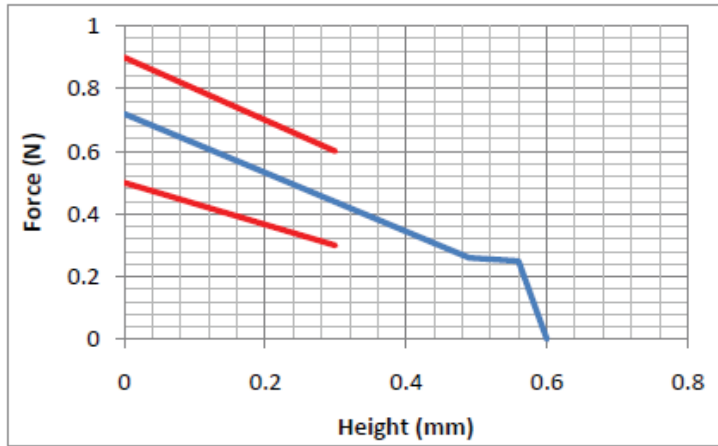


Note: Positive voltage on pin '+' moves membrane in direction of red arrow!

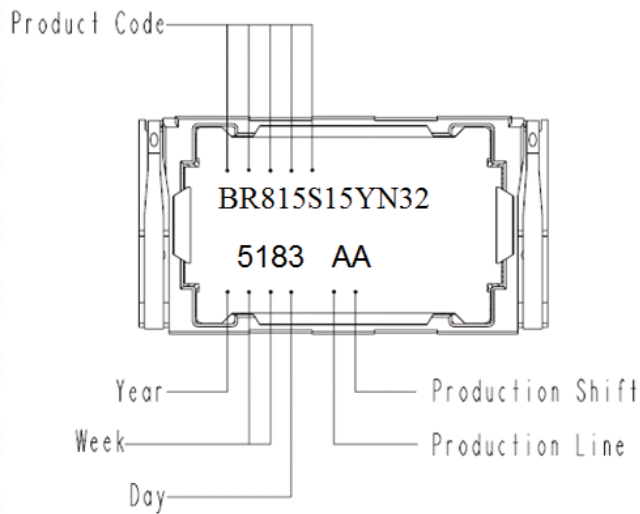


Recommend PAD layout

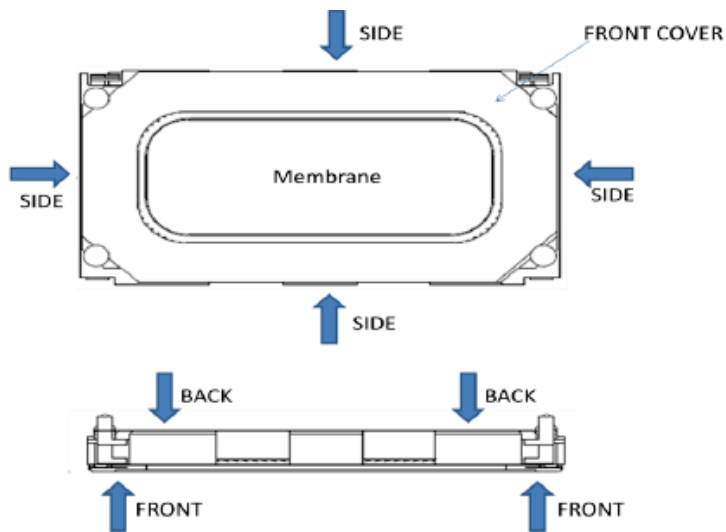
1.2. Spring Force



1.3. Part Marking/Labeling



1.4. Forces on Component



State	Maximum Permanent Force[N]	Maximum Handling Force[N]
From Back To Front(cover)	10	15
Membrane	0	0
From Side to Side	5	10

1.5. Material List

1. MATERIAL of BASKET: PC.
2. MATERIAL of MEMBRANE: POLYARYLATE – COMPOUND
3. MATERIAL of POT/ TOPPLATE: SOFT MAGNETIC IRON, Ni Plating
4. MATERIAL of MAGNET: Nd Fe B
5. MATERIAL of SPRING CONTACT: STAINLESS STEEL
6. PLATING of SPRING CONTACT: 2.5-3.5 μm Ni, 0.5-0.7 μm Au (CONTACT POINT)
7. MATERIAL of COVER: Brass CuZn, Ni Plating
8. DIMENSION: 8x15x1.5mm
9. MASS: 0.554 g
10. CONNECTIONS: SPRING CONTACT
11. DIRECTION of CONNECTOR: VERTICAL TO PCB (ORIENTATED)

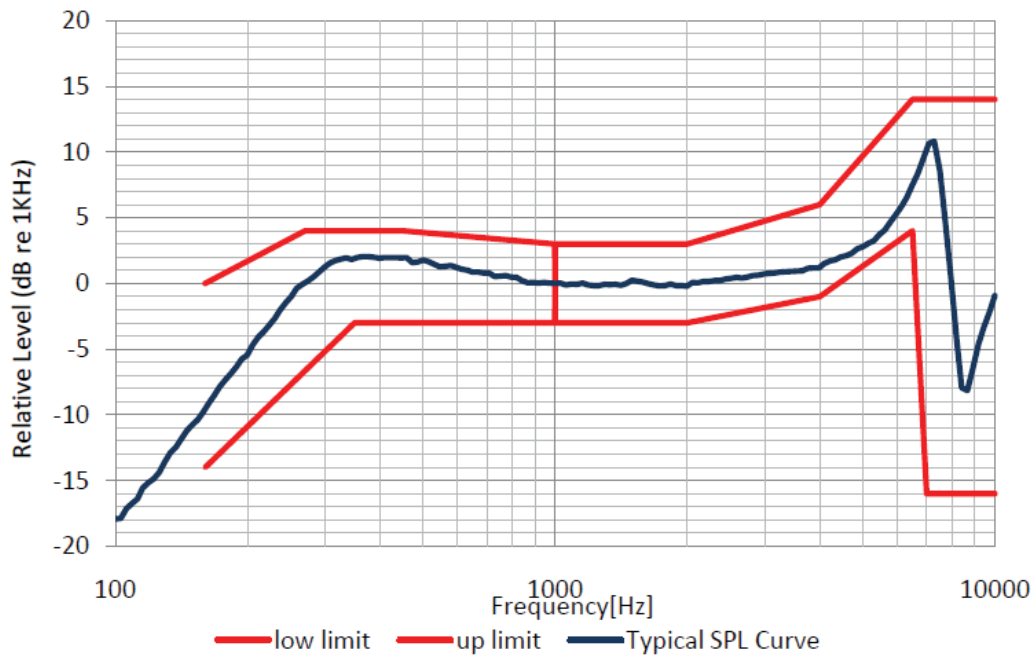
2. Electro-Acoustic Characteristics

2.1. Frequency response

TYPICAL FREQUENCY RESPONSE

measured on baffle according to chapter 2.6

(D=1cm; P=10mW @32Ω)



Tolerance window			
f [Hz]	lower limit [dB re1KHz]	f [Hz]	upper limit [dB re1KHz]
160	-14	160	0
350	-3	270	4
450	-3	450	4
999	-3	999	3
1000	0	1000	0
1001	-3	1001	3
2000	-3	2000	3
4000	-1	4000	6
6500	4	6500	14
7000	-16	10000	14
10000	-16		

$f_{min} = 1\text{kHz}$, $f_{max} = 1.001\text{kHz}$, SPL Spec.=91.57dB

2.2. Electro-Acoustic Parameters

Receiver mounted in baffle acc. to chapter 2.1

- | | |
|--|------------------|
| 1. Rated impedance | Z: 32Ω□ |
| 2. Voice coil resistance | R: 28.8□±2.88Ω□ |
| 3. Resonance frequency | f0: 300Hz±45Hz |
| 4. Maximum diaphragm excursion above the top of the surface: | 0.2mm |
| 5. Nominal characteristic sensitivity | 89 dBPa re 20uPa |
- (@baffle, 10mW, 1cm; average from 1KHz to 3KHz)

2.3. Power Handling

Receiver mounted in lifetime test device (open rear/open front).

- | | |
|----------------------|------------|
| 1. RATED NOISE POWER | 10mW (RMS) |
|----------------------|------------|
- (500h, pink noise with the weighting, crest factor is 12dB)

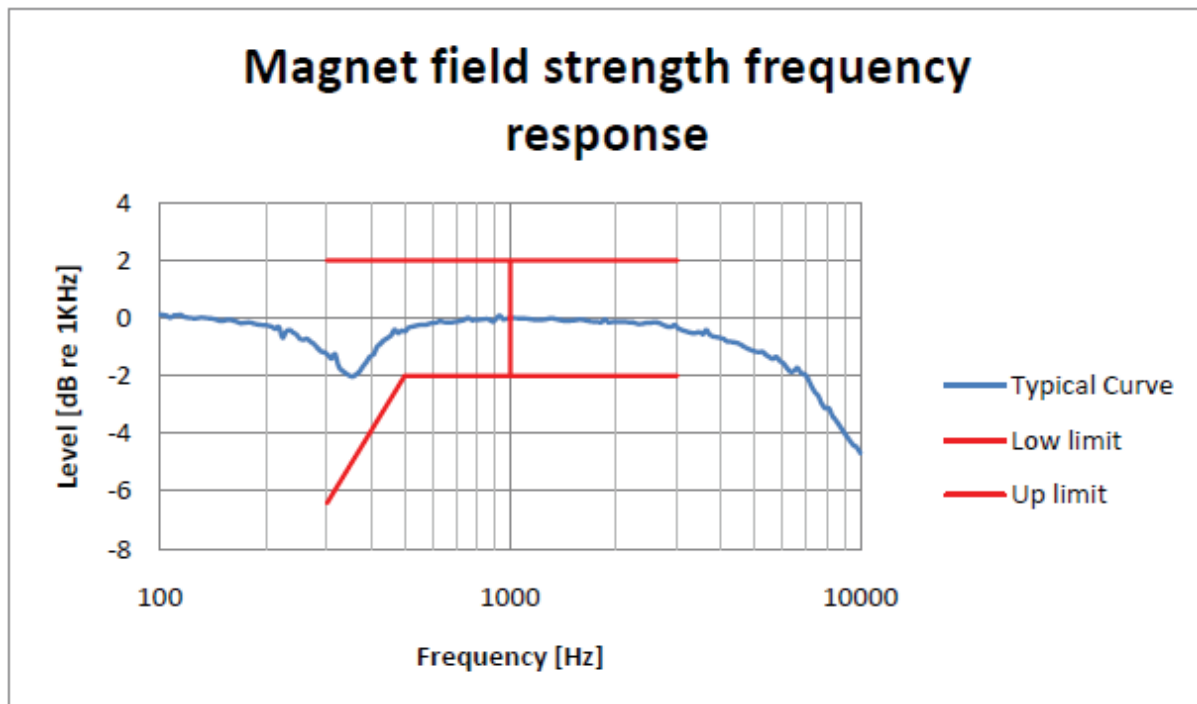
Type	Order	F0[Hz]
High Pass	1	250
High Pass	10	100
Low Pass	10	3500

- | | |
|-------------------|------------|
| 2. OVERLOAD POWER | 30mW (RMS) |
|-------------------|------------|
- (50h, sinusoidal, 200Hz~6 KHz, allow increase R&B)
- | | |
|---------------------------|------------|
| 3. RATED SINUSOIDAL POWER | 10mW (RMS) |
|---------------------------|------------|
- (50h, sinusoidal, 200Hz~6 KHz, no damage)

2.4. Magnetic field for Hearing Aid characteristics

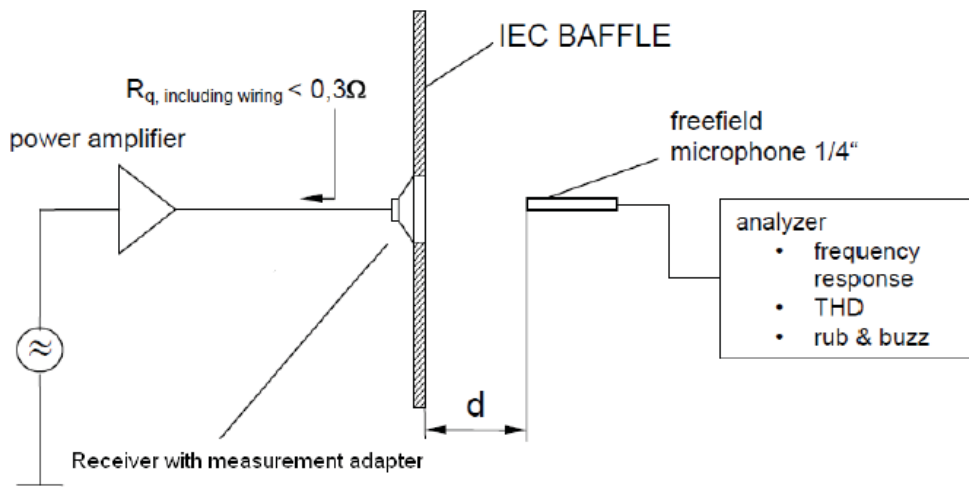
RECEIVER MOUNTED IN MEASUREMENT SETUP ACC. TO Chapter 2.5

1. CHARACT. FIELD STRENGTH SENSITIVITY
at 566mV (10mW)1kHz, measurement plane15mm
Axial : 12.13 dB A/m per V
Radial (Average of 4 Position): 4.50 dB A/m per V
2. FREQUENCY RESPONSE (AXIAL relative to value at 1kHz)



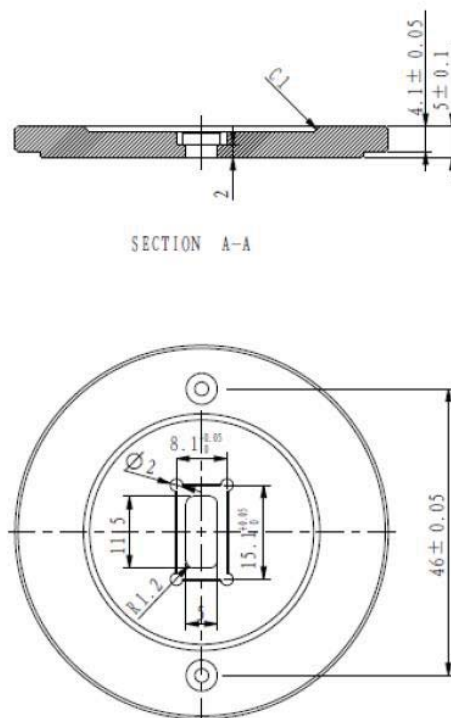
2.4. Measurement setup on baffle

2.4.1. Measured setup



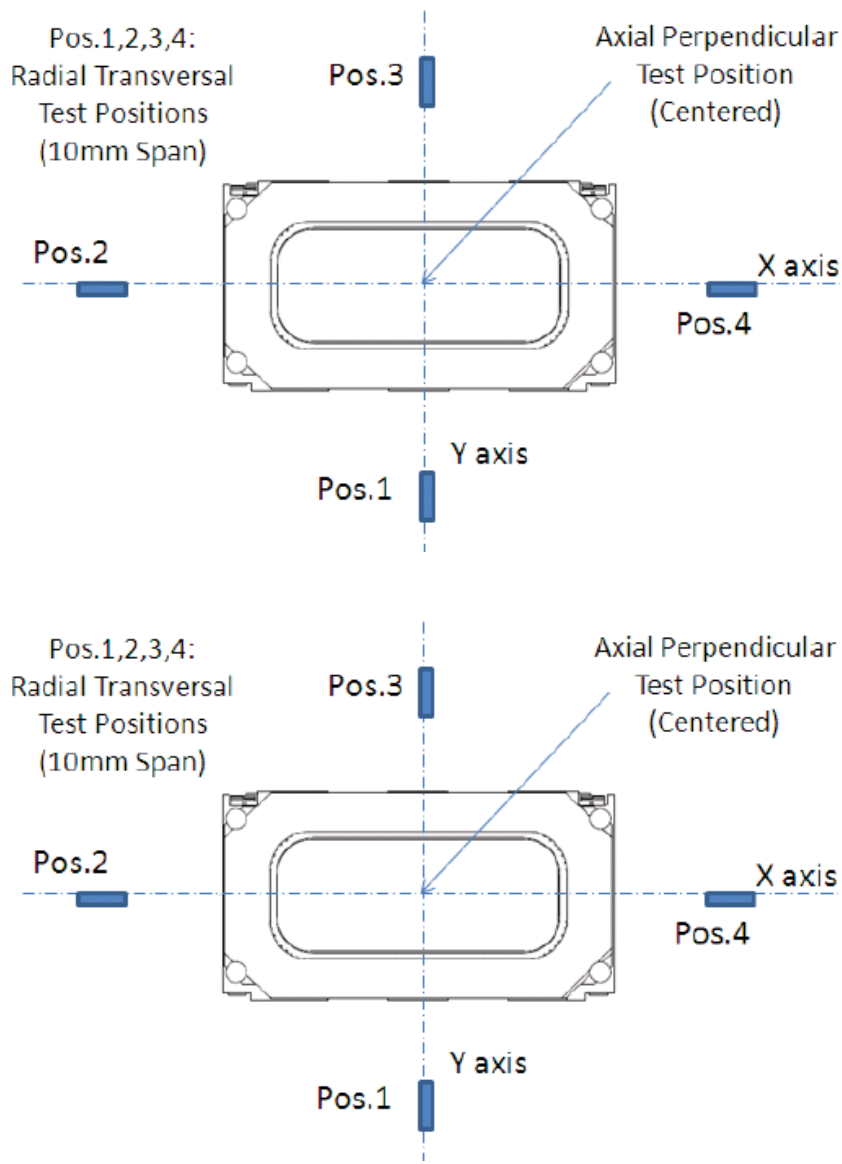
$D=1.0\text{cm.}$

2.4.2. Measured adapter



2.5. Measurement setup for Hearing Aid

Tests are conducted at Z (Axial) direction, Y and X (Radial) directions
Measurement Positions acc. to ANSI C63.19[4]



Receiver must be mounted on a **plastic surface, magnetic ambient levels be low as to not significantly affect the measurement, magnetic shielded chamber would be better.*

3. Environmental Conditions

3.1. Storage

The transducer fulfils the specified data after treatment according to the conditions of

ETS 300 019-2-1 Specification of environmental test: Storage

Test spec. T 1.2: Weather protected, not temperature controlled
storage locations.

3.2. Transportation

The transducer fulfils the specified data after treatment according to the conditions of

ETS 300 019-2-2 Specification of environmental test: Transportation

Test Spec. T 2.3: Public Transportation

3.3. Functionality

The transducer fulfils the specified data after treatment according to the conditions of

ETS 300 019-2-5 Specification of environmental test: Ground vehicle installations

Test spec. T 5.1: Protected installation

ETS 300 019-2-7 Specification of environmental test: Portable and non-stationary use Test spec.

T 7.3E: Partly weather protected and non-weather protected locations.

4. Environmental Tests

4.1. Qualification Tests

According to our milestone plan (Product Creation Process), a complete qualification test will be done at design validation on products, manufactured under serial conditions and 1x per year and product family. The qualification process covers all tests described under 4.5 and a complete inspection takes place.

4.2. Requalification Tests

1x per month and product family samples are taken and submitted to tests described under 4.5.2

4.3. Sample Size, Sequence

Unless otherwise stated 20 arbitrary new samples will be used to perform each test for both, qualification and requalification test as described under 4.1 and 4.2.

4.4. Period of Shelf-Life

The period of shelf-life is 2 years.

4.5. Testing Procedures

4.5.1. Storage Tests

4.5.2. Operating Tests

4.5.3. Salt Mist Test

4.5.4. Shock Resistance Test (Free Fall Test) - protected product

4.5.5. Impact Durability Test (Tumble Test) – protected product

4.5.6. G-Force Test

4.5.7. Resistance to Electrostatic Discharge

4.5.8. Sine Vibration Test

4.5.9. Random Vibration Test

4.5.10. Mechanical Shock

5. Related Documents

EN-60068-2	Environmental testing
IPC-SM-785	Guidelines for Accelerated Reliability Testing of Surface Mount Solder Attachment
IEC68-2-14	Temperature Change Testing Guideline
IEC68-2-3,1984	Humidity and Temperature Test Guideline
IEC60068-2-52	Low air pressure environmental testing procedure
IEC60068-2-32	Free fall Test Procedure
IEC61000-4-2	ESD Test Guideline
IEC68-2-27	Mechanical Shock Test Guideline