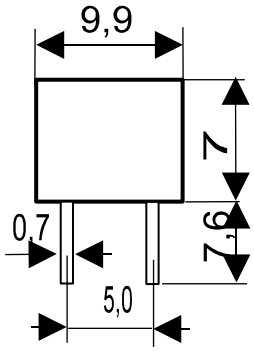
■ APPLICATIONS

· Remote Controller For Home Electric Appliance And Electronic Equipment.
· Ultrasonic Distance Measuring. Ultrasonic Approchaching switch
·Ultrasonic Transmitting And Receiving For Burglar Detection
Disaster Detection

■ **Main Features**

· High Sensitivity High Reliability And Stability
· High And Low Temp. –Resistance Humidity-
Resistance, Vibration-Resistance, Shock-Resistance

Outline Dimension

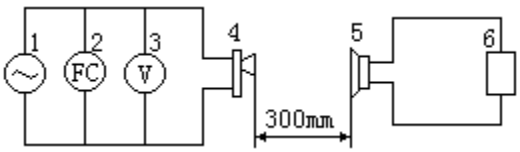


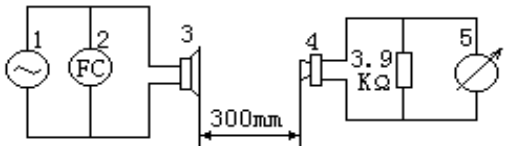
Normal Temperature Characteristics

Part Number	Frequency (KHZ)	Sensitivity (0dB=10v/Pa) (min)	S.P.L (at.10V.30cm) (0dB=0.02mPa) (min)	Capacitance (±30%PF)
40ST-10	40	——	110dB	2000
40SR-10		-70dB	——	

Test Circuit

Test Circuit For Output Sound Pressure (Transmitter) . Test Circuit For Sensitivity (Receiver)





1.Oscillator
2.Frequency Meter
3.Voltage Meter
4.Transmitting Sensor
5.Standard Receiving Unit
6.Sound Amplifier

1.Oscillator
2.Frequency Meter
3.Standard Transmitting Unit
4.Receiving Sensor
5.Millivolt Meter

SUNNY ELECTRONICS TECHNOLOGY CO., LTD
Add: Room 509,5th Floor, 50 Huaihai Road,
Nanjing, Jiangsu Province, 210005, China
TEL: +86-25-4505381 FAX: +86-25-4505383
E-mail: sunnyele@jlonline.com Http://www.china-sunny.com

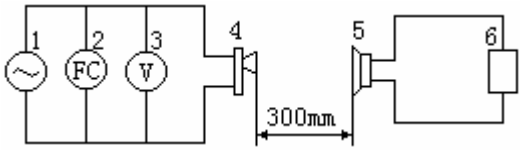
PIEZO-CERAMIC ULTRASONIC SENSOR (GENERAL)

■常温特性 Normal Temperature Characteristics

型号 Part Number	频率 Frequency (KHZ)	灵敏度 Sensitivity (0dB=10v/Pa) (min)	输出声压 S.P.L (at.10V.30cm) (0dB=0.02mPa) (min)	静电容量 Capacitance (±30%PF)	-6dB 指向角 -6dB direction angle
TCT40-10T1	40	/	110 dB	2000	60^0
TCT40-10R1		-70 dB	/		60^0

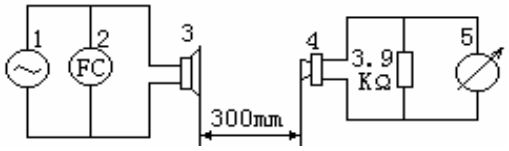
■测试电路 Test Circuit

■输出声压（发射型）测试电路
. Test Circuit For Output Sound Pressure (Transmitter)



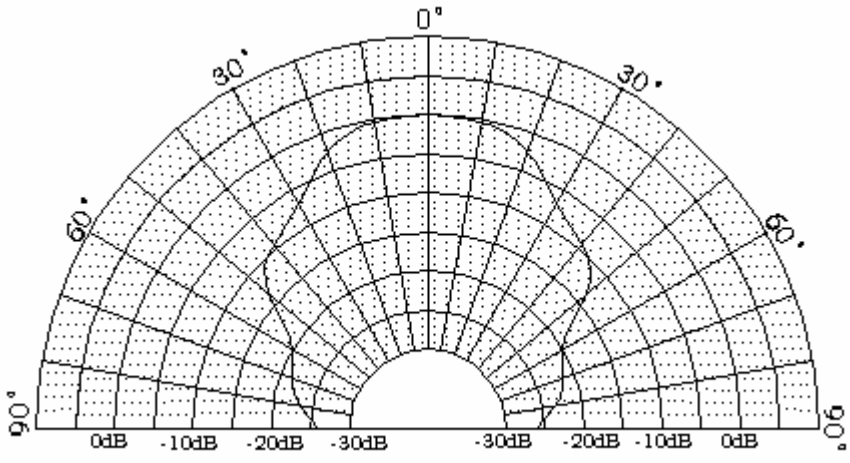
1．振荡器 1.Oscillator
2．频率计 2.Frequency Meter
3．电压表 3.Voltage Meter
4．发射型传感器 4.Transmitting Sensor
5．标准接收头 5.Standard Receiving Unit
6．传声放大器 6.Sound Amplifier

■ 灵敏度（接收型）测试电路
. Test Circuit For Sensitivity (Receiver)



1．振荡器 1.Oscillator
2．频率计 2.Frequency Meter
3．标准发射头 3.Standard Transmitting Unit
4．接收型传感器 4.Receiving Sensor
5．毫伏表 5.Millivolt Meter

Direction Angle:



ENVIRONMENTAL CHARACTERISTIC

1.Temperature characteristic

The variation of the S.P.L and Sensitivity at center frequency are within 6dB compared with initial figures in the temperature range at -30 to +85℃.

2. Humidity test

The variation of the S.P.L and Sensitivity at center frequency are within 6dB compared with initial figures after being placed in natural condition for 2 hours with following test conditions.

Temperature : 60±2℃
Humidity : RH90 to 95%
Times: 36 hours

3. Shock test

The variation of the S.P. L and Sensitivity at center frequency are within 3dB compared with initial figures with following test conditions.

Acceleration: sine 100G
Direction: 3 directions
Shock times: 3 times/each direction

4. Vibration test

The variation of the S.P. L and Sensitivity at center frequency are within 3dB compared with initial figures with following test conditions.

Amplitude/frequency: 1.5mm/10 to 70 Hz
Direction: 3 directions
Times: 3 hours/each direction
Sweep period: 5 min

5. High temperature test

The variation of the S.P.L and Sensitivity at center frequency are within 3dB compared with initial figures after being placed in natural condition for 2 hours with following test conditions.

Temperature/times: 100℃/36 hours

6. Low temperature test

The variation of the S.P.L and Sensitivity at center frequency are within 3dB compared with initial figures after being placed in natural condition for 2 hours with following test conditions.

Temperature/times: -40℃/36 hours

7. Heat cycle

The variation of the S.P.L and Sensitivity at center frequency are within 6dB compared with initial figures after being placed in natural condition for 2 hours with following test conditions.

Temperature/times/times: +85±3℃/1 hour
-40±3℃/1 hour
cycles: 10 cycle

8. Drop test

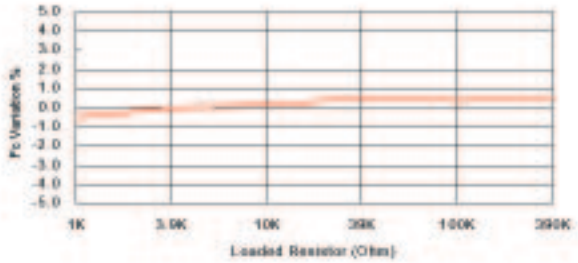
The variation of the S.P.L and Sensitivity at center frequency are within 6dB compared with initial figures with following test conditions.

Height : 1 meter onto concrete floor
Times: 10 times

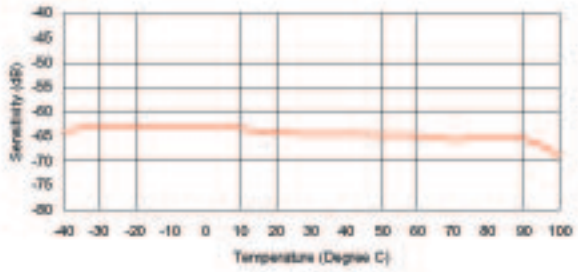
Receiver

Sensitivity Variation vs. Loaded Resistor

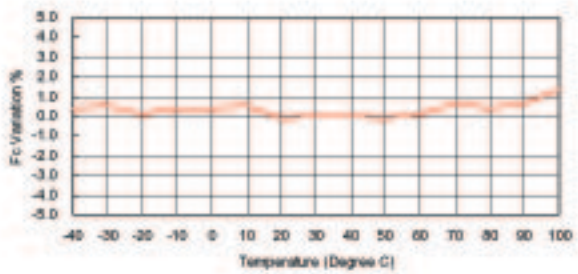
Center Frequency Shift vs. Loaded Resistor



Sensitivity Variation vs. Temperature

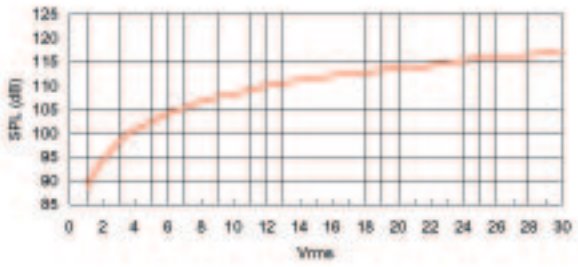


Center Frequency Shift vs. Temperature

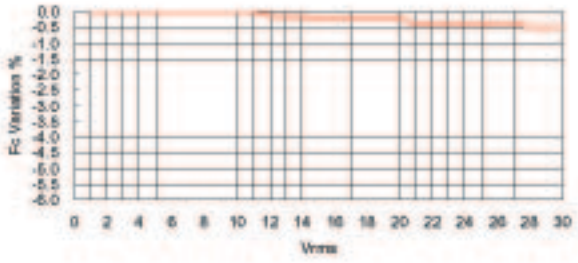


Transmitter

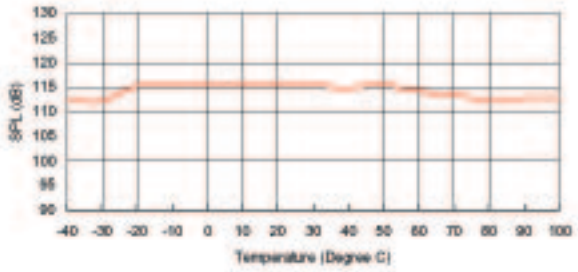
SPL Variation vs. Driving Voltage



Center Frequency Shift vs. Driving Voltage



SPL Variation vs. Temperature



Center Frequency Shift vs. Temperature