

**RECEIVER
BT-R8**

1 SCOPE

This specification covers a hearing-aid compatible dynamic type receiver for telephone handset, specially designed and constructed for payphone handsets.

2 DESIGN AND CONSTRUCTION

The receiver shall be of the design, construction and physical dimensions as shown Fig. 1.

3 ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

NO.	TEST	REQUIREMENTS	TEST CONDITIONS
3.1	Sweep Frequency Response Level	100 +/- 2dB SPL	FIG. 3
3.2	Frequency Response	1) Curve : Fig.2 2) 1 KHz : 100 +4/-3dB SPL	
3.3	Impedance	1 KHz : 170 +/- 30 ohm	FIG. 4
3.4	Insulation Resistance	At Least 50M ohm	1) Voltage : 250V D.C 2) Position : Between Terminals and Metallic Case
3.5	Dielectric Strength	Withstand	Voltage : 115V R.M.S, 60 Hz.A.C.
3.6	Magnetic Field Intensity 1) Axial Field 2) Radial Field	1) 1 KHz: At Least -72 dBV 2) Curve : Fig. 5 1 KHz. : At Least -77dBV	FIG. 5
3.7	Anti-Static	Not Occur Electric Discharge	FIG. 6

NO.	SIGN	DATE	REVISIONS

4 ENVIRONMENTAL TEST

4.1. GENERAL

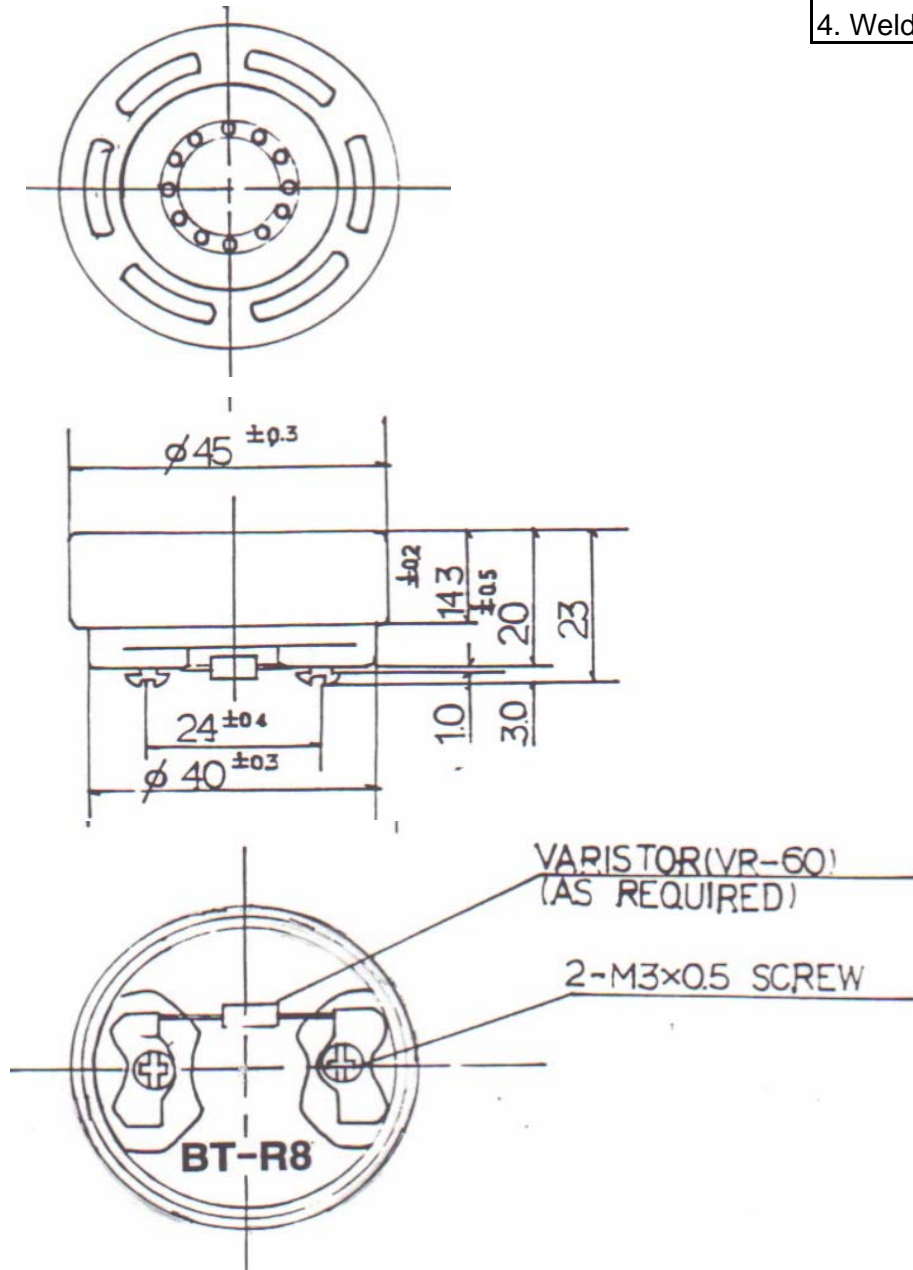
After any following test, the sweep frequency response level shall not vary more than ± 2 dB from the initial value.

4.2 TEST

NO.	TEST	TEST CONDISTIONS
4.2.1.	Humidity And High Temperature	1) Temperature : 60 +/- 3 C 2) Relative Humidity : 90 - 95% RH 3) Duration of Exposure : 72 Hours 4) Duration of Recovery : 6 Hours
4.2.2.	Low Temperature	1) Temperature : -20 +/- 3 C 2) Duration of Exposure : 72 Hours 3) Duration of Recovery : 6 Hours
4.2.3	Cycle, Temperature	1) Low Temperature : -20 +/- 3 C 2) High Temperature : 60 +/- 3 C 3) Number of Cycles : 5 Cycles 4) Duration of Exposure : 3 Hrs at Each Temperature 5) Duration of Transfer Time : Less Than 5 Min. 6) Duration of Recover : 6 Hours
4.2.4.	Shock, Drop Test	1) Mounting : 2500 or K-type Handset 2) Direction : Random Drop 3) Height : 1 Meter 4) Floor : Concrete Floor Faced with 5mm Thick Hard Wood Board 5) Number of Drop : 10 Times
4.2.5.	Vibration	1) Mounting : Rigidly Mounted on the Table 2) Direction : 3 Mutually Perpendicular Directions 3) Frequency : Varied Logarithmically From 10 To 50 Hz And Back To 10 Hz Every One Minute. 4) Amplitude : 1.5 mmp-p 5) Duration : 6 Hrs (2 Hrs in Each of 3 Directions)

FIG. 1
DESIGN, CONSTRUCTION AND
PHYSICAL DIMENSIONS

- REVISION 12/23/98
1. Inner Pole : 4 Holes
(Bottom Plate)
 2. Damping Cloth : Silk
 3. Leakage Coil : 0.14
 4. Welding Method Improved



UNIT	SCALE	TOLERANCES			DESCRIPTION	DRAWING NO.
		LENGTH	ANGLES	WEIGHT		
mm					RECEIVER BT-R8	MHS-C-149A-00

FIG.2 FREQUENCY RESPONSE LIMIT CURVES (RELATIVE TO 1 KHz RESPONSE)

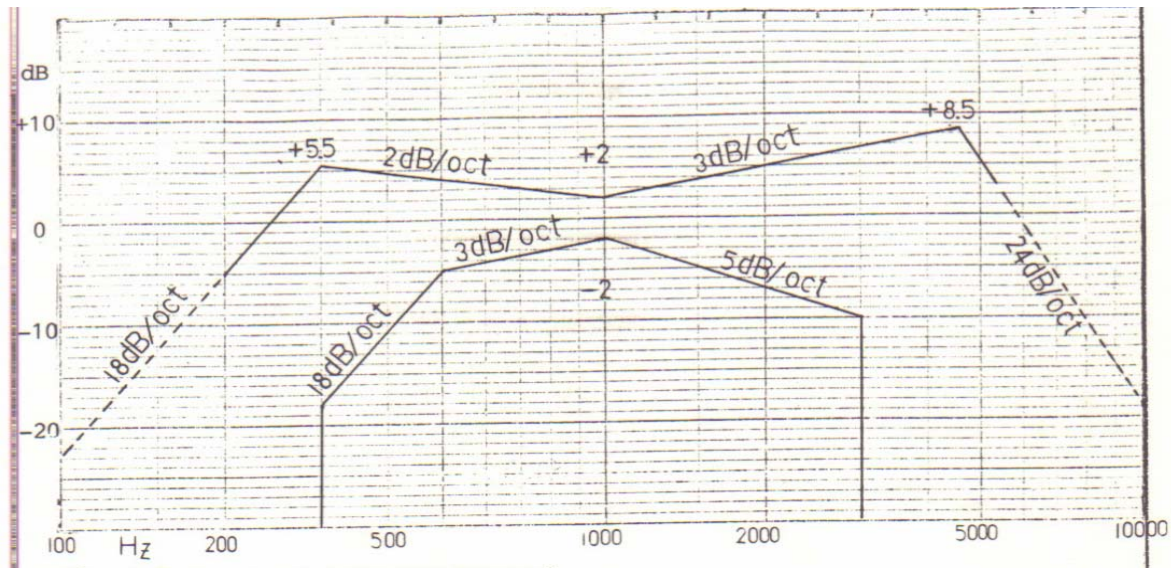
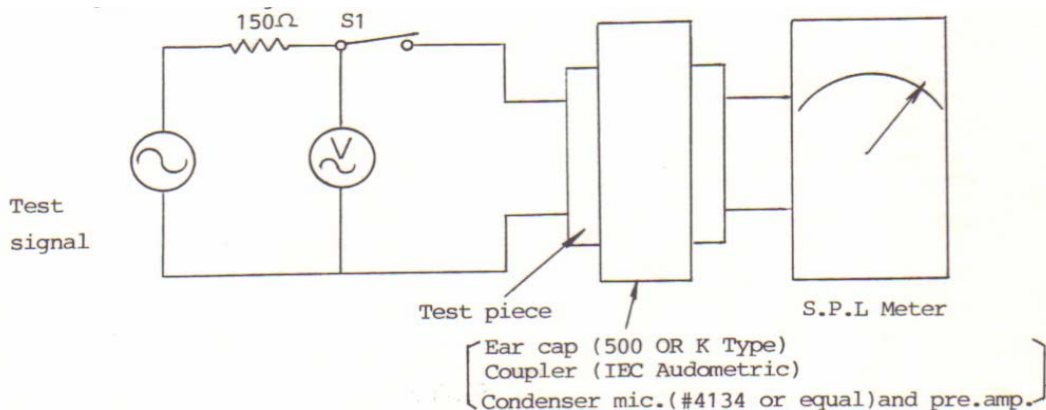


FIG.3 FREQUENCY RESPONSE MEASUREMENT
3.1 BLOCK DIAGRAM



3.2 SWEEP FREQUENCY RESPONSE

- 1) Test signal voltage (0.3 - 3.3KHz) :-18.4 dBV (S1: OFF)
- 2) Sweep : Apply test signal varying logarithmically from 0.3 -3.3 KHz and back to 0.3 KHz every one second. (S1:ON)
- 3) Read out the average position of the S.P.L. Meter needle (meter damping); $y=yx0.45$

3.3 FREQUENCY RESPONSE AT 1KHz

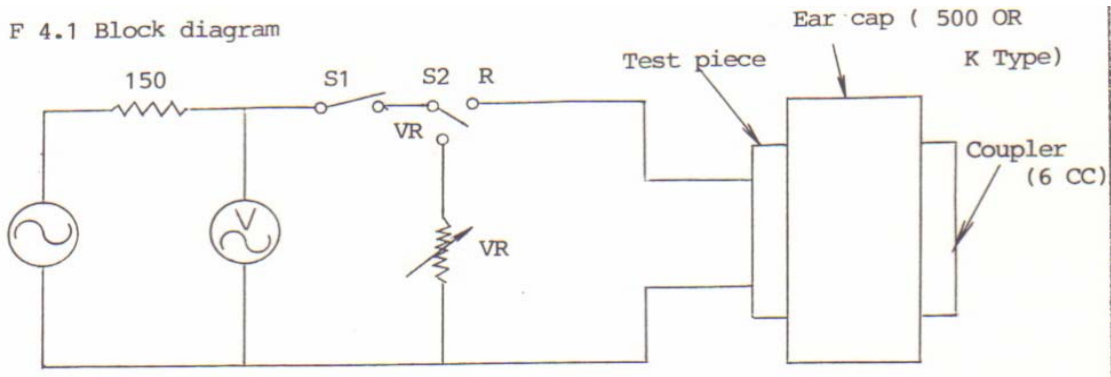
- 1) Apply on test signal (1 KHz) according to F.3.2 (1).
- 2) Read out the S.P.L. Meter Needle.

3.4 FREQUENCY RESPONSE CURVE

- 1) Apply on test signal according to F.3.2 (1).
- 2) Record 1) Paper Speed : 3Cm/Sec. 2) Writing Speed: 100mm/sec

FIG. 4 IMPEDANCE MEASUREMNT

F 4.1 Block diagram



F 4.2 Measurement

- 1) Test signal voltage : -18.4 dBV at 1KHz. (S1:OFF)
- 2) Apply on test signal (S2:R), and read out Voltmeter needle (Er).(S1:ON)
- 3) Apply on test signal (S2:VR), and adjust VR to the same as Er. (S1:ON)
- 4) Read out the resistance of the VR.
Impedance of the receiver = Resistance of the VR

FIG. 5 MAGNETIC FIELD INTENSITY MEASUREMENT

F 5.1. Axial Field Limit Curves (Relative to 1 KHz. Response)

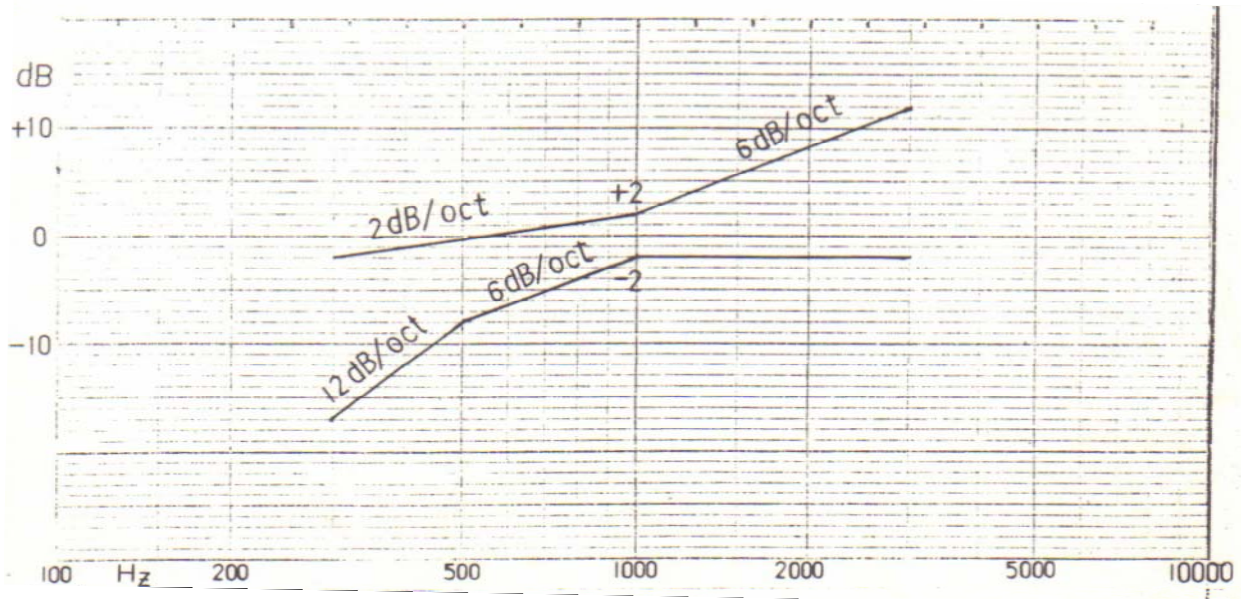
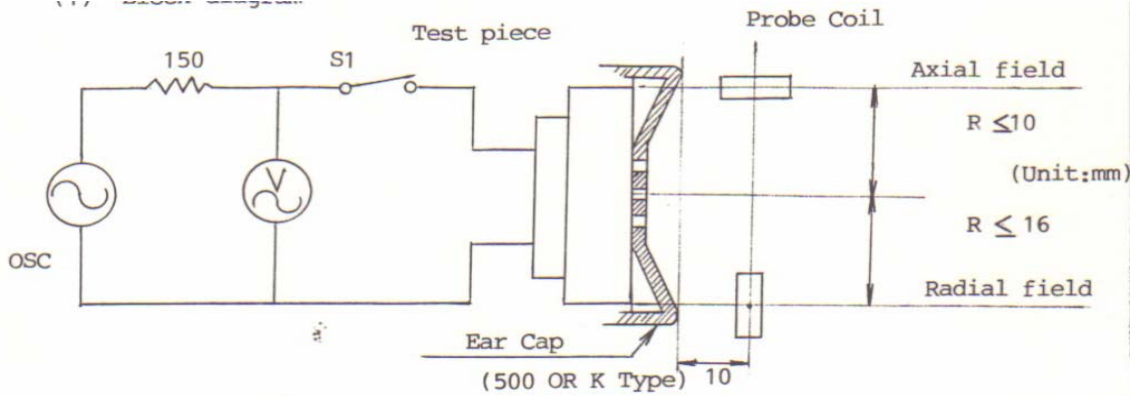


FIG 5.2 AXIAL FIELD MEASUREMENT

(1) BLOCK DIAGRAM



(2) MEASUREMENT

- 1) Test signal voltage (0.2 -3 KHz.) : -18.4 dBV (S1 :OFF)
- 2) Apply on test signal of 1 KHz. And read out Voltmeter needle.
- 3) Record 0. Paper Speed : 3mm/sec.
0. Writing Speed : 100 mm/sec.

(3) PROBE COIL

0. D.C. Resistance : 900 ohm
0. Inductance : 140 mmH
0. Sensitivity : -60.5 dBV/A/m
0. Dimensions

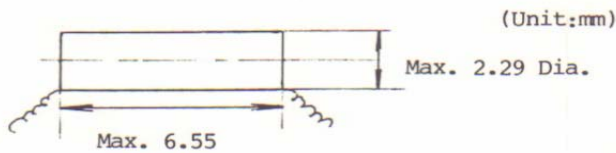
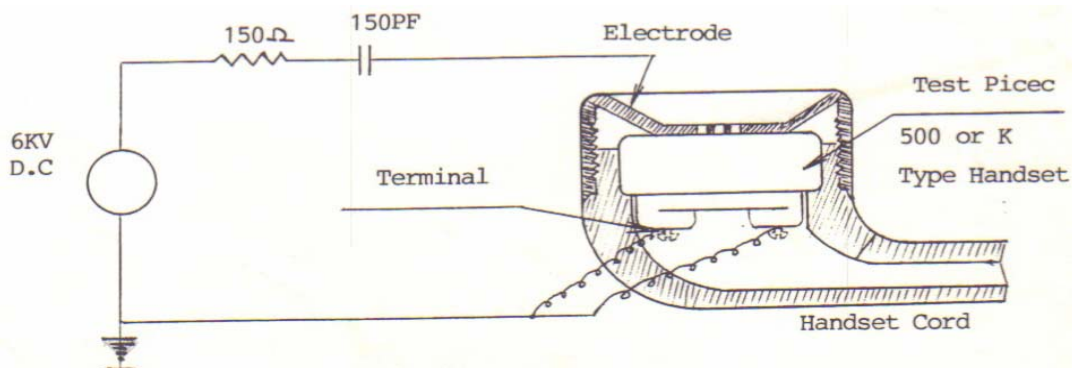


FIG 6 ANTI-STATIC TEST



SILICON VARISTOR DIODE

VR-60, VR-61

RATING OF STANDARD (Ta: 25°C)

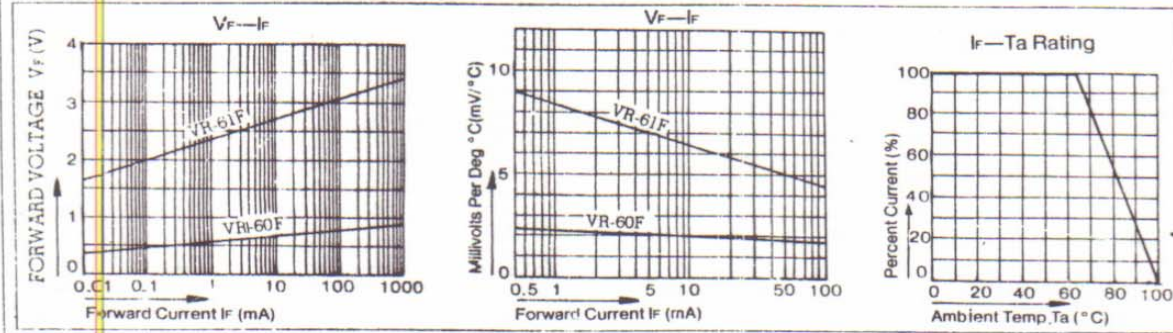
DIVISIONS	SIGN	VR-60F	VR-61F	Unit
D.C Forward Current	I_F (mA)	400	150	mA
Max. Surge Current for 10m sec.	I_{FSM}	32	25	
Junction Temperature	Tj	50Hz half sine - wave -60 - +100		°C
Storage Temperature	Tstg (°C)	-60 - +100		°C
Assembly of chips				
Color				

D.C CHARACTERISTICS (either direction, Ta: 25°C)

DIVISIONS	SIGN	Condition measurement	VR-60F	VR-61F	Unit
Forward Voltage	V_F	$I_F = 1A$	~1.5 max.		V
		$I_F = 1mA$		2.3 ± 0.25	
		$I_F = 10mA$		2.75 ± 0.25	
		$I_F = 70mA$		3.1 ± 0.25	
Forward Current	I_F	$V_F = 0.2$	20 max.		μA

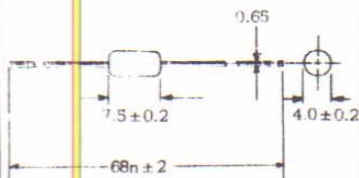
* Measurement within 3 sec.

GRAPH CHARACTERISTICS



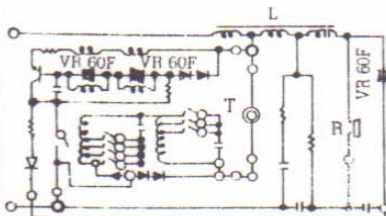
OUTLINE

[Unit mm]:
VR-60F VR-61F



EXAMPLE OF APPLICATION

Key-board circuit



Dial type Telephone

