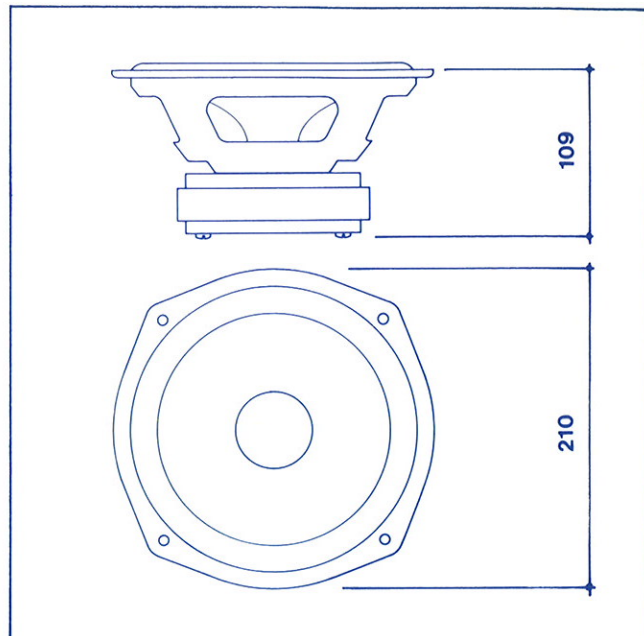


Model B200 Specification Number SP1054

Low/mid range unit with visco-elastic damped Bextrene diaphragm and high temperature coil assembly, suitable for use where low distortion and high power handling are required.



Net weight: 2.72 kg (6 lb)

Nominal impedance: 8 Ω

Nominal frequency range: 25-3,500 Hz

Typical enclosure volumes:

Totally enclosed box 20-25 litres ($\frac{3}{4}$ -1 cu ft)

Reflex 40-50 litres (1-1 $\frac{1}{2}$ cu ft)

Power handling:

Continuous sine wave 28 V RMS (see note 1)

Programme 100 W (see note 2)

Magnet:

Flux density 1.35 T (13,500 gauss)

Total flux 8.77 x 10⁻⁴ Wb (87,700 Maxwells)

Sensitivity: Pink noise input for 96 dB SPL at
1 metre on axis 6.4 V RMS

Voice coil:

Diameter 32.6 mm (1 $\frac{1}{4}$ in)

Inductance 0.45 mH

Max continuous service temperature (30 min) 250°C

Max intermittent temperature (5 sec) 340°C

Thermal time constant 12.5 seconds

Thermal resistivity (temp rise per applied Watt) 6°C/W

Nominal DC Resistance, R_{DC} 7.0 Ω (tolerance $\pm 5\%$)

Typical production spread 6.9 \pm 0.1 Ω (see note 3)

Minimum impedance (in nominal frequency range)
7.1 Ω at 190 Hz

Diaphragm:

Effective area, S_D 232 cm² (36 sq in)

Effective moving mass, M_D 21.3 gm

Max linear excursion, X_D 6 mm peak-peak (0.25 in)

Max damage limited excursion 20 mm peak-peak (0.8 in)

Free air resonance frequency, f_s:

Nominal 25 Hz (tolerance ± 5 Hz)

Typical production spread 24 \pm 2.2 Hz (see note 3)

Total mechanical resistance of suspension, R_{MS}:

0.7 mech Ω

Suspension compliance, C_{MS}: 2.2 x 10⁻³ m/N

(2.2 x 10⁻⁶ cm/dyne)

Equivalent volume of compliance, V_{AS}: 130 litres

(7,930 cu in)

Force factor, Bl: 10.4 N/A

Damping:

Mechanical Q_M 3.27

Electrical Q_E 0.25

Total Q_T 0.23 (see note 4)

Notes

1 Continuous Power Rating (P_c).

$$P_c = \frac{V^2}{R}$$

V is the RMS voltage which can be applied to the unit continuously without thermal overload of the voice coil. At low frequencies the continuous power rating of the speaker may be reduced because of limitations imposed on diaphragm excursion by the acoustic loading.

2 The programme rating of a unit is equal to the maximum programme rating of any system with which the unit may be safely used in conjunction with the recommended dividing network and enclosure.

The programme rating of any system is the undistorted power output of an amplifier with which the system may be satisfactorily operated on normal programme over an extended period of time.

3 "Typical production spread" is derived from statistical analysis of a large number of units, and is calculated to include 95% of all units.

$$4 \quad Q_M = \frac{2\pi f_s M_D}{R_{MS}} \quad Q_E = \frac{2\pi f_s M_D}{(Bl)^2 / R_{DC}} \quad \frac{1}{Q_T} = \frac{1}{Q_M} + \frac{1}{Q_E}$$

