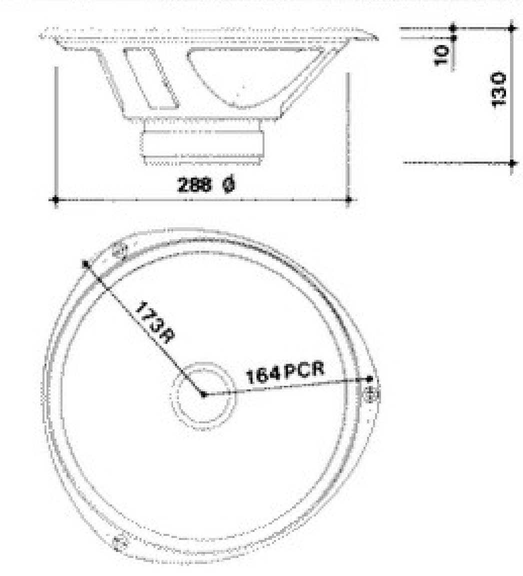
KEF

DATA SHEET

B300·B

Specification Number SP1071

Low frequency 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: 3.75 kg (8 lb 4 oz)

Nominal impedance: 8 ohms

Nominal frequency range: 25-2,000 Hz

Typical enclosure volumes:
Totally enclosed box 65-75 litres
Reflex 90-180 litres

Power handling:
Continuous sine wave 35 V RMS (see note 1)
Programme 200 W (see note 2)

Magnet:
Flux density 1.02 T (10,200 gauss)
Total flux 1.3 mWb (130 k Maxwells)

Voice coil:
Nominal diameter 52 mm
Nominal DC resistance, R_{DC} 6.9 ohms (tolerance ± 5%)
Minimum impedance 7.8 ohms at 120 Hz (in nominal frequency range)
Max continuous service temperature (30 min) 250°C
Max intermittent temperature (5 sec) 340°C

Diaphragm:
Effective area, S_D 520 cm²
Effective moving mass, M_D 73 gm
Max linear excursion, X_D 12 mm peak-peak
Max damage-limited excursion 25 mm peak-peak

Free air resonane frequency, f_s:
Nominal 23 Hz (tolerance ± 5 Hz)

Total mechanical resistance of suspension, R_{MS}:
2.0 mech ohms

Suspension compliance, C_{MS}: 6.6×10^{-4} m/N
Equivalent volume of compliance, V_{AS}: 250 litres
Force factor, Bl: 12 N/A

Damping:
Mechanical Q_M 5.3
Electrical Q_E 0.50
Total Q_T 0.46 (see note 3)

Notes

1 Continuous Power Rating (Pc).

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

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

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