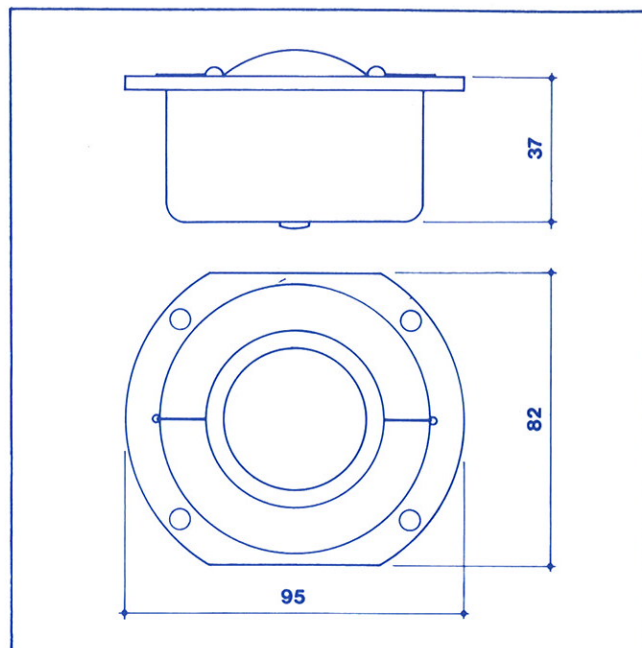


Model T52 Specification Number SP1049

Melinox dome high frequency unit with extended frequency response and wide dispersion.



Net weight: 0.73 kg (1.6 lb)

Nominal impedance: 8Ω

Nominal frequency range: 800-20,000 Hz (see note 5)

Power handling:

Continuous sine wave 10 V RMS (see note 1)

Programme 100 W (see note 2)

Magnet:

Flux density 1.0 T (10,000 gauss)

Total flux 5.0×10^{-4} Wb (50,000 Maxwells)

Sensitivity: Output, for 1 W pink noise input, at
1 metre on axis 84 dB SPL

Voice coil:

Diameter 39mm (1.5 in)

Inductance 85 μ H

Max continuous service temperature (30 min) 130°C

Max intermittent temperature (5 sec) 220°C

Thermal time constant 3.5 seconds

Thermal resistivity (temp rise per applied Watt) 4.0°C/W

Nominal DC Resistance, R_{DC} 6.6 Ω (tolerance $\pm 5\%$)

Typical production spread 6.7 $\pm 0.2\Omega$ (see note 3)

Minimum impedance (in nominal frequency range)
7.8 Ω at 2,360 Hz

Diaphragm:

Effective area, S_D 16.6 cm² (2.6 sq in)

Effective moving mass, M_D 0.92 gm

Free air resonance frequency, f_s :

Nominal 650 Hz (tolerance ± 70 Hz)

Typical production spread 620 ± 20 Hz (see note 3)

Total mechanical resistance of suspension, R_{MS} :
1.2 mech Ω

Suspension compliance, C_{MS} : 8.2×10^{-5} m/N
 8.2×10^{-8} cm/dyne)

Force factor, Bl : 4.5 N/A

Damping:

Mechanical Q_M 2.8

Electrical Q_E 1.59

Total Q_T 1.01 (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. (See Note 5)

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.

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

5 Minimum crossover frequency 3,000 Hz, filter cut-off slope at least 18 dB per octave.

