

MEASURING DIODE for frequencies up to 1000 Mc/s

HEATING

Indirect by A.C. or D.C.; series or parallel supply

Heater voltage $V_f = 6.3 \text{ V}$

Heater current $I_f = 300 \text{ mA}$

CAPACITANCE

Between anode and cathode $C_d < 0.5 \text{ pF}$

TYPICAL CHARACTERISTICS

Heater voltage $V_f = 6.3 \text{ V}$

Diode current $I_d = 0.5 \text{ mA}$

Diode voltage $V_d < 3 \text{ V}$

LIMITING VALUES (Absolute limits)

Peak inverse voltage

at frequencies lower than 100 Mc/s

$V_d \text{ inv}_p (f < 100 \text{ Mc/s}) = \text{max. } 1000 \text{ V}$

at frequencies higher than 100 Mc/s

$V_d \text{ inv}_p (f > 100 \text{ Mc/s}) = \text{max. } \frac{100}{f} \times 1000 \text{ V } 1)$

Cathode current (heater voltage from 5.6 to 7.0 volts) $I_k = \text{max. } 300 \mu\text{A}$

Peak cathode current (heater voltage from 5.6 to 7.0 volts) $I_{kp} = \text{max. } 5 \text{ mA}^2)$

Voltage between heater and cathode $V_{kf} = \text{max. } 50 \text{ V}$

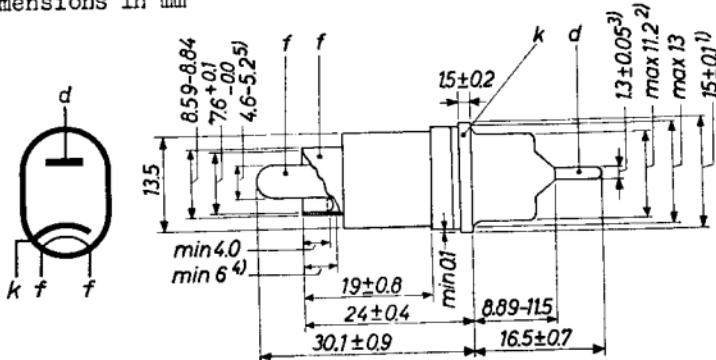
External resistance between heater and cathode $R_{kf} = \text{max. } 20 \text{ k}\Omega$

Heater voltage $V_f = \begin{matrix} \text{max. } 7.0 \text{ V} \\ \text{min. } 5.6 \text{ V} \end{matrix}$

¹) f in Mc/s

²) For frequencies lower than 100 c/s
 $I_{kp} = \text{max. } 0.3 + 0.047 f \text{ mA } (f \text{ in c/s})$

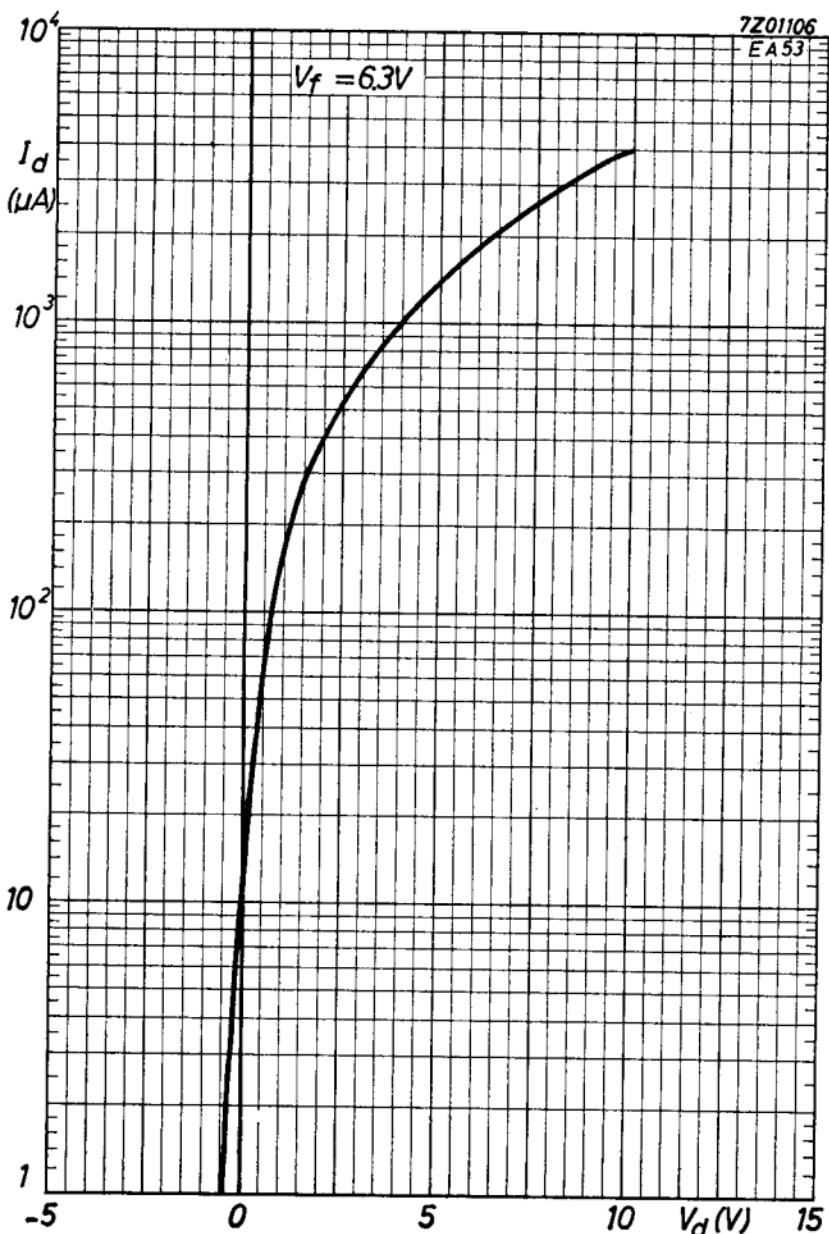
Dimensions in mm



- ¹⁾ In order to avoid strain, the connection to the cathode disc should be sufficiently flexible
- ²⁾ Eccentricity with respect to the cathode disc max.0.35 mm
- ³⁾ Eccentricity with respect to the cathode disc max.0.25 mm
- ⁴⁾ This dimension defines the length of the cylindrical section
- ⁵⁾ The max. dimension includes the eccentricity

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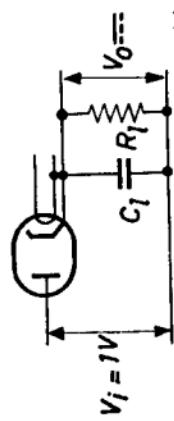
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With suitable mounting of the diode the deviations from the
curve at 1000 Mc/s are < + 5% - 10%



$$V_f = 6.3V$$
$$R_l = 1M\Omega$$
$$\frac{1}{\omega C_1} \ll R_l$$

140

V_o
(%)

120

100

80

60

40 0

f (Mc/s)

1200

1000

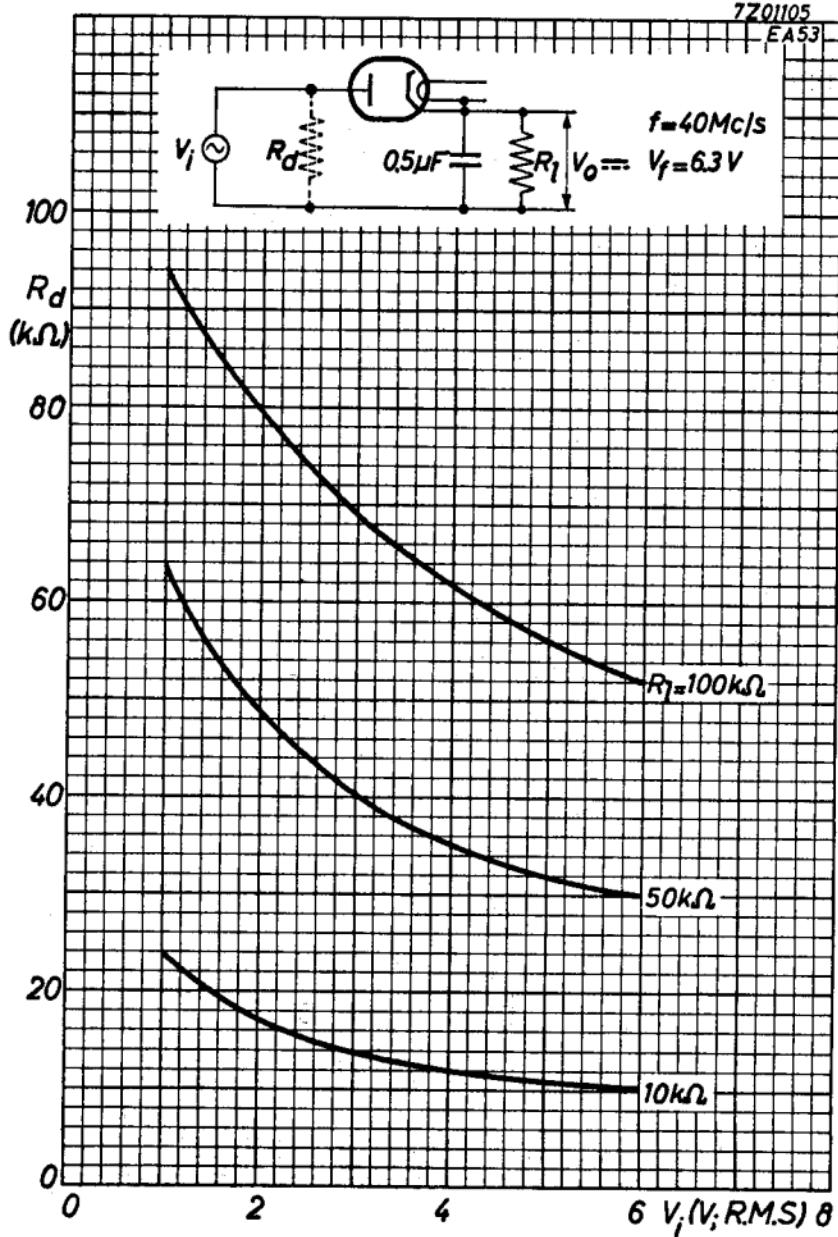
800

600

400

200

0

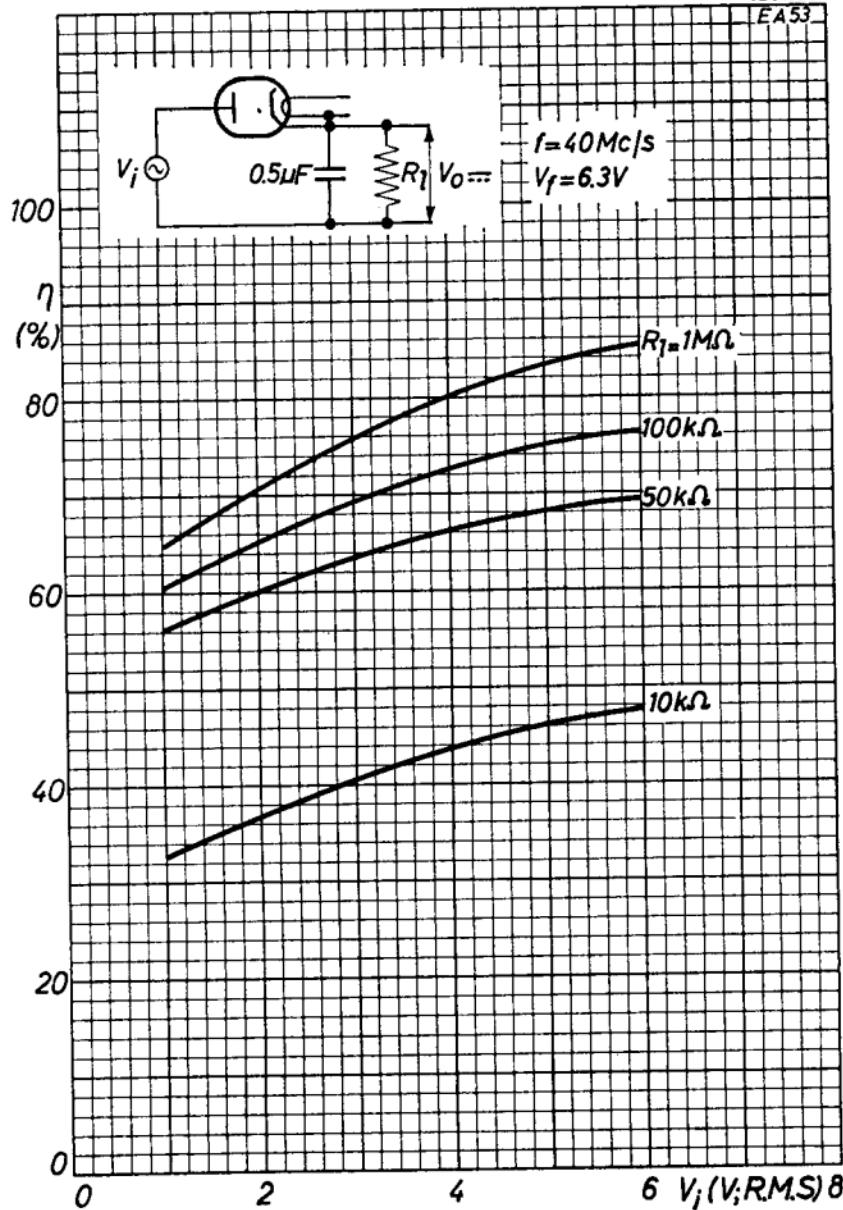
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HANDBOOK

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