

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)

$I_k = \text{max. } 300 \text{ } \mu\text{A}$

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

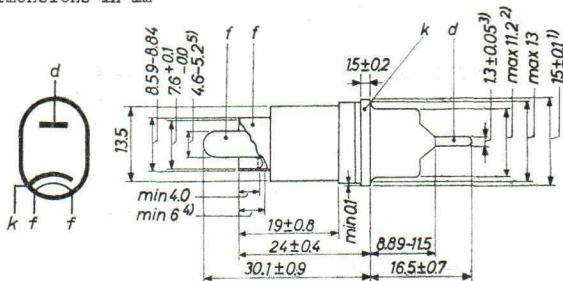
$V_f = \text{max. } 7.0 \text{ V}$
 $\text{min. } 5.6 \text{ V}$

¹⁾ f in Mc/s

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

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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

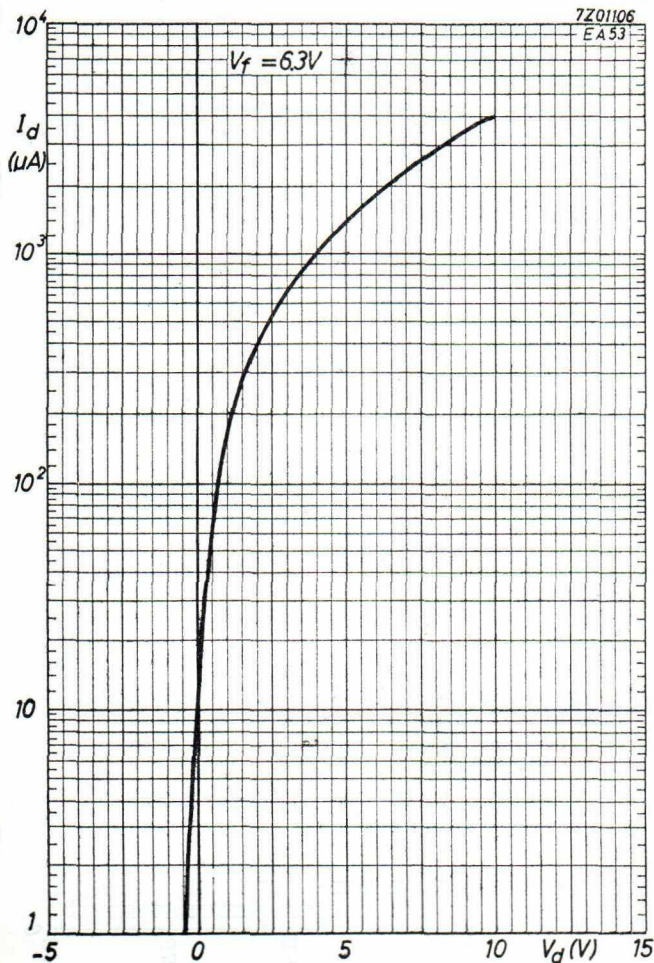
⁵⁾ The max. dimension includes the eccentricity

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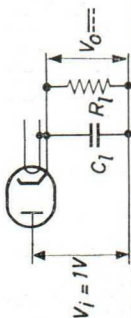
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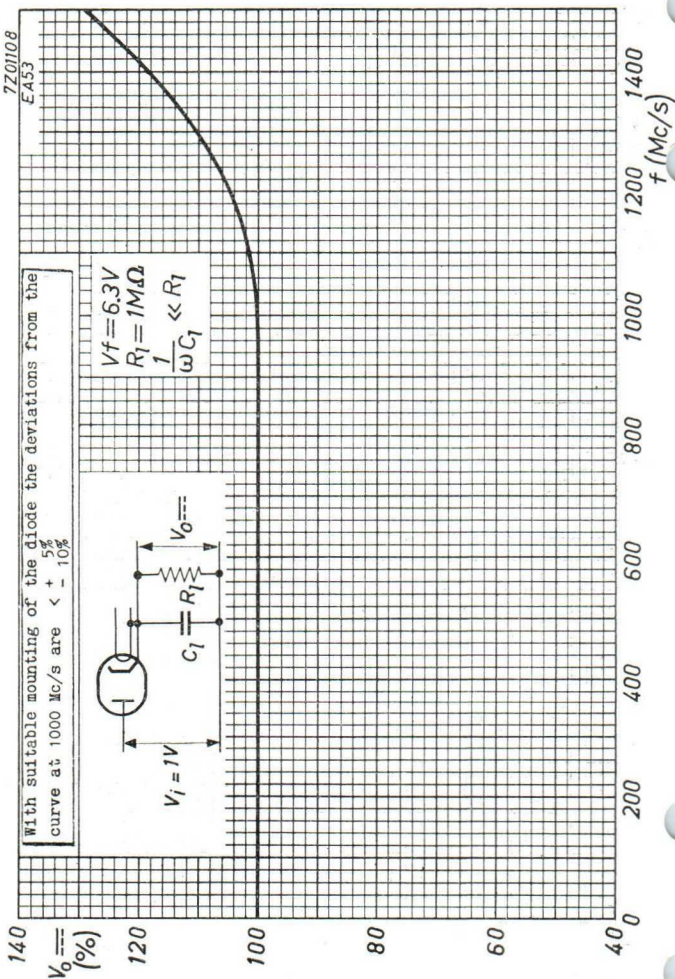
With suitable mounting of the diode the deviations from the curve at 1000 Mc/s are $\pm 5\%$ to $\pm 10\%$



$$Vf = 6.3V$$

$$R_1 = 1M\Omega$$

$$\frac{1}{\omega C_1} \ll R_1$$

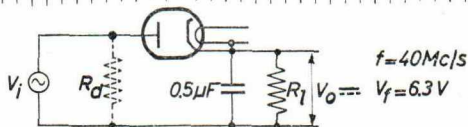


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R_d
($k\Omega$)

100

80

60

40

20

0

$R_1 = 100k\Omega$

$50k\Omega$

$10k\Omega$

0 2 4 6 V_i (V, R.M.S.) 8

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