

MEASURING DIODE for frequencies up to 1000 Mc/s
 DIODE DE MESURE pour des fréquences jusqu'à 1000 MHz
 MESSDIODE für Frequenzen bis 1000 MHz

Heating : indirect by A.C. or D.C.
 series or parallel supply

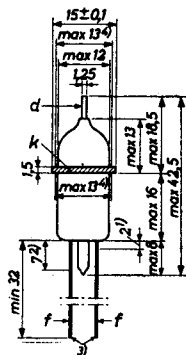
Chauffage: indirect par C.A. ou C.C.
 alimentation série ou pa-
 rallèle

Heizung : indirekt durch Wechsel-
 oder Gleichstrom; Serien-
 oder Parallelspeisung

$V_F = 6,3 \text{ V}$

$I_F = 300 \text{ mA}$

Dimensions in mm
 Dimensions en mm
 Abmessungen in mm



Eccentricity of the anode pin with respect to the cathode:
 max. 0.25 mm

Excentricité de la broche de l'anode par rapport à la
 cathode: 0,25 mm au maximum

Exzentrität des Anodenstiftes gegenüber der Katode:
 max. 0,25 mm

In order to avoid strain, the connections to the cathode
 should be made elastically

Afin d'éviter des tensions du verre, la cathode doit être
 connectée par des conducteurs flexibles

Um Glasspannungen zu vermeiden sind die Katodenzuleitungen
 federnd zu halten

1) This part of the leads should not be bent
 Cette partie des fils ne sera pas pliée
 Dieser Teil der Drähte soll nicht gebogen werden

2) This part of the leads should not be soldered
 Ne pas faire de soudures à cette partie des fils
 Dieser Teil der Drähte soll nicht gelötet werden

3) 4) See page 2; voir page 2; siehe Seite 2

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

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

at frequencies higher than 100 Mc/s

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

Cathode current (heater
voltage from 5.6 to 7.0
volts)

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

Peak cathode current
(heater voltage from
5.6 to 7.0 volts)

$I_{kp} = \text{max.} \quad 5 \text{ mA}^2)$

Voltage between heater
and cathode

$V_{kf} = \text{max.} \quad 50 \text{ V}$

External resistance be-
tween heater and cathode

$R_{kf} = \text{max.} \quad 20 \text{ k}\Omega$

Heater voltage

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

¹⁾ f in Mc/s

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

Capacitance
Capacité
Kapazität

$C_d < 0,5 \text{ pF}$

Typical characteristics
Caractéristiques types
Kenndaten

$I_d = 0,5 \text{ mA}$

$V_d < 3 \text{ V}$

Insulation

Isolément d-k

Isolation

$r_{dk} > 10\,000 \text{ M}\Omega$

Limiting values (ABSOLUTE LIMITS)
Caractéristiques limites (LIMITES ABSOLUES)
Grenzdaten (ABSOLUTE GRENZEN)

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

$V_d \text{ inv}_p (f > 100 \text{ Mc/s}) = \text{max. } 1000 \times \frac{100}{f} \text{ V}^5)$

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

$I_{k_p} = \text{max. } 5 \text{ mA}$

$V_{kf} = \text{max. } 50 \text{ V}$

$R_{kf} = \text{max. } 20 \text{ k}\Omega$

$V_f = \text{min. } 5,6 \text{ V}$

$V_f = \text{max. } 7,0 \text{ V}$

³) Cadmiated lead; 0.4 mm diameter
Fil cadmié d'un diamètre de 0,4 mm
Kadmierter Draht; 0,4 mm Durchmesser

⁴) Maximum diameter of the glass seal
Diamètre maximum du scellement de verre
Max. Durchmesser der Glaseinschmelzung

⁵) f in Mc/s; f en MHz; f in MHz

Capacitance
Capacité
Kapazität

$C_d < 0,5 \text{ pF}$

Typical characteristics
Caractéristiques types
Kenndaten

$I_d = 0,5 \text{ mA}$

$V_d < 3 \text{ V}$

Insulation

Isolément d-k

Isolation

$r_{dk} > 10\,000 \text{ M}\Omega$

Limiting values (ABSOLUTE LIMITS)
Caractéristiques limites (LIMITES ABSOLUES)
Grenzdaten (ABSOLUTE GRENZEN).

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

$V_d \text{ inv}_p (f > 100 \text{ Mc/s}) = \text{max. } 1000 \times \frac{100}{f} \text{ V } ^6)$

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

$I_{kp} = \text{max. } 5 \text{ mA}$

$V_{kf} = \text{max. } 50 \text{ V}$

$R_{kf} = \text{max. } 20 \text{ k}\Omega$

$V_f = \text{min. } 5,6 \text{ V}$

$V_f = \text{max. } 7,0 \text{ V}$

3) Cadmiated lead; 0.4 mm diameter
Fil cadmié d'un diamètre de 0,4 mm
Kadmierter Draht; 0,4 mm Durchmesser

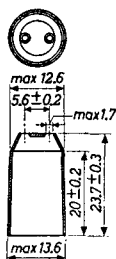
4) Maximum diameter of the glass seal
Diamètre maximum du scellement de verre
Max. Durchmesser der Glaseinschmelzung

→ 5) The temperature of the protective cap should not exceed
100 °C
La température du culot de protection ne surpassera
pas 100 °C
Die Temperatur der Schutzkappe soll 100 °C nicht über-
schreiten

6) f in Mc/s; f en MHz; f in MHz

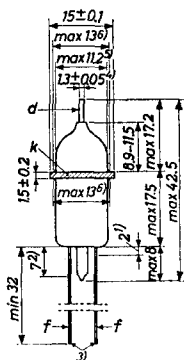
EA52**PHILIPS**

→ Dimensions in mm

Protective cap

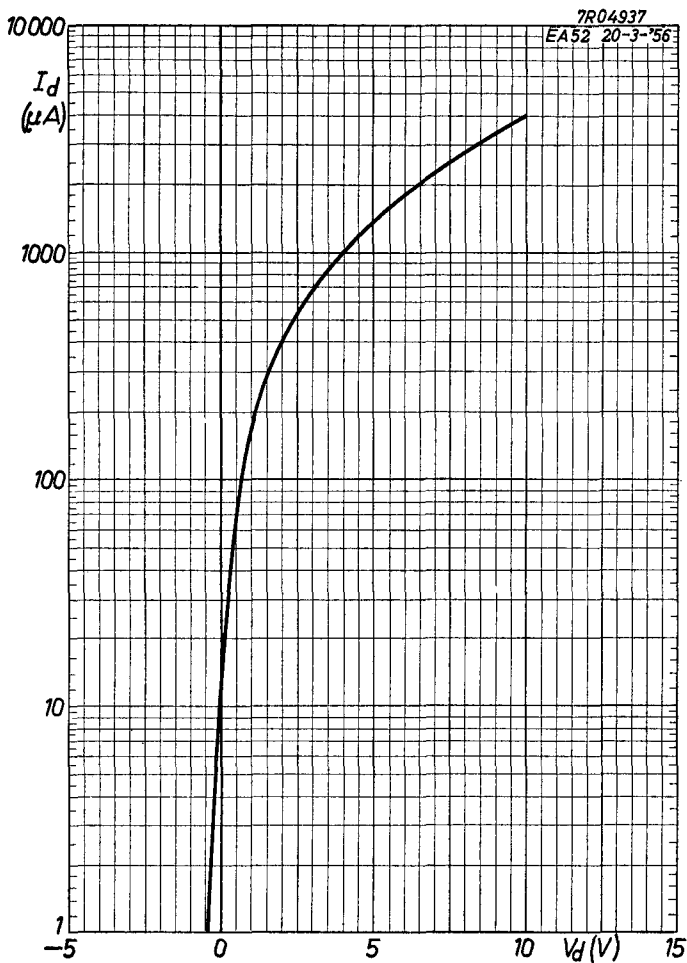
The temperature of the protective cap should not exceed 100 °C

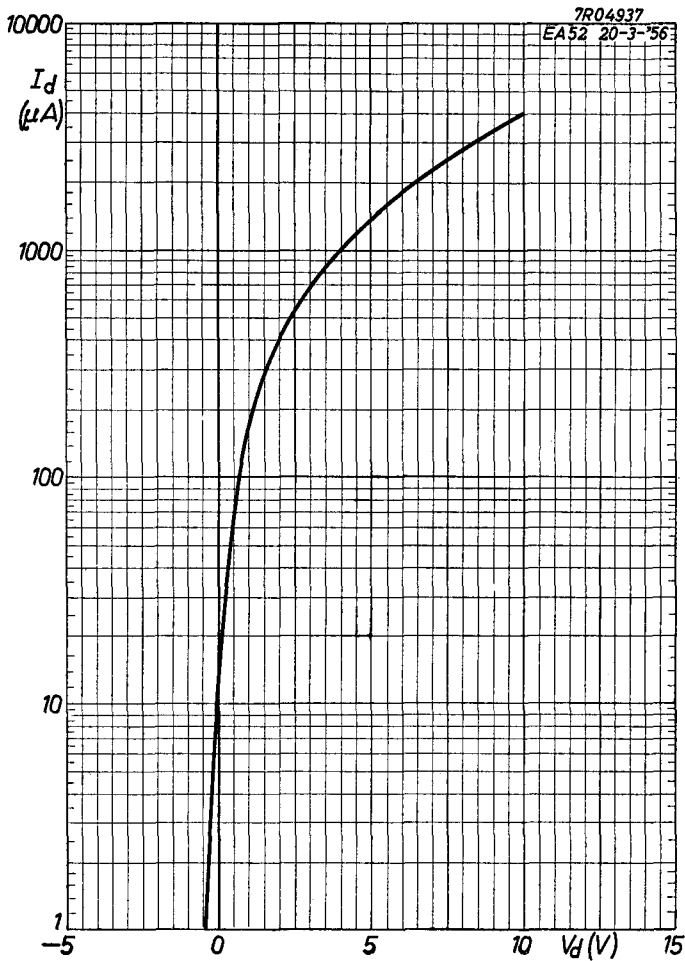
In order to avoid strain, the connection to the cathode disc should be sufficiently flexible



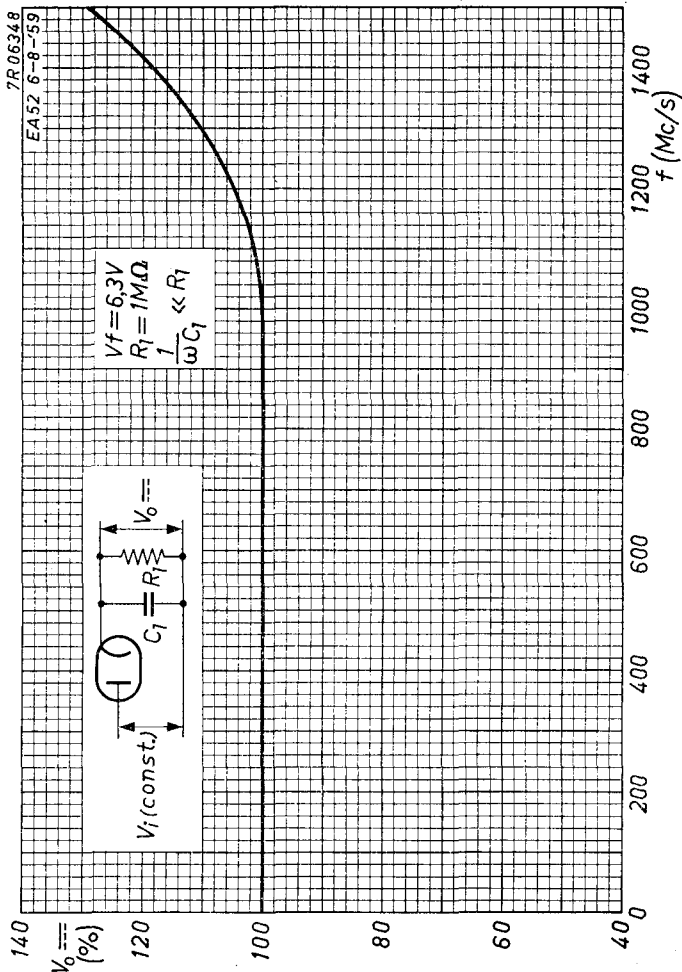
For curves of the EA52 please refer to type EA53

- 1) This part of the leads should not be bent
- 2) This part of the leads should not be soldered
- 3) Gold plated leads, 0.4 mm diameter
- 4) Eccentricity with respect to the cathode disc max. 0.25 mm
- 5) Eccentricity with respect to the cathode disc max. 0.35 mm
- 6) Maximum diameter of the glass seal





9.9.1959

EA52**PHILIPS**



	EA52	
page	sheet	date
1	1	1957.05.05
2	1	1959.10.10
3	1	1962.12.12
4	2	1957.05.05
5	2	1959.10.10
6	2	1962.12.12
7	A	1957.05.05
8	A	1959.09.09
9	B	1959.09.09
10	FP	2005.05.06