

THYRATRON; inert gas filled tetrode with negative control characteristic for industrial applications

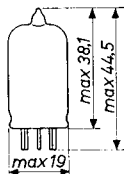
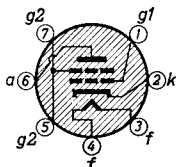
THYRATRON; tétrode à remplissage de gaz inerte avec caractéristique de commande négative pour applications industrielles

STROMTORRÖHRE; edelgasgefüllte Tetrode mit negativer Steuerkennlinie für industrielle Verwendung

Heating : indirect
 Chauffage: indirect
 Heizung : indirekt

$V_f = 6,3 \text{ V} \pm 10 \%$
 $I_f = 150 \text{ mA}$
 $T_w = \text{min. } 10 \text{ sec.}$

Dimensions in mm
 Dimensions en mm
 Abmessungen in mm



Base, culot, sockel: Miniature

Capacitances
 Capacités
 Kapazitäten

$C_{g1} = 2,0 \text{ pF}$
 $C_a = 1,5 \text{ pF}$
 $C_{ag1} = 0,03 \text{ pF}$

Typical characteristics
 Caractéristiques types
 Kenndaten

$V_{\text{arc}} = 10 \text{ V}$
 $V_a/V_{g1} = 250^1)$
 $V_a/V_{g2} = 15^1)$

Critical grid No.1 current

Courant de grille No.1 critique ($V_a=350 \text{ V}_{\text{eff}}$) = 0,5 μA
 Kritischer Strom des 1. Gitters

Recovery time
 Temps de rétablissement
 Erholungszeit

$V_{\text{ap}} = 500 \text{ V}$
 $I_{\text{kp}} = 100 \text{ mA}$
 $T_{\text{imp}} = 20 \text{ } \mu\text{sec}$
 $R_{g1} = 1 \text{ k}\Omega$
 $V_{g1} = \overbrace{-13 \text{ } \dots \text{ } -100}^1 \text{ V}_{\text{max}}$
 $T_{\text{dion}} = 40 \text{ } \dots \text{ } 30 \text{ } \mu\text{sec}$

¹⁾ At striking point; a l'allumage; bei Zündung

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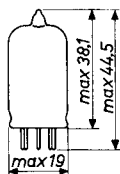
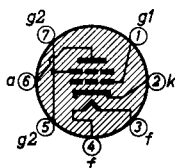
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$C_{g1} = 2,0 \text{ pF}$
 $C_a = 1,5 \text{ pF}$
 $C_{ag1} = 0,03 \text{ pF}$

Typical characteristics
 Caractéristiques types
 Kenndaten

$V_{arc} = 10 \text{ V}$
 $V_a/V_{g1} (R_{g2} = 0 \Omega) = 250^1)$
 $V_a/V_{g2} (R_{g1} = 0 \Omega) = 15^1)$

Critical grid No.1 current

Courant de grille No.1 critique ($V_a=350 \text{ V}_{eff}$) = 0,5 μA
 Kritischer Strom des 1. Gitters

Recovery time
 Temps de rétablissement
 Erholungszeit

$V_a = 500 \text{ V}$
 $I_{kp} = 100 \text{ mA}$
 $T_{imp} = 20 \text{ } \mu\text{sec}$
 $R_{g1} = 50 \text{ k}\Omega$
 $V_{g1} = -50 \text{ V}$
 $T_{dion} = 40 \text{ } \mu\text{sec}$

¹⁾ At striking point; à l'allumage; bei Zündung

Limiting values (Absolute limits)
 Caractéristiques limites (Limites absolues)
 Grenzdaten (Absolute Werte)

V_{ap}		= max. 500 V
$V_{a\ invp}$		= max. 500 V
$-V_{g2}$		= max. 50 V ¹⁾
$-V_{g2}$		= max. 10 V ²⁾
I_{g2}	($V_a > -10\text{ V}$)	= max. 5 mA ³⁾
R_{g2}		= max. 1 M Ω
$-V_{g1}$		= max. 100 V ¹⁾
$-V_{g1}$		= max. 10 V ²⁾
I_{g1}	($V_a > -10\text{ V}$)	= max. 5 mA ³⁾
I_{g1p}	($V_a > -10\text{ V}$)	= max. 25 mA
I_{g1p}	($V_a < -10\text{ V}$)	= max. 30 μ A
R_{g1}		= max. 10 M Ω
I_k	($T_{av} = \text{max. } 15\text{ sec}$)	= max. 25 mA
I_{kp}		= max. 100 mA
$I_k\ \text{surge}$	($T = \text{max. } 0,1\text{ sec}$)	= max. 2 A
V_{kfp}	(k pos.; f neg.)	= max. 100 V
V_{kfp}	(k neg.; f pos.)	= max. 25 V
t_{amb}		= -50 °C/+90 °C

¹⁾ Before conduction
 Avant l'allumage
 Gelöschte Röhre

²⁾ During conduction
 Pendant la période de conduction
 Gezündete Röhre

³⁾ $T_{av} = \text{max. } 0,02\text{ sec.}$

Limiting values (Absolute limits)
 Caractéristiques limites (Limites absolues)
 Grenzdaten (Absolute Werte)

V_{ap}		= max. 500 V
V_a invp		= max. 500 V
$-V_{g2}$		= max. 50 V ¹⁾
$-V_{g2}$		= max. 10 V ²⁾
I_{g2}	($V_a > -10$ V)	= max. 5 mA ³⁾
R_{g2}		= max. 1 M Ω ⁴⁾
$-V_{g1}$		= max. 100 V ¹⁾
$-V_{g1}$		= max. 10 V ²⁾
I_{g1}	($V_a > -10$ V)	= max. 5 mA ³⁾
I_{g1p}	($V_a > -10$ V)	= max. 25 mA
I_{g1p}	($V_a < -10$ V)	= max. 30 μ A
R_{g1}		= max. 10 M Ω ⁵⁾
I_k	(T_{av} = max. 15 sec)	= max. 25 mA
I_{kp}		= max. 100 mA
I_k surge	(T = max. 0,1 sec)	= max. 2 A
V_{kfp}	(k pos.; f neg.)	= max. 100 V
V_{kfp}	(k neg.; f pos.)	= max. 25 V
t_{amb}		= -55 °C/+90 °C

1) Before conduction
 Avant l'allumage
 Gelöschte Röhre

2) During conduction
 Pendant la période de conduction
 Gezündete Röhre

3) T_{av} = max. 0,02 sec.

4) Grid Nr. 2 should preferably be connected directly to the cathode. However, the max. permissible value of I_{g2} should not be exceeded.
 La grille no. 2 devra de préférence être reliée à la cathode. Cependant, la valeur max. admissible de I_{g2} ne doit pas être dépassée.
 Das 2. Gitter soll vorzugsweise mit der Katode verbunden werden. Der max. zulässige Wert von I_{g2} soll jedoch nicht überschritten werden.

5) Recommended value during stand by 100 k Ω
 Valeur conseillée dans la position d'attente 100 k Ω
 Empfohlener Wert in Bereitschaftsstellung 100 k Ω

PHILIPS

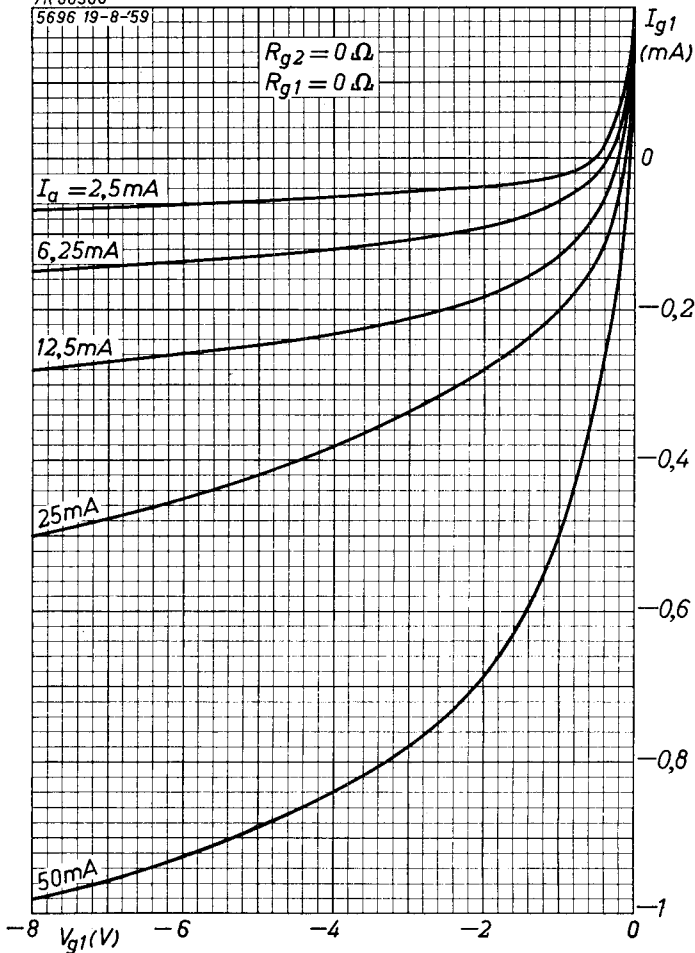
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$$R_{g2} = 0 \Omega$$

$$R_{g1} = 0 \Omega$$



9.9.1959

A

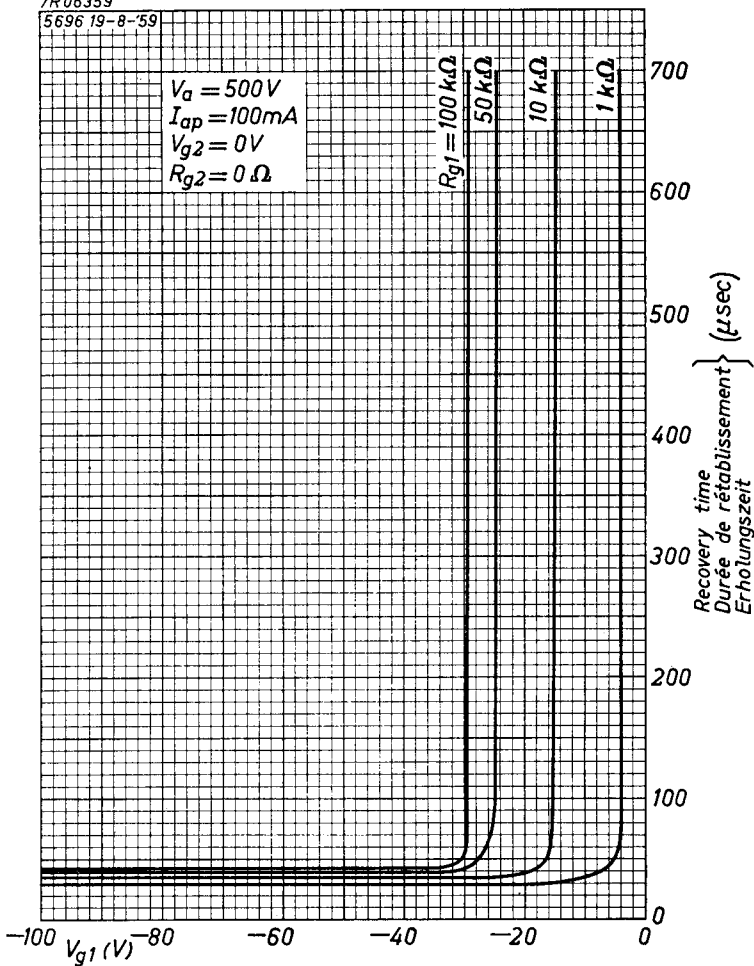
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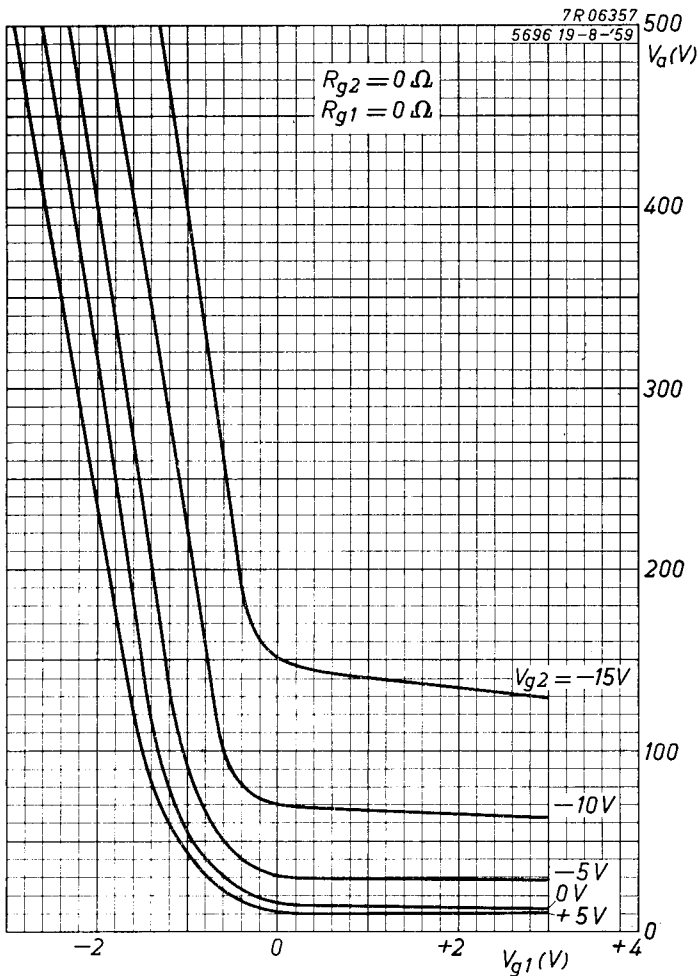
$V_a = 500V$
 $I_{ap} = 100mA$
 $V_{g2} = 0V$
 $R_{g2} = 0\Omega$

 $R_{g1} = 100k\Omega$ $50k\Omega$ $10k\Omega$ $1k\Omega$ 

B

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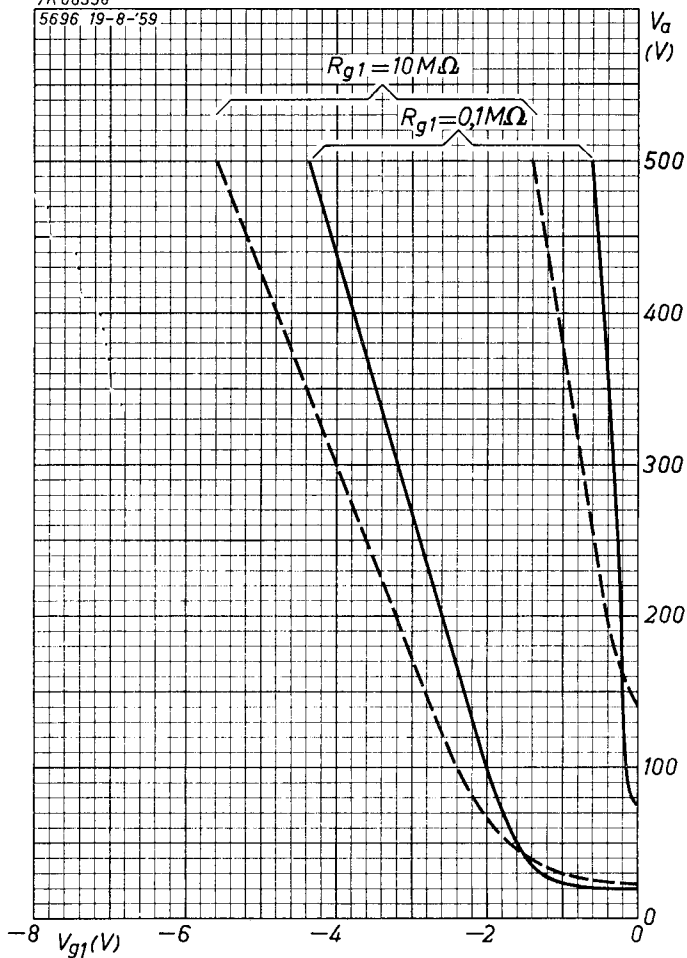
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HANDBOOK

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page	sheet	date
1	1	1959.02.02
2	1	1959.09.09
3	2	1959.02.02
4	2	1959.09.09
5	A	1959.09.09
6	B	1959.09.09
7	C	1959.09.09
8	D	1959.09.09
9	FP	1999.12.30