

EDISWAN

MAZDA

30F27

SCREENED V.H.F. TETRODE Indirectly heated—for series operation **TENTATIVE**

30F27

GENERAL

The 30F27 is an indirectly heated V.H.F. Tetrode, with variable μ characteristics for reducing cross modulation effects at higher signal levels. It is of Frame Grid construction and is intended for use in Television Turret Tuners.

RATING

Heater Current	I_h	0.3	A
Heater Voltage	V_h	3.7	V
Maximum Anode Voltage	$V_a(\max)$	250	V
Maximum Screen Voltage	$V_{g2}(\max)$	230	V
Maximum Anode Dissipation	$p_a(\max)$	2.5	W
Maximum Screen Dissipation	$p_{g2}(\max)$	0.4	W
Maximum Heater/Cathode Voltage (r.m.s.)	$V_{h-k}(\text{rms})\max$	90†	
Maximum Cathode Current	$I_k(\max)$	18	mA
Mutual Conductance	g_m	15*	mA/V
Inner Amplification Factor	μ_{g1-g2}	60*	

* At $V_a=170\text{V}$, $V_{g2}=140\text{V}$, $I_a=13.5\text{mA}$.

† From Cathode to higher potential heater pin.

INTER-ELECTRODE CAPACITANCES (pF)

		*	**	***
Grid 1/Earth	c_{in}	6.3	6.6	7.6
Anode/Earth	c_{out}	1.8	2.1	3.1
Anode/Grid 1	c_{a-g1}	0.027	0.029	0.031
Grid 1/Grid 2	c_{g1-g2}	2.0	2.0	2.0
Grid 1/Cathode	c_{g1-k}	4.0	4.1	4.5

* With fully shielded socket, without can.

** With holder capacity balanced out.

*** Total interelectrode capacities including B9A ceramic holder without skirt or radial shield (Plessey Holder type CP180014/1).

December, 1960

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RADIO & ELECTRONIC COMPONENTS DIVISION

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TENTATIVE**DIMENSIONS**

Maximum Overall Length	56 mm
Maximum Diameter	22.2mm
Maximum Seated Height	49 mm

MOUNTING POSITION—Unrestricted**TYPICAL OPERATION**

Anode Voltage	V_a	$\uparrow$ 170	$\uparrow\uparrow$ 150	V
Screen Voltage (Initial)	V_{g2}	140	105	V
Self Bias Resistance	R_k	82	.	Ω
Grid Current Bias Resistance	R_{g1}	.	330	$k\Omega$
Grid Bias Voltage (approx)	V_{g1}	-1.25	.	V
Anode Current	I_a	13.5	14	mA
Screen Current	I_{g2}	1.7	1.4	mA
Equivalent Grid Noise Resistance	R_{eq}	450		Ω
Mutual Conductance	g_m	15	15.5mA/V	
Input loss at 50 Mc/s		6.8§		$k\Omega$
Input Capacity Working	$c_{in(w)}$	10.3§**		pF
Change in Input Capacity produced by biasing valve to cut-off	Δc_{in}	2.9§		pF

† Cathode self bias circuit

†† Grid Current bias circuit.

§ Measured at 50Mc/s with the three Cathodes strapped and taken directly to earth.

** With holder capacity balanced out.

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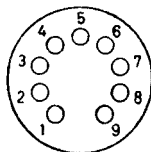
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BASE—Noval (B9A)



Viewed from free end of pins

CONNECTIONS

Pin 1	Cathode	k
Pin 2	Control Grid	g ₁
Pin 3	Cathode, input	k _{in}
Pin 4	Heater	h
Pin 5	Heater	h
Pin 6	Shield	s
Pin 7	Anode	a
Pin 8	Screen Grid	g ₂
Pin 9	Cathode	k

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