

# SUBMINIATURE A.F. VOLTAGE AMPLIFYING PENTODE

# DF64

Subminiature voltage amplifying pentode suitable for use in hearing aids. It has a filament current of 10mA and is primarily intended for use with an h.t. battery supply of 15volts.

## FILAMENT

$V_f$	0.62	V
$I_f$	10	mA

## MOUNTING POSITION

Any

**Note.**—Direct soldered connections to the leads of this valve must be at least 5mm from the seal and any bending of the valve leads must be at least 1.5mm from the seal.

## CAPACITANCES (measured without external shield)

$C_{a-g1}$	<0.2	pF
$C_{in}$	1.8	pF
$C_{out}$	2.0	pF

## CHARACTERISTICS

$V_a$	15	V
$V_{g2}$	15	V
$I_a$	50	$\mu$ A
$V_{g1}$	-0.75	V
$I_{g2}$	17	$\mu$ A
$g_m$	90	$\mu$ A/V
$\Gamma_a$	1.2	M $\Omega$
$\mu_{g1-g2}$	7.5	

## OPERATING CONDITIONS AS RESISTANCE COUPLED A.F. AMPLIFIER (see circuit for component references)

### With fixed bias

$V_b$	15	V
$R_a$	2.2	M $\Omega$
$R_{g2}$	2.7	M $\Omega$
$V_{g1}$	-0.62	V
$I_k$	6.6	$\mu$ A
Gain	27.4	dB
$R_{out}$	5.0	M $\Omega$

### With grid current biasing (zero source impedance)

$V_b$	15	V
$R_a$	2.2	M $\Omega$
$R_{g2}$	4.7	M $\Omega$
$R_{g1}$	10	M $\Omega$
$I_k$	5.9	$\mu$ A
Gain	28	dB
$R_{out}$	5.0	M $\Omega$

## LIMITING VALUES

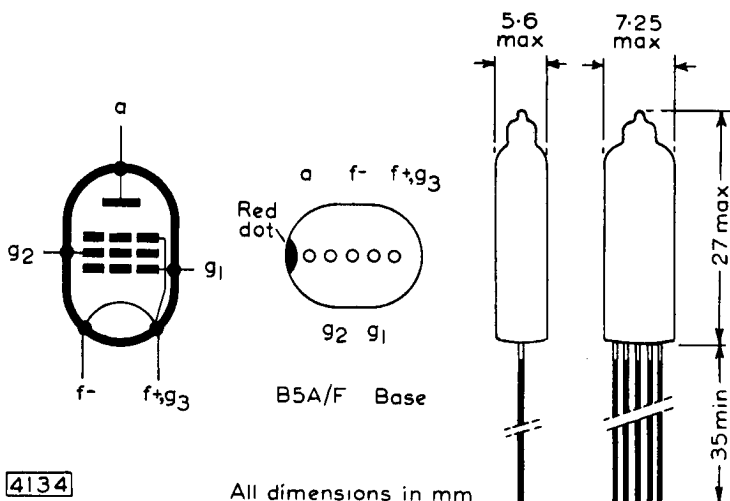
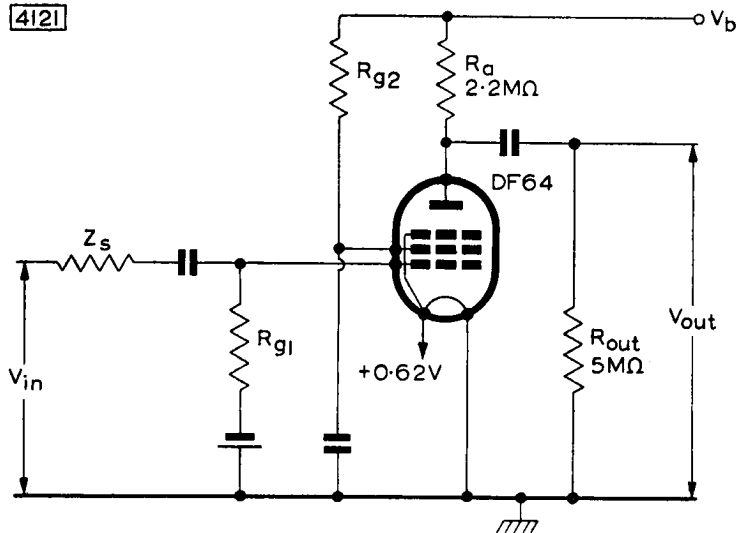
$V_a$ max.	45	V
$V_{g2}$ max.	45	V
$I_k$ max.	75	$\mu$ A

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4121



4134

All dimensions in mm