

8F76R

1 SECTION
CONSTRUCTION
TETRODE

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

High-power transmitting tetrode designed for RF power amplification, linear amplification, oscillation, modulation, or frequency multiplication.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.06 S
MAXIMUM PLATE VOLTAGE	8000 V
MAXIMUM PLATE DISSIPATION	15000 W
Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.	

The 8F76R is a forced-air-cooled VHF power tetrode for television, FM, and SSB linear-amplifier service, featuring rugged coaxial ceramic-to-metal construction and long-life design.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 NEC

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 NEC

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum ratings apvly at frequency up to	250	Maximum ratings apvly at frequency up to 250 Ȳ
Voltage cviieitiieecntronssennssnsanscassons	7.5 V	Voltage cviieitiieecntronssennssnsanscassons 7.5 volts
Current .e.veeerceeesnnencacsossncncssansnnas	120 A	Current .e.veeerceeesnnencacsossncncssansnnas 120 amps
Maximum Starting Current ciecececcencas	300 A	Maximum Starting Current ciecececcencas 300 amps
Transconductance (Ib= [1]	2.5	Transconductance (Ib=2.5 8EPS) +evrrrivervnnoncnens 60 millimhos
Transconductance (Ib= [2]	8	Transconductance (Ib=2.5 8EPS) +evrrrivervnnoncnens 60 millimhos
Transconductance (Ib= [3]	60	Transconductance (Ib=2.5 8EPS) +evrrrivervnnoncnens 60 millimhos
Anplification Factor, Grid No [1]	2	Anplification Factor, Grid No.2 to Grid No.1 8.7%
Anplification Factor, Grid No [2]	8.7	Anplification Factor, Grid No.2 to Grid No.1 8.7%
Grid No.1 to Filament iivivveeracencans	56	Grid No.1 to Filament iivivveeracencans 56 uplf
Grid No.1 to Grid NOe2 teieeererecesnononens	91	Grid No.1 to Grid NOe2 teieeererecesnononens 91 uuF
Grid Wo [1]	2	Grid Wo.2 to Plate .sceereeeervessncocncncscs 20 uprF
Grid Wo [2]	20	Grid Wo.2 to Plate .sceereeeervessncocncncscs 20 uprF
Grid No [1]	1	Grid No. 1 to Plate (Note 1) et 0.6 i
Grid No [2]	1	Grid No. 1 to Plate (Note 1) et 0.6 i

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No [3]	0.6	Grid No. 1 to Plate (Note 1) et 0.6 i
Plate to Filament (Note [1])	1	Plate to Filament (Note 1) ..eeveeeveceee.. 0.075 uuF
Plate to Filament (Note [2])	0.075	Plate to Filament (Note 1) ..eeveeeveceee.. 0.075 uuF
on the grid No	2	on the grid No.2 terminal plain and connected to it.
To plate: Forced air cooling required (Note	2	To plate: Forced air cooling required (Note 2)
Plate dissipation ceieensoseecee [1]	10 kW	Plate dissipation ceieensoseecee 10 12 15 kW
Plate dissipation ceieensoseecee [2]	12 kW	Plate dissipation ceieensoseecee 10 12 15 kW
Plate dissipation ceieensoseecee [3]	15 kW	Plate dissipation ceieensoseecee 10 12 15 kW
Maximum incoming air temperature	45	Maximum incoming air temperature 45 °C
Maximum radiator temperature (Note [1])	3	Maximum radiator temperature (Note 3) 250 oC
Maximum radiator temperature (Note [2])	250	Maximum radiator temperature (Note 3) 250 oC
temperature c	250	temperature c... 250 c
DC Plate VOItAZE ceveieesecensceacsscscnscscsnesonans	8000	DC Plate VOItAZE ceveieesecensceacsscscnscscsnesonans 8000 volts
DC Grid No [1]	2 V	DC Grid No.2 VOLTage cceeveesccscsacccocnsecensanna 1500 volts
DC Grid No [2]	1500 V	DC Grid No.2 VOLTage cceeveesccscsacccocnsecensanna 1500 volts
DC Grid Fo.l Voltage .eveieieeesesnsessccacnnaesss ~	1000 V	DC Grid Fo.l Voltage .eveieieeesesnsessccacnnaesss ~1000 volts
DC Plate Current ...e.iceeeeeeccececeescacacscnnnnas	5.5 A	DC Plate Current ...e.iceeeeeeccececeescacacscnnnnas 5.5 amps
DC Grid No [1]	2	DC Grid No.2 CURtent teeeceessccscocccscovosoonnnas 250 mA
DC Grid No [2]	250	DC Grid No.2 CURtent teeeceessccscocccscovosoonnnas 250 mA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid No.1 CuUrrrent .ouueeeecereearantooccasnoascese	250	DC Grid No.1 CuUrrrent .ouueeeecereearantooccasnoascese 250 mA
Plate Input et cesesteasescecttessnsnestnnas	30 kV	Plate Input et cesesteasescecttessnsnestnnas 30 kV
Plate Dissipation seeeseveeeececesscecsoccacnnansnes	15 kW	Plate Dissipation seeeseveeeececesscecsoccacnnansnes 15 kW
Grid No [1]	2 W	Grid No.2 Dissipation teiuieseececececncccosaceasae 300 watts
Grid No [2]	300 W	Grid No.2 Dissipation teiuieseececececncccosaceasae 300 watts
Grid Mo.1 DisSSipation steveeeciececccacecscaannans	180	Grid Mo.1 DisSSipation steveeeciececccacecscaannans 180 watts
DC Plate Voltage ..veicenceecencressncccsannnonsans	6200 V	DC Plate Voltage ..veicenceecencressncccsannnonsans 6200 volts
DC Grid No [1]	2	DC Grid No.2 VOLT8EE cuvvritiseecasanaccorscanennces - 830 volts
DC Grid No [2]	830	DC Grid No.2 VOLT8EE cuvvritiseecasanaccorscanennces - 830 volts
DC Grid No.1 Voltage ceevecssccnsesncacnossccsannsonn	-120 V	DC Grid No.1 Voltage ceevecssccnsesncacnossccsannsonn -120 volts
SC Grid №	2 A	SC Grid №.2 Current
Driving Power (aprox.) (Note	4 W	Driving Power (aprox.) (Note 4)
DC plate Voltage ® [1]	0 V	DC plate Voltage ® 0 8 6 D & 9 00 0 B 00 eSO OE 00 PR O S Ce eSS e 8000 volts
DC plate Voltage ® [2]	8 V	DC plate Voltage ® 0 8 6 D & 9 00 0 B 00 eSO OE 00 PR O S Ce eSS e 8000 volts
DC plate Voltage ® [3]	6 V	DC plate Voltage ® 0 8 6 D & 9 00 0 B 00 eSO OE 00 PR O S Ce eSS e 8000 volts
DC plate Voltage ® [4]	9 V	DC plate Voltage ® 0 8 6 D & 9 00 0 B 00 eSO OE 00 PR O S Ce eSS e 8000 volts
DC plate Voltage ® [5]	8000 V	DC plate Voltage ® 0 8 6 D & 9 00 0 B 00 eSO OE 00 PR O S Ce eSS e 8000 volts
DC Grid No [1]	2 V	DC Grid No.2 Voltage .veecescassosecsocensosncsnncas 1500 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid No [2]	1500 V	DC Grid No.2 Voltage veecescassosecsocensosnscsnncas 1500 volts
Max. Signal DC Plate Current c..ceescececsvcascnsnas	5.5 A	Max. Signal DC Plate Current c..ceescececsvcascnsnas 5.5 amps
° Pl&te Dissipation o-.o.-..o-... -.Aocaun.t-oc-'OCt0" ,	15 kW	° Pl&te Dissipation o-.o.-..o-....Aocaun.t-oc-'OCtO" ,15 kW
Grid No [1]	2 W	Grid No.2 Dissipation teeieeescscveececscsacsasscscss 300 vatts
Grid No [2]	300 W	Grid No.2 Dissipation teeieeescscveececscsacsasscscss 300 vatts
DC Plate Voltage [1]	90 V	DC Plate Voltage 90 s e PP L et st es P e eP TR EORBOISIOIEOTOGETRTDLETSY 8000 voltis
DC Plate Voltage [2]	8000 V	DC Plate Voltage 90 s e PP L et st es P e eP TR EORBOISIOIEOTOGETRTDLETSY 8000 voltis
DC Grid N°	2 V	DC Grid N°.2 Voltage ...'...'.....'...'l.'...'... .lmo volts
DC Grid NO-l Voltage [1]	0 V	DC Grid NO-l Voltage 0ocoolacl'oo- oona'.t'l.lo.oof -130 volts
DC Grid NO-l Voltage [2]	-130 V	DC Grid NO-l Voltage 0ocoolacl'oo- oona'.t'l.lo.oof -130 volts
PeakRI' Grid l\ 'o.l voltage LA B R B BN K B BE AN K BB AN B K I I Y B A BN	120 V	PeakRI' Grid l\ 'o.l voltage LA B R B BN K B BE AN K BB AN B K I I Y B A BN 120 voltis
Max. Signal DC Plate Current ocvevecececesceares	2.16 A	Max. Signal DC Plate Current ocvevecececesceares 2.16 amps
Zero~Signal DC Plate Current ...ceeieecccascsocessns	250 A	Zero~Signal DC Plate Current ...ceeieecccascsocessns 250 mA
Max. Signal DC Grid No [1]	2 A	Max. Signal DC Grid No.2 Current;.. - 30
Max. Signal DC Grid No [2]	30 A	Max. Signal DC Grid No.2 Current;.. - 30
Max. Signal Power Output (approx.) csesestscscenns	11.4 kW	Max. Signal Power Output (approx.) csesestscscenns 11.4 kW
DC Plate Voltage R R R I I S I RN SR B A B A N I I A B I I I)	8000 V	DC Plate Voltage R R R I I S I RN SR B A B A N I I A B I I I) 8000 volts
DC Grid No [1]	2 V	DC Grid No.2 Voltage seecesevecaas ceessasesrevsns 1500 volts
DC Grid No [2]	1500 V	DC Grid No.2 Voltage seecesevecaas ceessasesrevsns 1500 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid Yo.l Voltage .vieieesecececnssansnseneesanres =	1000 V	DC Grid Yo.l Voltage .vieieesecececnssansnseneesanres =1000 Qol@;
DC Plate Current c...eiecerescacoscscrssessacssssccnnnes	4.5 A	DC Plate Current c...eiecerescacoscscrssessacssssccnnnes 4.5 amps
DC Grid Yo [1]	2	DC Grid Yo.2 Curreqt “etsessesasesessacecassasenrares 250
DC Grid Yo [2]	250	DC Grid Yo.2 Curreqt “etsessesasesessacecassasenrares 250
DC Grid No.l Current ..e..ccececccocnanas ;	250 A	DC Grid No.l Current ..e..ccececccocnanas ;..... 250
Plate Input seeieiceseraeccccennsovssssaansssassaares	30 kW	Plate Input seeieiceseraeccccennsovssssaansssassaares 30 kW
Plate Dissipalion seeeeeesevestnconccessacocnsescnsa	15	Plate Dissipalion seeeeeesevestnconccessacocnsescnsa 15 k¥
Grid No [1]	2 W	Grid No.2 Dissipation s.iecevnvnceronocrocasavengenae 300 wattis
Grid No [2]	300 W	Grid No.2 Dissipation s.iecevnvnceronocrocasavengenae 300 wattis
Grid No.l Dissiration ..eeeeeeveccaicsecscnssnconacas	180	Grid No.l Dissiration ..eeeeeeveccaicsecscnssnconacas 180 watts
DC Plate Volt&ge nco{ouuQ-.;co-o-- noo'foouoon;o-u	7000	DC Plate Volt&ge nco{ouuQ-.;co-o-- noo'foouoon;o-u.. 7000 Volts
DC Grid No'z Voltage ® [1]	0 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [2]	5 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [3]	9 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [4]	6 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [5]	45 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [6]	65 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC Grid No'z Voltage ® [7]	508 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid No'z Voltage ® [8]	0 V	DC Grid No'z Voltage ® 0 & 5 9 6 45 65 508 0 s s PR Lo e looo volts
DC GI'id NO;]. Voltage [1]	6 V	DC GI'id NO;]. Voltage 6 ¢ 2000080000000 tAsss BRI PLsLD -260 VOLTs
DC GI'id NO;]. Voltage [2]	2000080000000 V	DC GI'id NO;]. Voltage 6 ¢ 2000080000000 tAsss BRI PLsLD -260 VOLTs
DC GI'id NO;]. Voltage [3]	-260 V	DC GI'id NO;]. Voltage 6 ¢ 2000080000000 tAsss BRI PLsLD -260 VOLTs
Peak RF Grid N0el VOLERZE eeveeesreensseconnsacenss	312	Peak RF Grid N0el VOLERZE eeveeesreensseconnsacenss 312 volts
DC Plate Current ccceveveenssnscscnscscascncnse	3 A	DC Plate Current ccceveveenssnscscnscscascncnse 3 amps
DC Grid No [1]	2 A	DC Grid No.2 Current ..ceeevesossosssssssssssnncnoss 63 mA
DC Grid No [2]	63 A	DC Grid No.2 Current ..ceeevesossosssssssssssnncnoss 63 mA
DC Grid Ro.l Current ..c.viiiieerenntesonnoscsnsnsns	67 A	DC Grid Ro.l Current ..c.viiiieerenntesonnoscsnsnsns 67 mA
Driving Power (approx.) (Note [1])	4 W	Driving Power (approx.) (Note 4) tueeeveieeierencnnns 20 watts
Driving Power (approx.) (Note [2])	20 W	Driving Power (approx.) (Note 4) tueeeveieeierencnnns 20 watts

TUBE TINKER

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