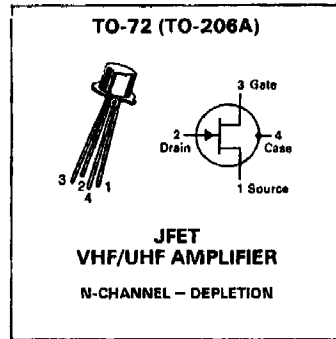


MAXIMUM RATINGS

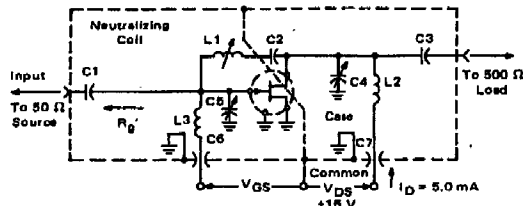
Rating	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	30	Vdc
Drain-Gate Voltage	V _{DG}	30	Vdc
Reverse Gate-Source Voltage	V _{GSR}	-30	Vdc
Forward Gate Current	I _{GF}	10	mAdc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	300 1.71	mW mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +150	°C



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit	
OFF CHARACTERISTICS						
Gate-Source Breakdown Voltage (I _G = 10 μAdc, V _{DS} = 0)	V _{(BR)GSS}	30	—	—	Vdc	
Gate-Source Cutoff Voltage (V _{DS} = 15 Vdc, I _D = 0.5 nAdc)	BFW10 BFW11	V _{GSOFF}	—	8 6	Vdc	
Gate Reverse Current (V _{GS} = 20 Vdc, V _{DS} = 0)	I _{GSS}	—	—	0.1	nAdc	
Gate-Source Voltage (V _{GS} = 15 Vdc, I _D = 400 μAdc)	BFW10	V _{GS}	2	—	Vdc	
Gate-Source Voltage (V _{GS} = 15 Vdc, I _D = 50 μAdc)	BFW11	V _{GS}	1.25	—	Vdc	
ON CHARACTERISTICS						
Zero-Gate Voltage Drain Current (V _{DS} = 15 Vdc, V _{GS} = 0)	BFW10 BFW11	I _{DSS}	8 4	— —	20 10	mAdc
SMALL-SIGNAL CHARACTERISTICS						
Forward Transmittance (V _{DS} = 15 Vdc, V _{GS} = 0, f = 1 kHz)	BFW10 BFW11	Y _{fs}	3.5 3.0	— —	8.5 8.5	mmhos
Output Admittance (V _{DS} = 15 Vdc, V _{GS} = 0, f = 1.0 kHz)	BFW10 BFW11	Y _{os}	—	—	85 50	μmhos
Input Capacitance (V _{DS} = 15 Vdc, V _{GS} = 0 Vdc, f = 1.0 MHz)		C _{iss}	—	—	5.0	pF
Reverse Transfer Capacitance (V _{DS} = 15 Vdc, V _{GS} = 0 Vdc, f = 1.0 MHz)		C _{rss}	—	—	0.8	pF
Forward Transmittance (V _{DS} = 15 Vdc, V _{GS} = 0, f = 200 MHz)		Y _{fs}	3.2	—	—	mmhos
Equivalent Noise Voltage (V _{DS} = 15 Vdc, V _{GS} = 0, f = 25 Hz)		e _n	—	—	75	nV/√Hz
Noise Figure (V _{DS} = 15 Vdc, V _{GS} = 0 V, see Figures 1, 2, 3)		NF	—	—	2.5	dB

FIGURE 1 — 100 MHz and 400 MHz NEUTRALIZED TEST CIRCUIT



Adjust V_{GS} for
I_D = 5.0 mA
V_{GS} < 0 Volts

NOTE: The noise source is a hot-cold body (AII type 70 or equivalent) with a test receiver (AII type 136 or equivalent).

Reference Designation	VALUE	
	100 MHz	400 MHz
C1	7.0 pF	1.8 pF
C2	1000 pF	17 pF
C3	3.0 pF	1.0 pF
C4	1-12 pF	0.8-8.0 pF
C5	1-12 pF	0.8-8.0 pF
C6	0.0015 μF	0.001 μF
C7	0.0015 μF	0.001 μF
L1	3.0 μH*	0.2 μH**
L2	0.15 μH*	0.03 μH**
L3	0.14 μH*	0.022 μH**

- *L1 17 turns, (approx. — depends upon circuit layout) AWG #28 enameled copper wire, close wound on 9/32" ceramic coil form. Tuning provided by a powdered iron slug.
- L2 4-1/2 turns, AWG #18 enameled copper wire, 5/16" long, 3/8" I.D. (AIR CORE).
- L3 3-1/2 turns, AWG #18 enameled copper wire, 1/4" long, 3/8" I.D. (AIR CORE).

- **L1 6 turns, (approx. — depends upon circuit layout) AWG #24 enameled copper wire, close wound on 7/32" ceramic coil form. Tuning provided by an aluminum slug.
- L2 1 turn, AWG #18 enameled copper wire, 3/8" I.D. (AIR CORE).
- L3 1/2 turn, AWG #18 enameled copper wire, 1/4" I.D. (AIR CORE).

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