

BF244,A,B,C

CASE 29-02, STYLE 22
TO-92 (TO-226AA)

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JFET
VHF/UHF AMPLIFIER
N-CHANNEL – DEPLETION

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	± 30	Vdc
Drain-Gate Voltage	V_{DG}	30	Vdc
Gate-Source Voltage	V_{GS}	30	Vdc
Drain Current	I_D	100	mAdc
Forward Gate Current	$I_{G(f)}$	10	mAdc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	360 2.88	mW mW/ $^\circ\text{C}$
Storage Channel Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$

Refer to 2N4416 for graphs.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Gate-Source Breakdown Voltage ($I_G = 1.0 \mu\text{Adc}$, $V_{DS} = 0$)	$V_{(BR)GSS}$	30	—	—	V
Gate-Source ($V_{DS} = 15 \text{ Vdc}$, $I_D = 200 \mu\text{A}$)	V_{GS}	0.4 0.4 1.6 3.2	— — — —	7.5 2.2 3.8 7.5	V
Gate-Source Cutoff Voltage ($V_{DS} = 15 \text{ Vdc}$, $I_D = 10 \text{ nA}$)	$V_{GS(off)}$	0.5	—	8	V
Gate Reverse Current ($V_{GS} = 20 \text{ Vdc}$, $V_{DS} = 0$)	I_{GSS}	—	—	5	nA

ON CHARACTERISTICS

Zero-Gate Voltage Drain Current ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$)	I_{DSS}	2 2 6 12		25 6.5 15 25	mA
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SMALL-SIGNAL CHARACTERISTICS

Forward Transfer Admittance ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$, $f = 1 \text{ KHz}$)	$ Y_{fs} $	3.0		6.5	mmhos
Output Admittance ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$, $f = 1 \text{ KHz}$)	$ Y_{os} $		40		μmhos
Forward Transfer Admittance ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$, $f = 200 \text{ MHz}$)	$ Y_{fs} $		5.6		mmhos
Reverse Transfer Admittance ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$, $f = 200 \text{ MHz}$)	$ Y_{rs} $		1.0		mmhos
Input Capacitance ($V_{DS} = 20 \text{ Vdc}$, $-V_{GS} = 1 \text{ Vdc}$)	C_{iss}		3		pF
Reverse Transfer Capacitance ($V_{DS} = 20 \text{ Vdc}$, $-V_{GS} = 1 \text{ Vdc}$, $f = 1 \text{ MHz}$)	C_{rss}		0.7		pF
Output Capacitance ($V_{DS} = 20 \text{ Vdc}$, $-V_{GS} = 1 \text{ Vdc}$, $f = 1 \text{ MHz}$)	C_{oss}		0.9		pF
Noise Figure ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$, $R_G = 1 \text{ K}\Omega$, $f = 100 \text{ MHz}$)	N_F		1.5		db
Cut-off Frequency(3) ($V_{DS} = 15 \text{ Vdc}$, $V_{GS} = 0$)	$F(Y_{fs})$		700		MHz

- (1) On orders against the BF245, any or all subgroups might be shipped.
- (2) On orders against the BF244, any or all subgroups might be shipped.
- (3) The frequency at which g_{fs} is 0.7 of its value at 1 KHz.