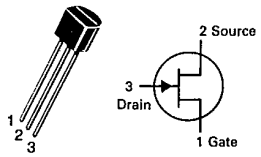
T-31-25

BF256,A,B,C

CASE 29-04, STYLE 23
TO-92 (TO-226AA)



JFET
VHF/UHF AMPLIFIER

N-CHANNEL — DEPLETION

Refer to 2N4416 for graphs.

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°C Derate above 25°C	P_D	360 2.88	mW mW/°C
Storage Channel Temperature Range	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 = 1.0 µAdc, V_{DS} = 0)		$V_{(BR)GSS}$	30	—	—	Vdc
Gate-Source Voltage (V_{DS} = 15 Vdc, I_D = 200 µA)		$V_{GS(off)}$	0.5	—	7.5	Vdc
Gate Reverse Current (V_{GS} = 20 Vdc, V_{DS} = 0)		I_{GSS}	—	—	5	nAdc
ON CHARACTERISTICS						
Zero-Gate Voltage Drain Current) (V_{DS} = 15 Vdc, V_{GS} = 0)	BF256(1)	I_{DSS}	3	—	18	mAdc
	BF256A		3	—	7	
	BF256B		6	—	13	
	BF256C		11	—	18	
SMALL-SIGNAL CHARACTERISTICS						
Forward Transfer Admittance (V_{DS} = 15 Vdc, V_{GS} = 0, f = 1 kHz)		Y_{fs}	4.5	5	—	mmhos
Reverse Transfer Capacitance (V_{DS} = 20 Vdc, $-V_{GS}$ = 1Vdc, f = 1 MHz)		C_{rss}	—	0.7	—	pF
Output Capacitance (V_{DS} = 20 Vdc, V_{GS} = 0, f = 1 MHz)		C_{oss}	—	1.0	—	pF
Noise Figure (V_{DS} = 10 Vdc, R_S = 47Ω, f = 800 MHz)		N_F	—	7.5	—	db
Cut-off Frequency(2) (V_{DS} = 15 Vdc, V_{GS} = 0)		f_{gfs}	—	1000	—	MHz
Power Gain (V_{DS} = 15 Vdc, R_S = 47 Ω, f =800 MHz)		G_p	—	11	—	dB

(1) On orders against the BF256, any or all subgroups might be shipped.
(2) The frequency at which gfs is 0.7 of its value at 1 kHz.