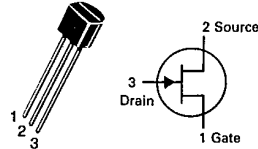


6367254 MOTOROLA SC (XSTRS/R F)

96D 82624 D

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	$V_{DS}$	$\pm 30$	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 $25^\circ\text{C}$	$P_D$	360 2.88	mW mW/ $^\circ\text{C}$
Storage Channel Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>					
Gate-Source Breakdown Voltage ( $I_G = 1.0 \mu\text{Adc}$ , $V_{DS} = 0$ )	$V_{(BR)GSS}$	30	—	—	Vdc
Gate-Source Voltage ( $V_{DS} = 15 \text{ Vdc}$ , $I_D = 200 \mu\text{A}$ )	$V_{GS(off)}$	0.5	—	7.5	Vdc
Gate Reverse Current ( $V_{GS} = 20 \text{ Vdc}$ , $V_{DS} = 0$ )	$I_{GSS}$	—	—	5	nAdc
<b>ON CHARACTERISTICS</b>					
Zero-Gate Voltage Drain Current ( $V_{DS} = 15 \text{ Vdc}$ , $V_{GS} = 0$ )	$I_{DSS}$				mAdc
	BF256(1)	3	—	18	
	BF256A	3	—	7	
	BF256B	6	—	13	
	BF256C	11	—	18	
<b>SMALL-SIGNAL CHARACTERISTICS</b>					
Forward Transfer Admittance ( $V_{DS} = 15 \text{ Vdc}$ , $V_{GS} = 0$ , $f = 1 \text{ kHz}$ )	$Y_{fs}$	4.5	5	—	mmhos
Reverse Transfer Capacitance ( $V_{DS} = 20 \text{ Vdc}$ , $-V_{GS} = 1 \text{ Vdc}$ , $f = 1 \text{ MHz}$ )	$C_{rss}$	—	0.7	—	pF
Output Capacitance ( $V_{DS} = 20 \text{ Vdc}$ , $V_{GS} = 0$ , $f = 1 \text{ MHz}$ )	$C_{oss}$	—	1.0	—	pF
Noise Figure ( $V_{DS} = 10 \text{ Vdc}$ , $R_S = 47 \Omega$ , $f = 800 \text{ MHz}$ )	$N_F$	—	7.5	—	db
Cut-off Frequency(2) ( $V_{DS} = 15 \text{ Vdc}$ , $V_{GS} = 0$ )	$f_{gfs}$	—	1000	—	MHz
Power Gain ( $V_{DS} = 15 \text{ Vdc}$ , $R_S = 47 \Omega$ , $f = 800 \text{ MHz}$ )	$G_p$	—	11	—	dB

(1) On orders against the BF256, any or all subgroups might be shipped.

(2) The frequency at which  $g_{fs}$  is 0.7 of its value at 1 kHz.