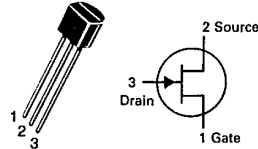


6367254 MOTOROLA SC (XSTRS/R F)

96D 82624 D

T-31-25

BF256,A,B,CCASE 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 @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	360 2.88	mW mW/ $^\circ\text{C}$
Storage Channel Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$

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	—	—	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
ON CHARACTERISTICS					
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	
SMALL-SIGNAL CHARACTERISTICS					
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.

MOTOROLA SMALL-SIGNAL SEMICONDUCTORS