BF256A

BF256A is a Preferred Device

JFET - General Purpose

N–Channel

N–Channel Junction Field Effect Transistor designed for VHF and UHF applications.

- Low Cost TO–92 Type Package
- Forward Transfer Admittance, Y_{fs} = 4.5 mmhos (Min)
- Transfer Capacitance – C_{rss} = 0.7 (Typ)
- Power Gain at f = 800 MHz, Typ. = 11 dB

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
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
Operating and Storage Channel Temperature Range	$T_{channel}$, T_{stg}	–65 to +150	°C

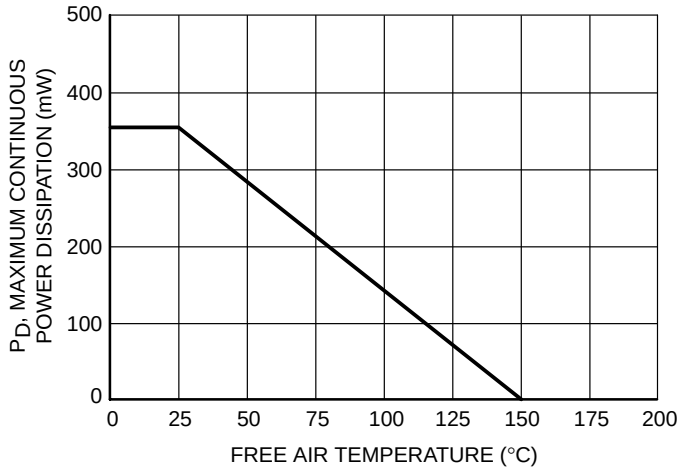

Figure 1. Power Derating Curve

ON Semiconductor™

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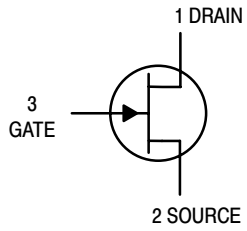
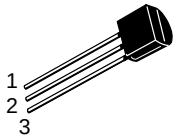
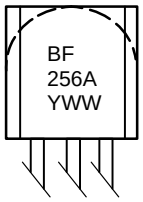




TO–92
CASE 29
STYLE 5

MARKING DIAGRAMS



Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
BF256A	TO–92	5000 Units/Box

Preferred devices are recommended choices for future use and best overall value.

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)	$-V_{GS}$	0.5	—	7.5	Vdc
Gate Reverse Current	($-V_{GS}$ = 20 Vdc, V_{DS} = 0)	$-I_{GSS}$	—	—	5.0	nAdc
ON CHARACTERISTICS						
Zero–Gate–Voltage Drain Current (Note 1.)	(V_{DS} = 15 Vdc, V_{GS} = 0)	I_{DSS}	3.0	–	7.0	mAdc
SMALL–SIGNAL CHARACTERISTICS						
Forward Transfer Admittance	(V_{DS} = 15 Vdc, V_{GS} = 0, f = 1 kHz)	$\|Y_{fs}\|$	4.5	5.0	–	mmhos
Reverse Transfer Capacitance	(V_{DS} = 20 Vdc, $-V_{GS}$ = 1 Vdc, 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
Cut–Off Frequency (Note 2.)	(V_{DS} = 15 Vdc, V_{GS} = 0)	f_{gfs}	–	1000	–	MHz

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle = 2.0%.
2. The frequency at which gfs is 0.7 of its value at 1 KHz.

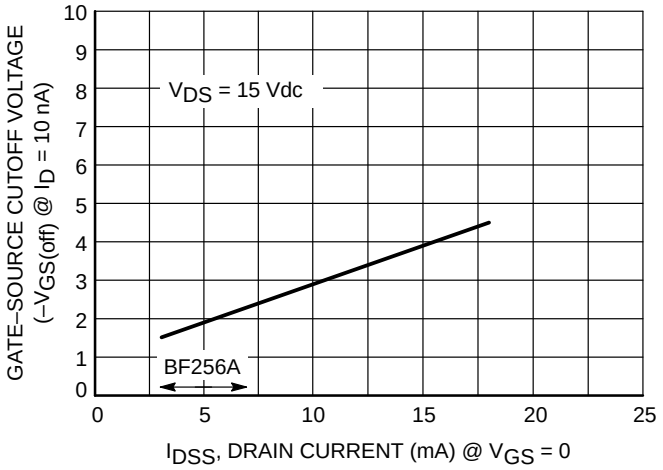


Figure 2. Correlation Between $-V_{GS(off)}$ and I_{DSS}

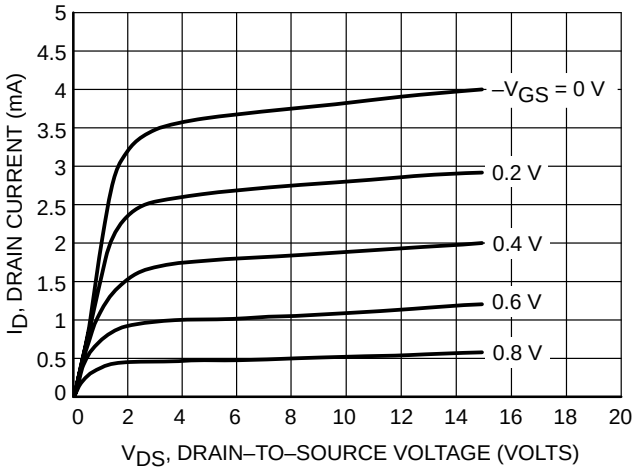


Figure 3. Drain Current versus Drain–to–Source Voltage

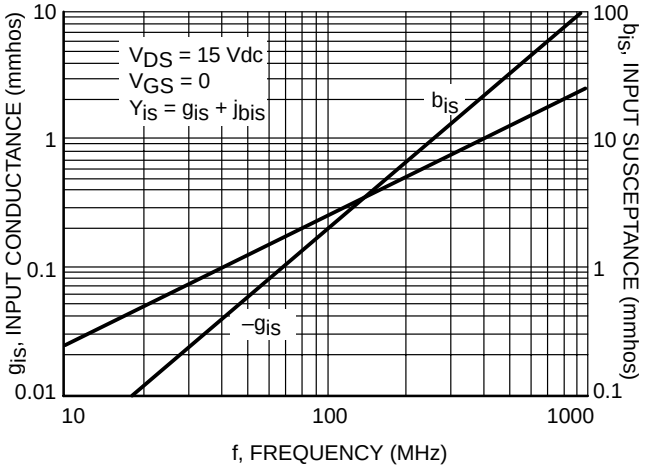


Figure 4. Input Admittance versus Frequency

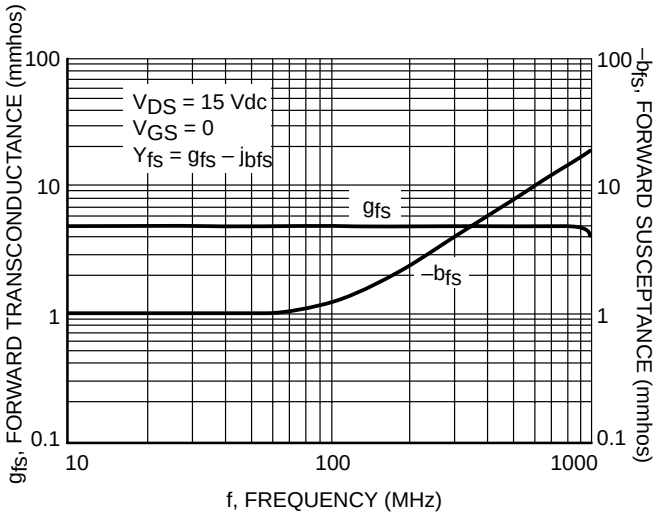


Figure 5. Forward Transfer Admittance versus Frequency

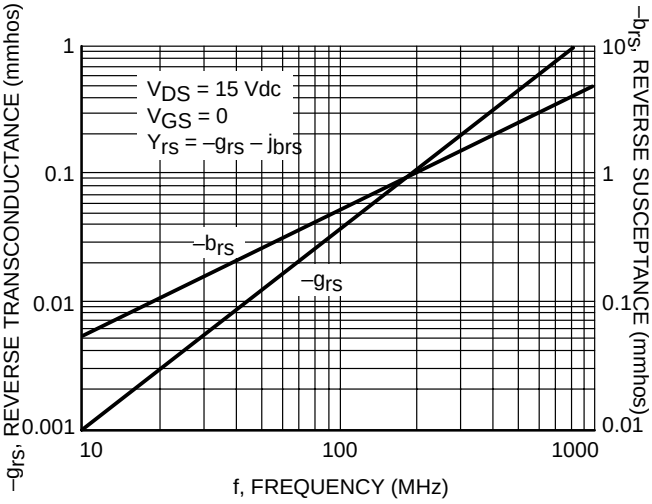


Figure 6. Reverse Transfer Admittance versus Frequency

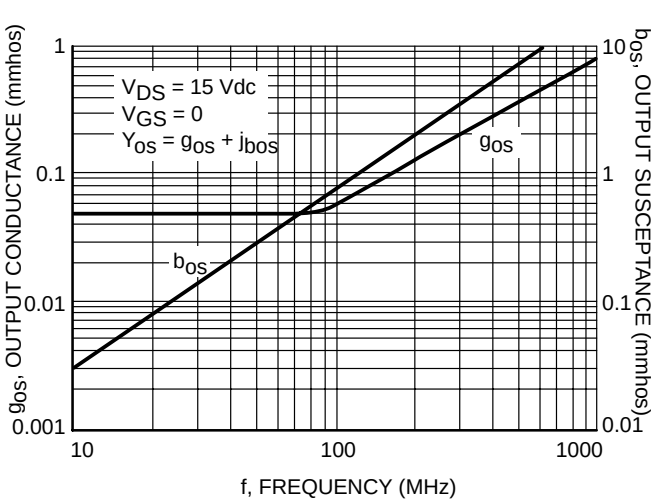


Figure 7. Output Admittance versus Frequency

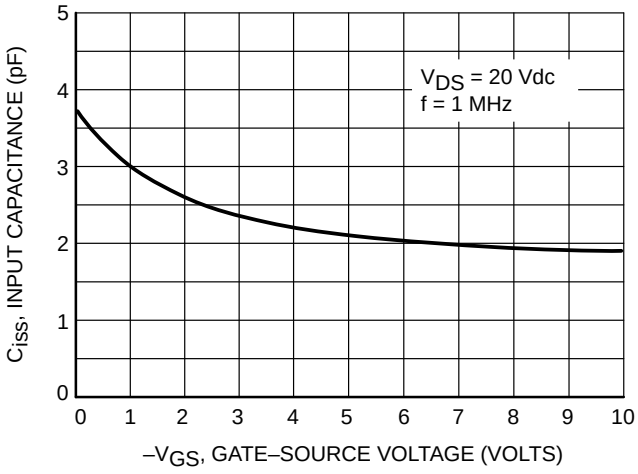


Figure 8. Input Capacitance versus Gate–Source Voltage

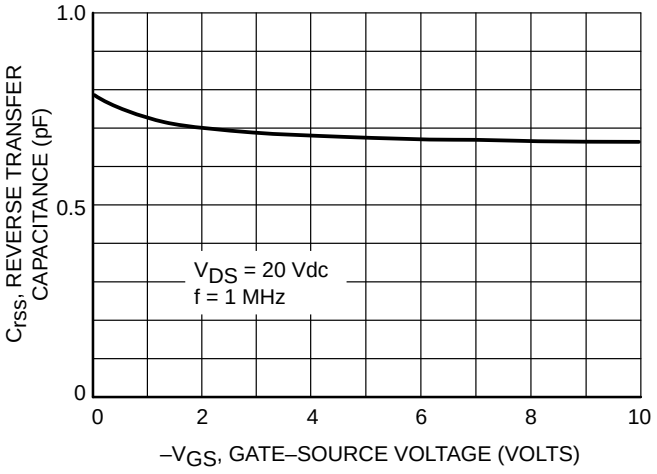
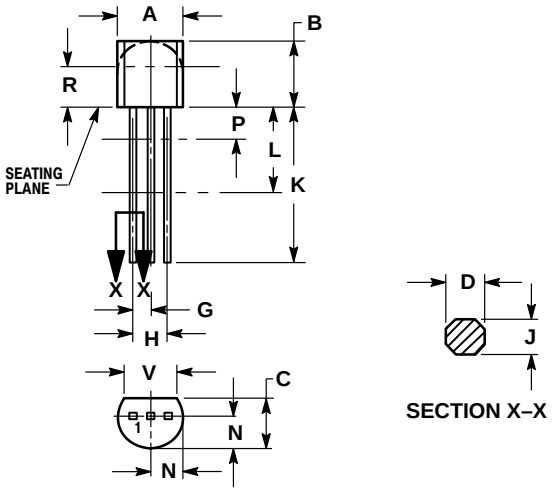


Figure 9. Reverse Transfer Capacitance versus Gate–Source Voltage

PACKAGE DIMENSIONS

TO–92 (TO–226)
CASE 29–11
ISSUE AL



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.04	2.66
P	---	0.100	---	2.54
R	0.115	---	2.93	---
V	0.135	---	3.43	---

PUBLICATION ORDERING INFORMATION

Literature Fulfillment:
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