

NPN General Purpose Amplifier

BF820/BF822

FEATURES

- Low current(max.50mA).
- High voltage(max.300V).



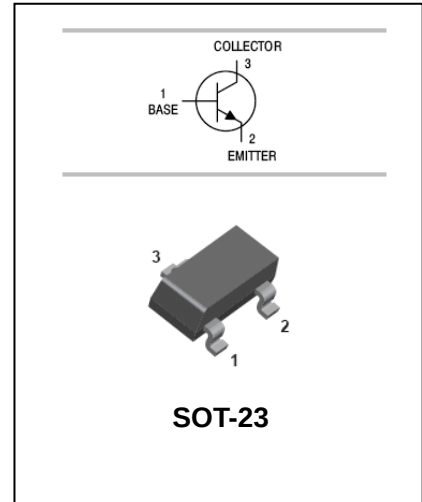
Lead-free

APPLICATIONS

- Telephony and professional communication equipment.

ORDERING INFORMATION

Type No.	Marking	Package Code
BF820	1V	SOT-23
BF822	1X	SOT-23



MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	BF820	V
		BF822	
V_{CEO}	Collector-Emitter Voltage	BF820	V
		BF822	
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Dissipation	250	mW
T_j, T_{stg}	Junction and Storage Temperature	-55to+150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$ $I_E=0$ BF820 BF822	300 250		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$ $I_B=0$ BF820 BF822	300 250		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$ $I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=200V$ $I_E=0$		10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V$ $I_C=0$		50	nA
DC current gain	h_{FE}	$V_{CE}=20V$ $I_C=25mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=30mA$ $I_B=5mA$		0.6	V
Transition frequency	f_T	$V_{CE}=10V$ $I_C=10mA$ $f=100MHz$	60		MHz
Feedback capacitance	C_{re}	$V_{CB}=30V$ $I_C=0$ $f=100MHz$		1.6	pF

PACKAGE OUTLINE

Plastic surface mounted package

SOT-23

Top view and side view of the SOT-23 package. The top view shows dimensions A (width), B (height), D (lead width), and K (total height). The side view shows dimension C (lead height).

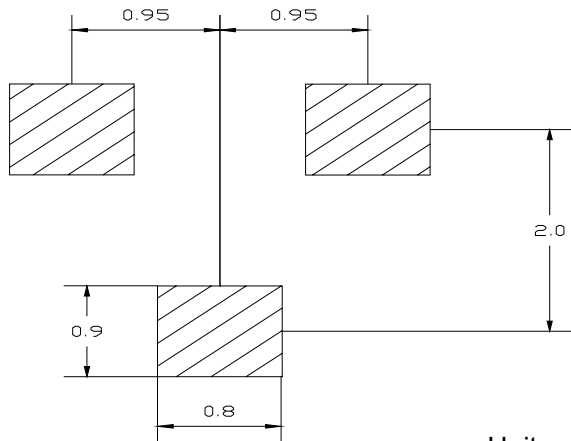
Front view of the SOT-23 package showing dimensions E (lead width) and J (lead height).

Bottom view of the SOT-23 package showing dimensions G (lead width), H (lead height), and C (lead height).

SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

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SOLDERING FOOTPRINT

Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
BF820/822	SOT-23	3000/Tape&Reel