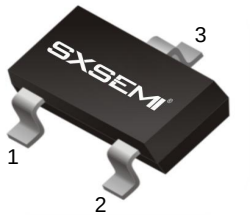
SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

MARKING: BF820:1V, BF822: 1X

FEATURES

- Low current (max.50 mA)
- High voltage (max.300V)
- Telephony and professional communication equipment.

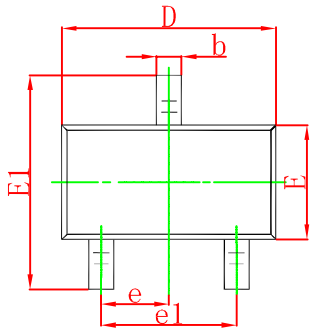
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

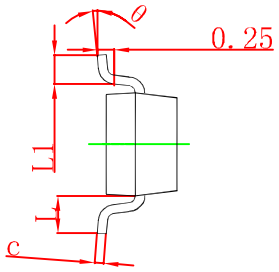
Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BF820 BF822	300 250	V
V_{CEO}	Collector-Emitter Voltage	BF820 BF822	300 250	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current -Continuous		50	mA
P_C	Collector Power Dissipation		0.25	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range		-55-150	℃

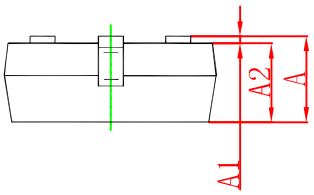
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, 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= 100μA, I_C=0		5		V
Collector cut-off current	I_{CBO}	V_{CB}=200V,I_E=0			0.01	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V,I_C=0			0.05	μA
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
Collector output capacitance	C_{ob}	V_{CB}=30V,I_E=0,f=1MHz			1.6	pF

SOT-23 Package Outline Dimensions

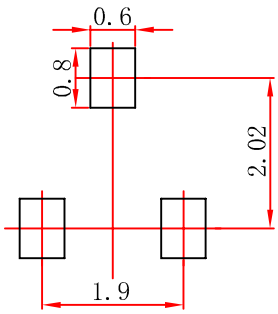






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.