

Features

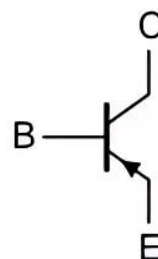
- High DC Current Gain
- High Collector Current
- Low Collector-emitter Saturation Voltage

Applications

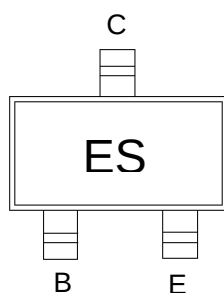
- Low Frequency Amplifier Drive



SOT-323 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-1	A
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

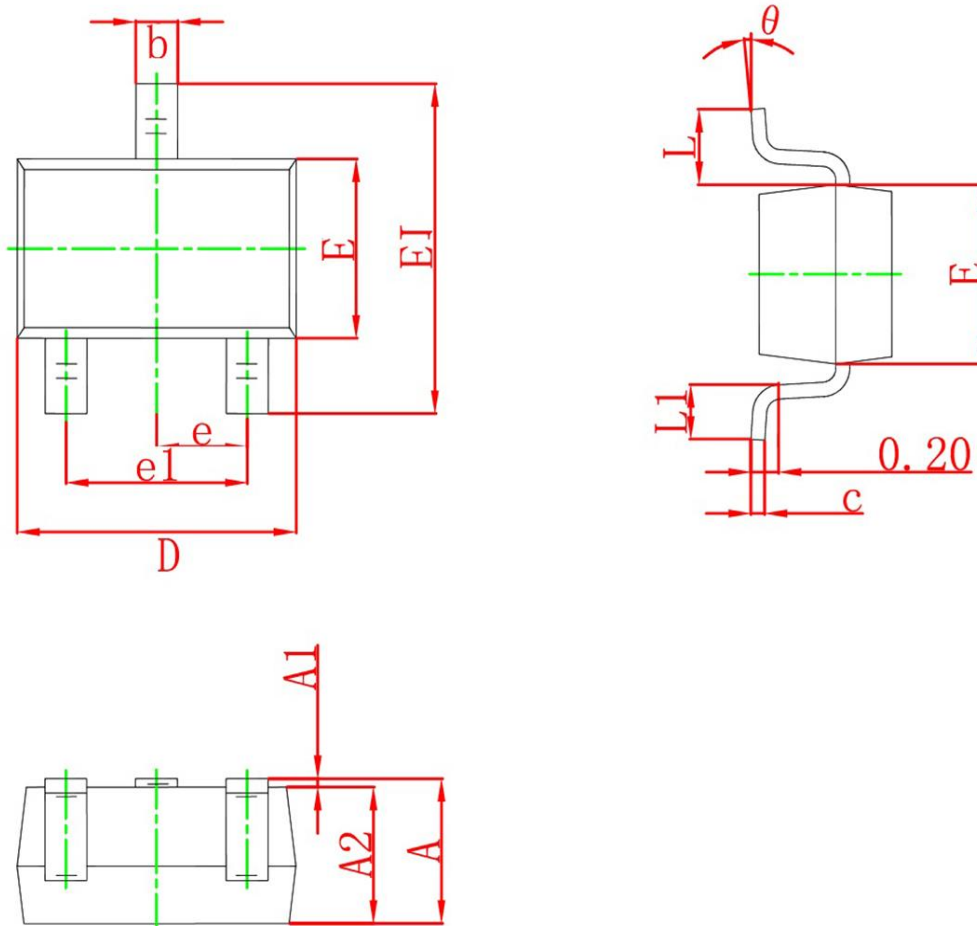
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SB1694	SOT-323	ES	3,000	45,000	180,000	7"reel

Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -10\mu A, I_E = 0$	-30	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-30	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -10\mu A, I_C = 0$	-6	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -30V, I_E = 0$	--	--	-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5V, I_C = 0$	--	--	-100	nA
H_{FE}^*	DC current gain	$V_{CE} = -2V, I_C = -100mA$	270	--	680	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -500mA, I_B = -25mA$	--	--	-0.38	V
f_T	Transition frequency	$V_{CE} = -2V, I_C = -100mA, f = 100MHz$	--	320	--	MHz
C_{ob}	Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$	--	7	--	pF

*Pulse test: pulse width $\leq 350\mu s$, duty cycle $\leq 2.0\%$.

SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°