

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

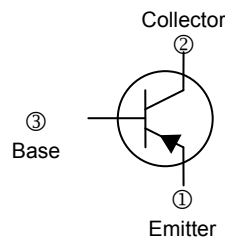
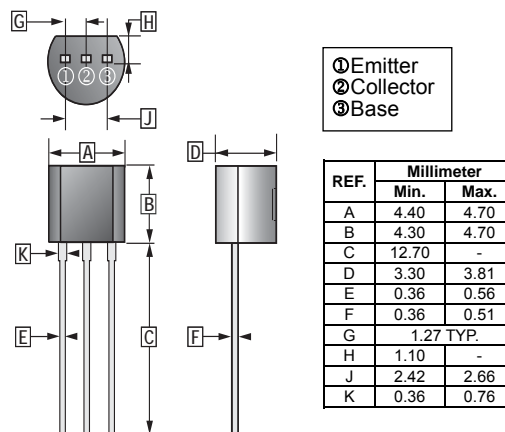
FEATURES

- Low Collector Saturation Voltage
- High DC Current Gain
- High Collector Power Dissipation
- Complementary of the 2SD1513

CLASSIFICATION OF h_{FE} (1)

Product-Rank	2SB1068-L	2SB1068-K	2SB1068-U
Range	135~270	200~400	300~650

TO-92



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CB0}	-20	V
Collector to Emitter Voltage	V_{CEO}	-16	V
Emitter to Base Voltage	V_{EBO}	-6	V
Collector Current - Continuous	I_C	-2	A
Collector Power Dissipation	P_C	0.625	W
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	200	$^\circ\text{C} / \text{W}$
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test condition
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	-20	-	-	V	$I_C = -0.1\text{mA}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-16	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-6	-	-	V	$I_E = -0.1\text{mA}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -16\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -6\text{V}, I_C = 0$
DC Current Gain	$h_{FE(1)}$	135	-	650		$V_{CE} = -2\text{V}, I_C = -0.1\text{A}$
	$h_{FE(2)}$	100	-	-		$V_{CE} = -2\text{V}, I_C = -1.5\text{A}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)1}$	-	-	-0.4	V	$I_C = -1\text{A}, I_B = -10\text{mA}$
	$V_{CE(sat)2}$	-	-	-0.5	V	$I_C = -1.5\text{A}, I_B = -20\text{mA}$
	$V_{CE(sat)3}$	-	-	-0.5	V	$I_C = -1.5\text{A}, I_B = -75\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-1.2	V	$I_C = -1.5\text{A}, I_B = -75\text{mA}$
Base to Emitter voltage	V_{BE}	-0.55	-	-0.65	V	$V_{CE} = -6\text{V}, I_C = -5\text{mA}$
Collector-Base Capacitance	C_{cb}	-	60	-	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Transition Frequency	f_T	100	-	-	MHz	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$