

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

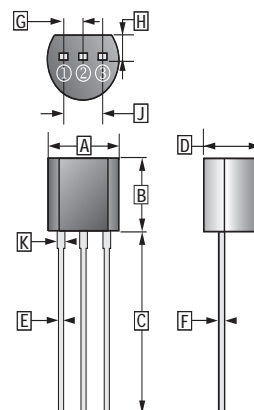
FEATURES

TO-92

- High DC Current gain and excellent h_{FE} linearity
- Low Saturation Voltage

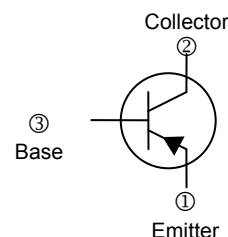
CLASSIFICATION OF $h_{FE(1)}$

Product-Rank	2SA1300-Y	2SA1300-GR	2SA1300-BL
Range	140~280	200~400	300~600



① Emitter
② Collector
③ Base

REF.	Millimeter	
	Min.	Max.
A	4.40	4.70
B	4.30	4.70
C	12.70	-
D	3.30	3.81
E	0.36	0.56
F	0.36	0.51
G	1.27 TYP.	
H	1.10	-
J	2.42	2.66
K	0.36	0.76



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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-20	V
Collector to Emitter Voltage	V_{CEO}	-10	V
Emitter to Base Voltage	V_{EBO}	-6	V
Collector Current - Continuous	I_C	-2	A
Collector Power Dissipation	P_C	750	mW
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	$I_C = -1\text{mA}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-10	-	-	V	$I_C = -10\text{mA}, I_B = 0$
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	$V_{CB} = -20\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -6\text{V}, I_C = 0$
DC Current Gain	h_{FE}	140	-	600		$V_{CE} = -1\text{V}, I_C = -0.5\text{A}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.82	V	$I_C = -2\text{A}, I_B = -0.1\text{A}$
Base to Emitter Voltage	V_{BE}	-	-	-1.5	V	$V_{CE} = -1\text{V}, I_C = -2\text{A}$
Transition Frequency	f_T	-	140	-	MHz	$V_{CE} = -1\text{V}, I_C = -0.5\text{A}, f = 30\text{MHz}$
Collector Output Capacitance	C_{ob}	-	50	-	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$

CHARACTERISTICS CURVE

