

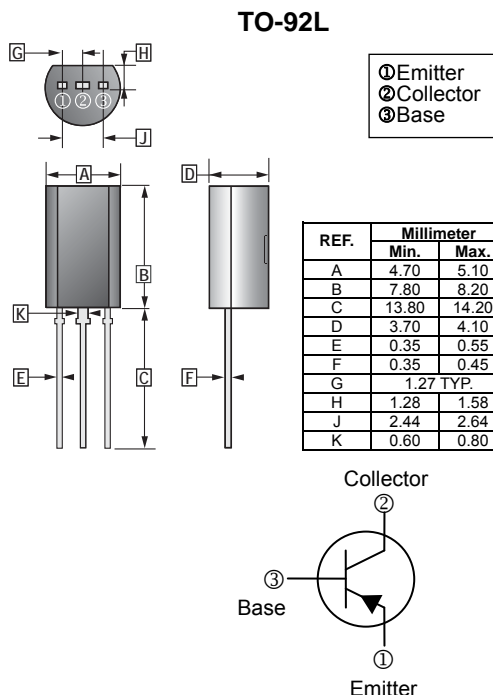
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURE

- Automatic insertion by radial taping possible.
- Complementary pair with 2SC1384L.

CLASSIFICATION OF h_{FE}

Product-Rank	2SA684-Q	2SA684-R	2SA684-S
Range	85~170	120~240	170~340



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

Parameter	Symbol	Rated	Unit
Collector to Base Voltage	V_{CB0}	-60	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-1	A
Collector Power Dissipation	P_C	0.75	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	166	$^\circ\text{C/W}$
Thermal Resistance Junction to Case	$R_{\theta JC}$	125	$^\circ\text{C/W}$
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 Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -10\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -2\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -10\mu\text{A}, I_C = 0$
Collector Cut-off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -20\text{V}, I_E = 0$
DC Current Gain	$h_{FE(1)}$	85	-	340		$V_{CE} = -10\text{V}, I_C = -500\text{mA}$
	$h_{FE(2)}$	50	-	-		$V_{CE} = -5\text{V}, I_C = -1\text{A}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-0.2	-0.4	V	$I_C = -500\text{mA}, I_B = -50\text{mA}$
Base-Emitter Voltage	$V_{BE(sat)}$	-	-0.85	-1.2	V	$I_C = -500\text{mA}, I_B = -50\text{mA}$
Transition Frequency	f_T	-	200	-	MHz	$V_{CE} = -10\text{V}, I_E = 50\text{mA}, f = 200\text{MHz}$
Collector Output Capacitance	C_{ob}	-	20	30	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$

CHARACTERISTIC CURVES

