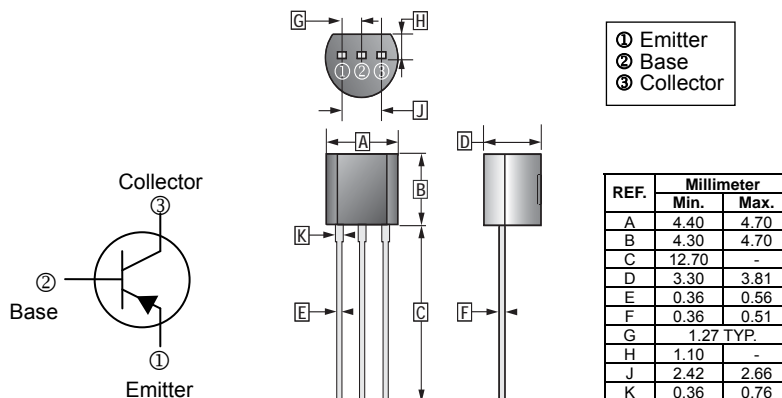


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- General Purpose Amplifier Transistor

**TO-92**



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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CB0}$	-40	V
Collector to Emitter Voltage	$V_{CEO}$	-40	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current - Continuous	$I_C$	-0.6	A
Collector Power Dissipation	$P_C$	625	mW
Thermal resistance, 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	$V_{(BR)CB0}$	-40	-	-	V	$I_C = 0.1\text{mA}, I_E = 0\text{A}$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}^*$	-40	-	-	V	$I_C = -1\text{mA}, I_B = 0\text{A}$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -0.1\text{mA}, I_C = 0\text{A}$
Collector Cut-Off Current	$I_{CB0}$	-	-	-0.1	$\mu\text{A}$	$V_{CB} = -40\text{V}, I_E = 0\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	-	-	-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}, I_C = 0\text{mA}$
DC Current Gain	$h_{FE}^*$	30	-	-	V	$V_{CE} = -1\text{V}, I_C = -1\text{mA}$
		50	-	-		$V_{CE} = -1\text{V}, I_C = -10\text{mA}$
		50	-	150		$V_{CE} = -2\text{V}, I_C = -150\text{mA}$
		20	-	-		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}^*$	-	-	-0.4	V	$I_C = -150\text{mA}, I_B = -15\text{mA}$
		-	-	-0.75		$I_C = -500\text{mA}, I_B = -50\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}^*$	-0.75	-	-0.95	V	$I_C = -150\text{mA}, I_B = -15\text{mA}$
		-	-	-1.3		$I_C = -500\text{mA}, I_B = -50\text{mA}$
Collector output Capacitance	$C_{ob}$	-	-	8.5	pF	$V_{CB} = -10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$
Emitter input Capacitance	$C_{ib}$	-	-	30	pF	$V_{EB} = -0.5\text{V}, I_C = 0\text{A}, f = 1\text{MHz}$
Transition Frequency	$f_T^*$	150	-	-	MHz	$V_{CE} = -10\text{V}, I_C = -20\text{mA}, f = 100\text{MHz}$

\*Pulse test : Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .