

RoHS Compliant Product

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

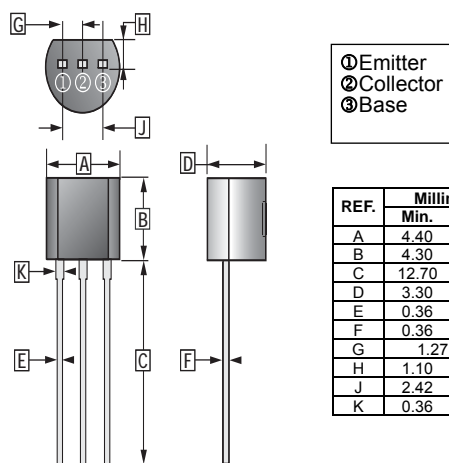
## FEATURES

- Low Frequency Amplifier

TO-92

## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SA1083-D	2SA1083-E
Range	250-500	400-800



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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-60	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current - Continuous	$I_C$	-0.1	A
Collector Power Dissipation	$P_C$	400	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	312	$^\circ\text{C} / \text{W}$
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	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -0.01\text{mA}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -0.01\text{mA}, I_C = 0$
Collector Cut-Off Current	$I_{CBO}$	-	-	-0.1	$\mu\text{A}$	$V_{CB} = -50\text{V}, I_E = 0$
Emitter Cut-Off Current	$I_{EBO}$	-	-	-0.1	$\mu\text{A}$	$V_{EB} = -2\text{V}, I_C = 0$
DC Current Gain	$h_{FE}$	250	-	800		$V_{CE} = -12\text{V}, I_C = -2\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.2	V	$I_C = -10\text{mA}, I_B = -1\text{mA}$
Base to Emitter Voltage	$V_{BE}$	-	-0.6	-	V	$V_{CE} = -12\text{V}, I_C = -2\text{mA}$
Transition Frequency	$f_T$	-	90	-	MHz	$V_{CE} = -12\text{V}, I_C = -2\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	3.5	-	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$