

RoHS Compliant Product

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

## FEATURES

- Large Current Capacity and Wide ASO

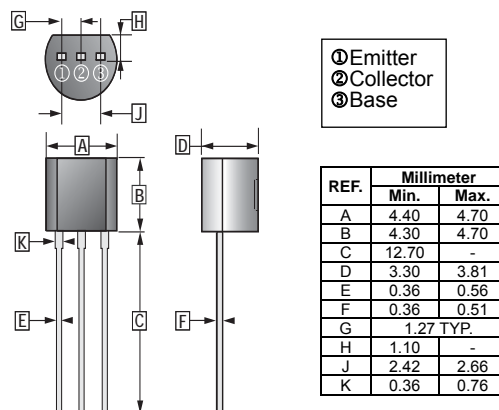
## APPLICATIONS

- Capable of Being Used in The Low Frequency to High Frequency Range

## CLASSIFICATION OF $h_{FE(1)}$

Product-Rank	2SA1318-R	2SA1318-S	2SA1318-T	2SA1318-U
Range	100~200	140~280	200~400	280~560

TO-92



## 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	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-6	V
Collector Current - Continuous	$I_C$	-0.2	A
Collector Power Dissipation	$P_C$	500	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	250	$^\circ\text{C} / \text{W}$
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	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-6	-	-	V	$I_E = -0.01\text{mA}, I_C = 0$
Collector Cut-Off Current	$I_{CBO}$	-	-	-0.1	$\mu\text{A}$	$V_{CB} = -40\text{V}, I_E = 0$
Emitter Cut-Off Current	$I_{EBO}$	-	-	-0.1	$\mu\text{A}$	$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain	$h_{FE(1)}$	100	-	560		$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
	$h_{FE(2)}$	70	-	-		$V_{CE} = -6\text{V}, I_C = -0.1\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.3	V	$I_C = -0.1\text{A}, I_B = -10\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-1.0	V	$I_C = -0.1\text{A}, I_B = -10\text{mA}$
Transition Frequency	$f_T$	-	200	-	MHz	$V_{CE} = -6\text{V}, I_C = -10\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	4.5	-	pF	$V_{CB} = -6\text{V}, f = 1\text{MHz}$