

RoHS Compliant Product

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

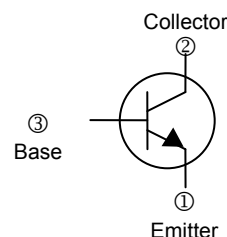
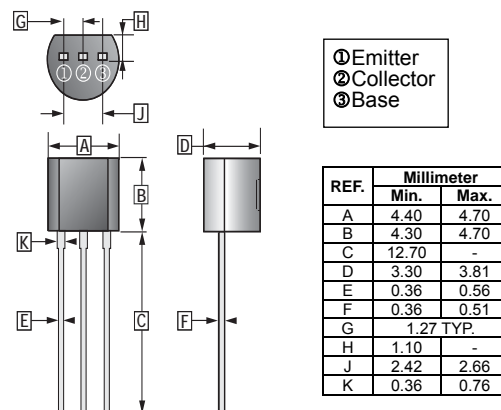
FEATURES

TO-92

- Low Collector to Emitter Saturation Voltage $V_{CE(sat)}$
- Complementary Pair with 2SA720

CLASSIFICATION OF $h_{FE(1)}$

Product-Rank	2SC1318-Q	2SC1318-R	2SC1318-S
Range	85~170	120~240	170~340



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}	7	V
Collector Current - Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	625	mW
Thermal Resistance From 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	$V_{(BR)CBO}$	60	-	-	V	$I_C = 0.01\text{mA}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	50	-	-	V	$I_C = 10\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	7	-	-	V	$I_E = 0.01\text{mA}, I_C = 0$
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	$h_{FE(1)}$	85	-	340		$V_{CE} = 10\text{V}, I_C = 0.15\text{A}$
	$h_{FE(2)}$	40	-	-		$V_{CE} = 10\text{V}, I_C = 0.5\text{A}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.6	V	$I_C = 300\text{mA}, I_B = 30\text{mA}$
Base to Emitter Voltage	$V_{BE(sat)}$	-	-	1.5	V	$I_C = 300\text{mA}, I_B = 30\text{mA}$
Transition Frequency	f_T	-	200	-	MHz	$V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 200\text{MHz}$
Collector Output Capacitance	C_{ob}	-	-	15	pF	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$