

RoHS Compliant Product

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

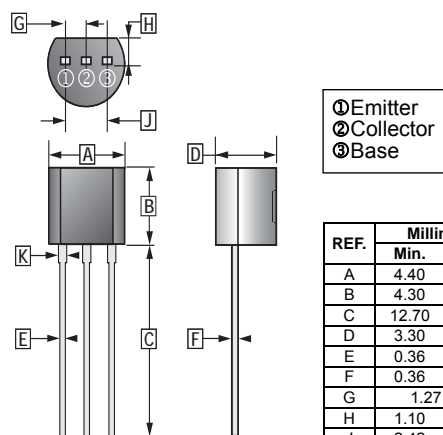
FEATURES

- Excellent h_{FE} Linearity
- High Transition Frequency

CLASSIFICATION OF h_{FE}

Product-Rank	2SC1959-O	2SC1959-Y	2SC1959-GR
Range			
$h_{FE}(1)$	70~140	120~240	200~400
$h_{FE}(2)$	25Min	40Min	-

TO-92



REF.	Millimeter	
	Min.	Max.
A	4.40	4.70
B	4.30	4.70
C	12.70	-
D	3.30	3.81
E	0.36	0.56
F	0.36	0.51
G	1.27 TYP.	
H	1.10	-
J	2.42	2.66
K	0.36	0.76

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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	35	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	500	mA
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 Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	35	-	-	V	$I_C=0.1\text{mA}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	30	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=0.1\text{mA}, I_C=0$
Collector Cut - Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=35\text{V}, I_E=0$
Emitter Cut - Off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	$h_{FE(1)}$	70	-	400		$V_{CE}=1\text{V}, I_C=100\text{mA}$
	$h_{FE(2)}$	25	-	-		$V_{CE}=6\text{V}, I_C=400\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.25	V	$I_C=100\text{mA}, I_B=10\text{mA}$
Base to Emitter Voltage	V_{BE}	-	-	1	V	$V_{CE}=1\text{V}, I_C=100\text{mA}$
Collector Output Capacitance	C_{ob}	-	7	-	pF	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$
Transition Frequency	f_T	-	300	-	MHz	$V_{CE}=6\text{V}, I_C=20\text{mA}$