

RoHS Compliant Product

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

## FEATURES

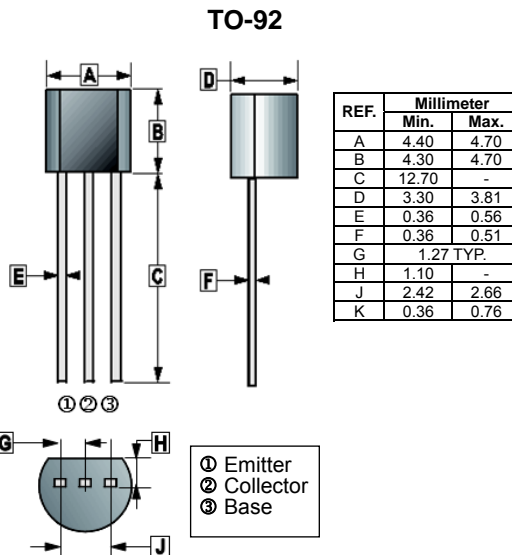
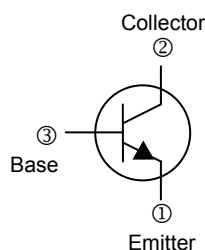
- Excellent  $h_{FE}$  Linearity
- High Transition Frequency

## CLASSIFICATION OF $h_{FE}$

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

## MARKING

C1959  
031



## 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
Continuous Collector Current	$I_C$	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 and 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	$V_{(BR)CBO}$	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	$\mu\text{A}$	$V_{CB}=35\text{V}, I_E=0$
Emitter Cut – Off Current	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	$h_{FE}$	70	-	400		$V_{CE}=1\text{V}, I_C=100\text{mA}$
		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	$V_{CE}=6\text{V}, I_C=20\text{mA}$

**CHARACTERISTIC CURVES**

Static Characteristic

