

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

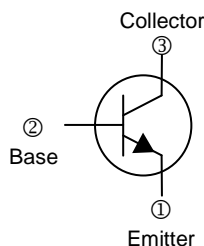
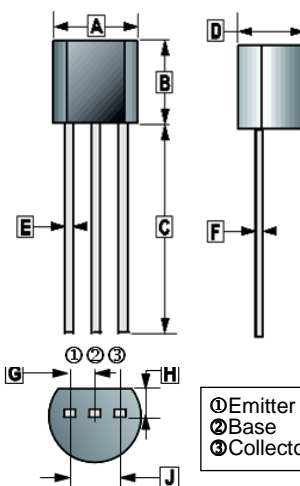
## FEATURES

- Low Collector Current
- Complementary To KSA539
- Low Frequency Amplifier & High Frequency Oscillator

## CLASSIFICATION OF $h_{FE}$

Product-Rank	KSC815-R	KSC815-O	KSC815-Y	KSC815-G
Range	40~80	70~140	120~240	200~400

## TO-92



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	-	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56	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	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	45	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current - Continuous	$I_C$	200	mA
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	$I_C=0.1\text{mA}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	45	-	-	V	$I_C=10\text{mA}, I_B=0$
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	$\mu\text{A}$	$V_{CB}=45\text{V}, I_E=0$
Emitter Cut - Off Current	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	$V_{EB}=3\text{V}, I_C=0$
DC Current Gain	$h_{FE}$	40	-	400		$V_{CE}=1\text{V}, I_C=50\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C=150\text{mA}, I_B=15\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.1	V	$I_C=150\text{mA}, I_B=15\text{mA}$
Base to Emitter Voltage	$V_{BE}$	0.6	-	0.9	V	$V_{CE}=10\text{V}, I_C=10\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	4	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Transition Frequency	$f_T$	100	-	-	MHz	$V_{CE}=10\text{V}, I_C=10\text{mA}$