

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

## FEATURES

- Low frequency power amplifier application
- Power switching application

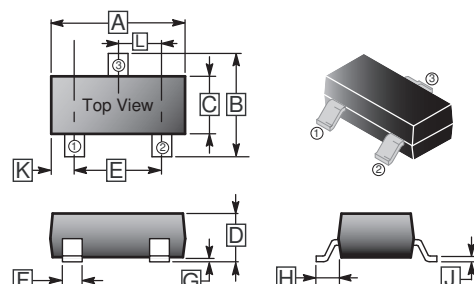
## CLASSIFICATION OF $h_{FE}$

Product-Rank	KTA2014-O	KTA2014-Y	KTA2014-GR
Range	70~140	120~240	200~400
Marking Code	SO	SY	SG

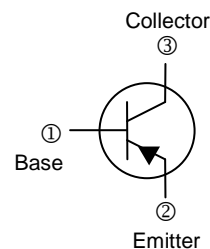
## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch

## SOT-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			



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

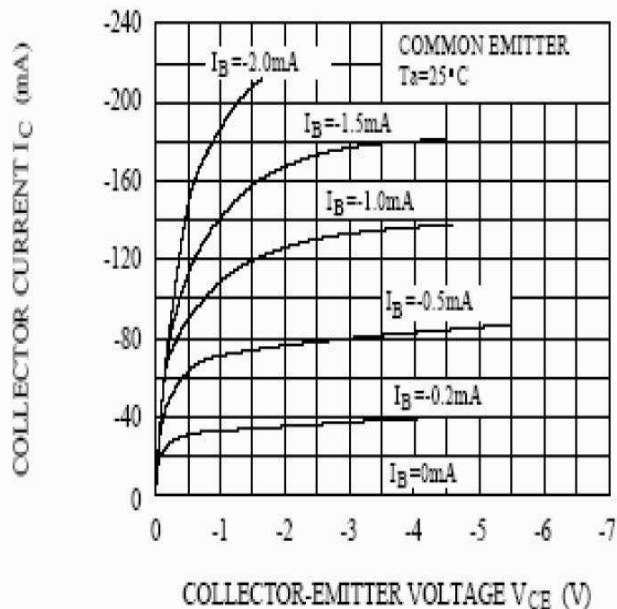
Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CB0}$	-50	V
Collector to Emitter Voltage	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current - Continuous	$I_C$	-150	mA
Collector Power Dissipation	$P_C$	100	mW
Junction, Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise specified)

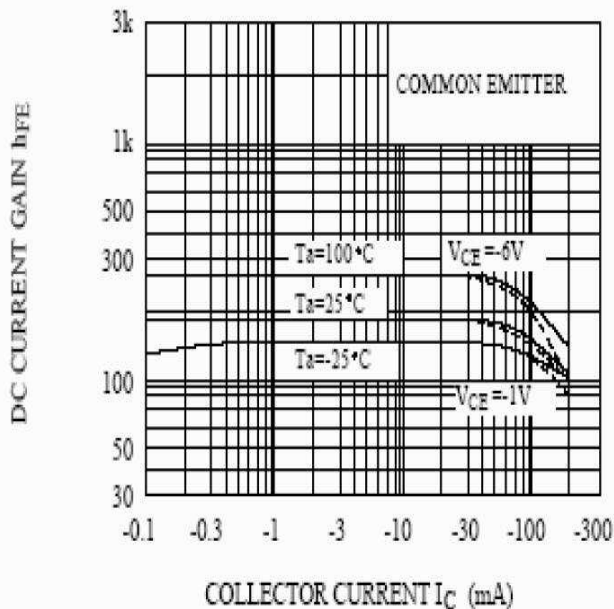
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	-50	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -100\mu\text{A}, I_C = 0$
Collector Cut-Off Current	$I_{CBO}$	-	-	-0.1	$\mu\text{A}$	$V_{CB} = -50\text{V}, I_E = 0$
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		$V_{CE} = -6\text{V}, I_C = -2\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.3	V	$I_C = -100\text{mA}, I_B = -10\text{mA}$
Transition Frequency	$f_T$	80	-	-	MHz	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$
Collector output capacitance	$C_{ob}$	-	-	7	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Noise Figure	NF	-	-	10	dB	$V_{CE} = -6\text{V}, I_C = -0.1\text{mA}$ $f = 1\text{KHz}, R_g = 10\text{K}\Omega$

**CHARACTERISTIC CURVES**

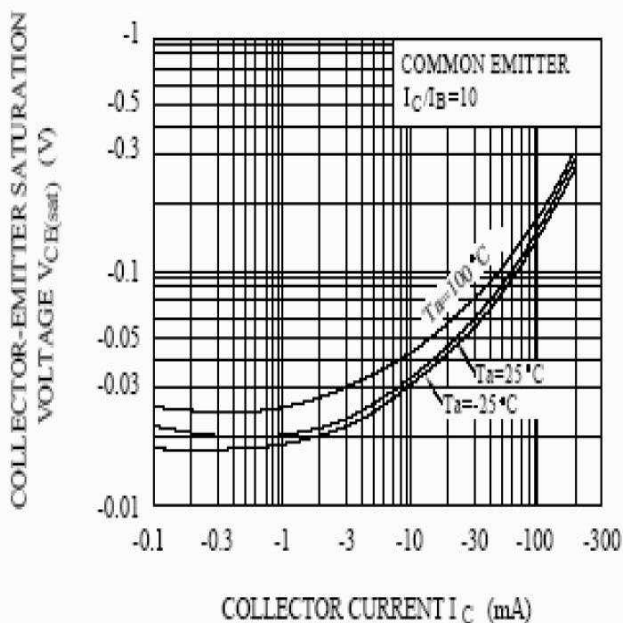
$I_C - V_{CE}$



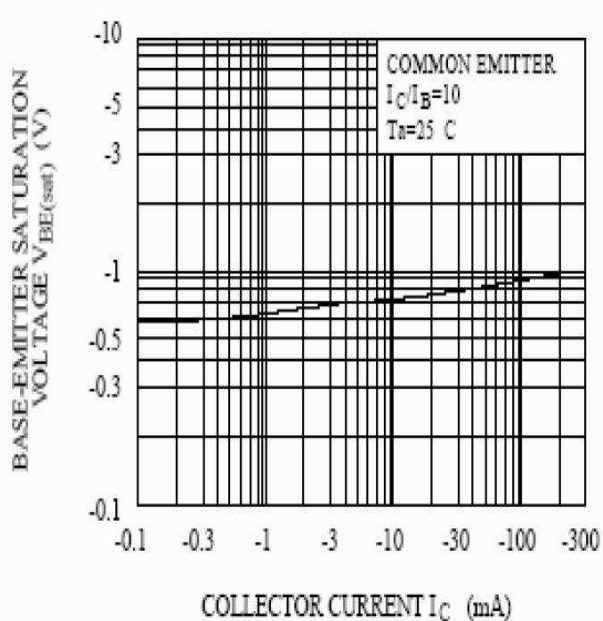
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



**CHARACTERISTIC CURVES**

