

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

## FEATURE

- RF amplifier
- High current transition frequency  $f_T=550\text{MHz(Typ.)}$ ,  
[ $V_{CE}=6\text{V}$ ,  $I_E=-1\text{mA}$ ]
- Low output capacitance :  $C_{ob}=1.4\text{pF(Typ.)}$  [ $V_{CB}=6\text{V}$ ,  $I_E=0$ ]
- Low base time constant and high gain
- Excellent noise response

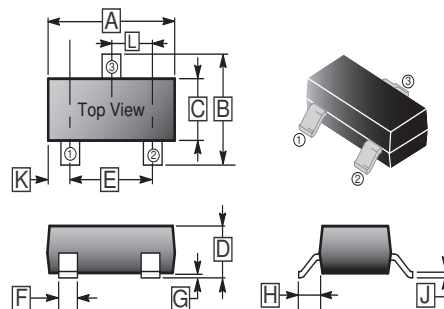
## MARKING :

5345

## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SC5345-R	2SC5345-O	2SC5345-Y
Range	40~80	70~140	120~240

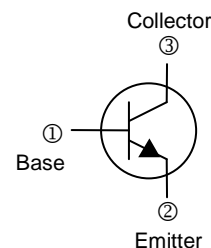
## SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch



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

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	30	V
Collector to Emitter Voltage	$V_{CEO}$	20	V
Emitter to Base Voltage	$V_{EBO}$	4	V
Collector Current - Continuous	$I_C$	20	mA
Collector Power Dissipation	$P_C$	300	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	$V_{(BR)CBO}$	30	-	-	V	$I_C=10\mu\text{A}$ , $I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	20	-	-	V	$I_C=5\text{mA}$ , $I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	4	-	-	V	$I_E=10\mu\text{A}$ , $I_C=0$
Collector Cut-Off Current	$I_{CBO}$	-	-	0.5	$\mu\text{A}$	$V_{CB}=30\text{V}$ , $I_E=0$
Emitter Cut-Off Current	$I_{EBO}$	-	-	0.5	$\mu\text{A}$	$V_{EB}=4\text{V}$ , $I_C=0$
DC Current Gain	$h_{FE}$	40	-	240		$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=10\text{mA}$ , $I_B=1\text{mA}$
Transition Frequency	$f_T$	-	550	-	MHz	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$
Collector output capacitance	$C_{ob}$	-	1.4	-	pF	$V_{CB}=6\text{V}$ , $I_E=0$ , $f=1\text{MHz}$

**CHARACTERISTIC CURVES**

Fig. 1  $P_C - T_a$

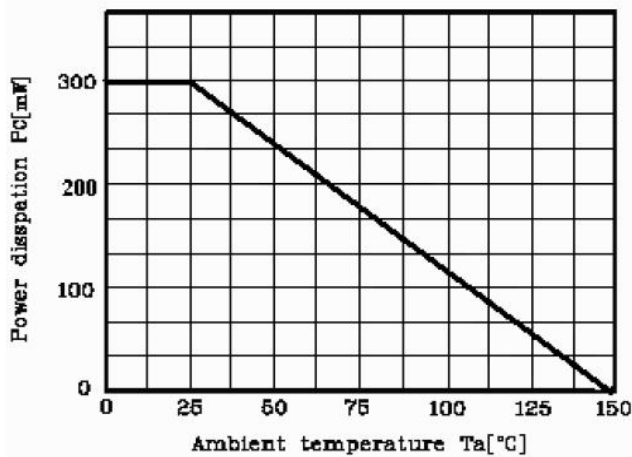


Fig. 2  $I_C - V_{CE}$

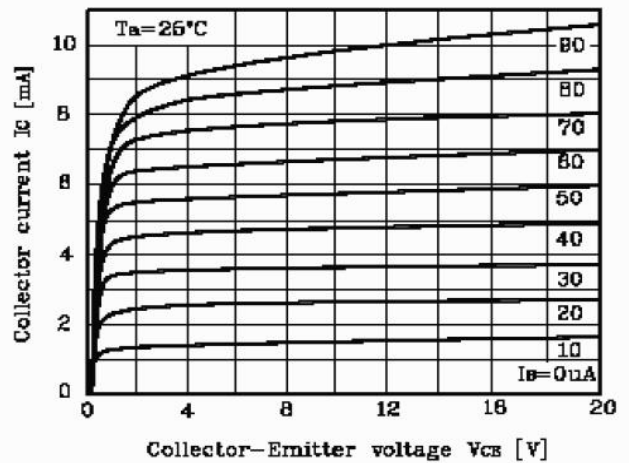


Fig. 3  $h_{FE} - I_C$

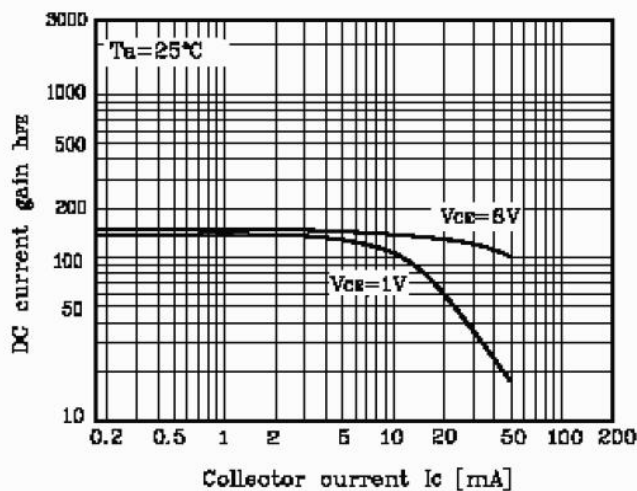


Fig. 4  $f_T - I_E$

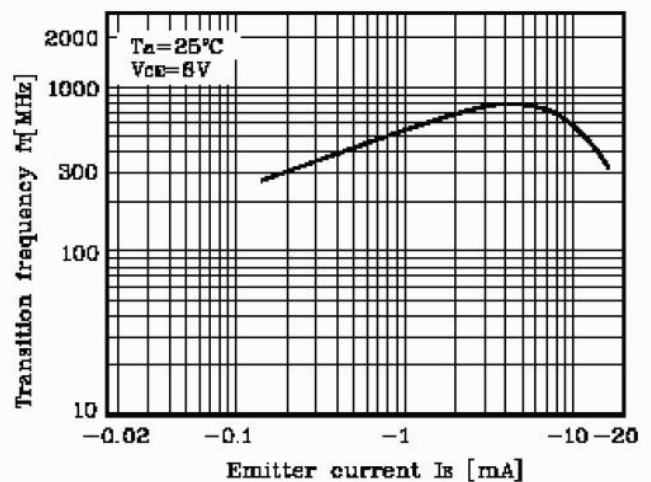


Fig. 5  $C_{ob} - V_{CB}, C_{ib} - V_{EB}$

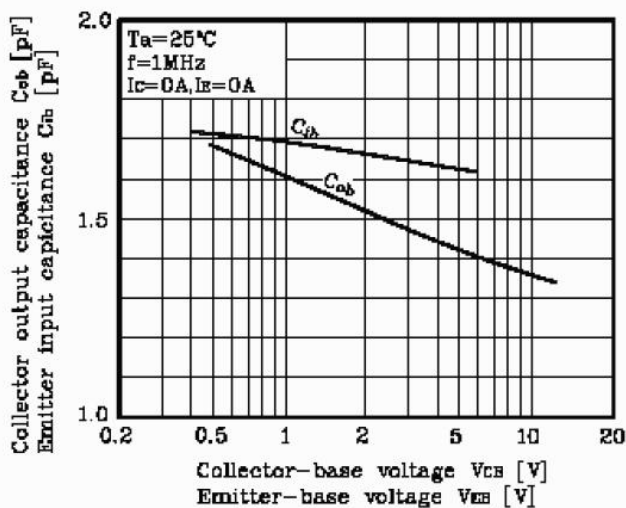


Fig. 6  $Y_{ie} - I_C$

