

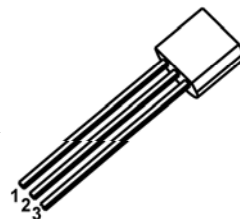
TRANSISTOR (NPN)

### FEATURES

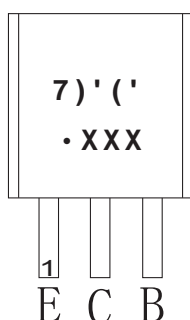
- Excellent  $h_{FE}$  Linearity  
 $h_{FE}(2)=100(\text{Typ})$  at  $V_{CE}=6V, I_C=150\text{mA}$   
 $h_{FE}(I_C=0.1\text{mA})/h_{FE}(I_C=2\text{mA})=0.95(\text{Typ})$ .
- Low Noise:  $NF=10\text{dB}(\text{Typ})$ . At  $f=1\text{KHz}$ .

### TO-92

1. EMITTER
2. COLLECTOR
3. BASE



### MARKING

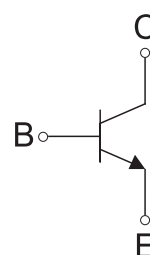


C5343=Device code

Solid dot=Green molding compound device,  
if none, the normal device

XXX=Code

### Equivalent Circuit



### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SC5343	TO-92	Bulk	1000pcs/Bag
2SC5343-TA	TO-92	Tape	2000pcs/Box

### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	150	mA
$P_C$	Collector power dissipation	625	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$



## ELECTRICAL CHARACTERISTICS

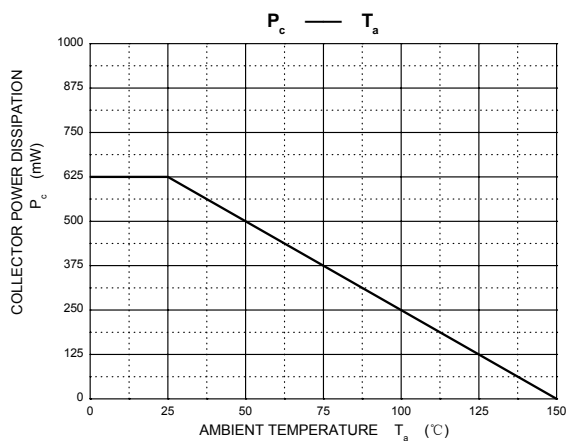
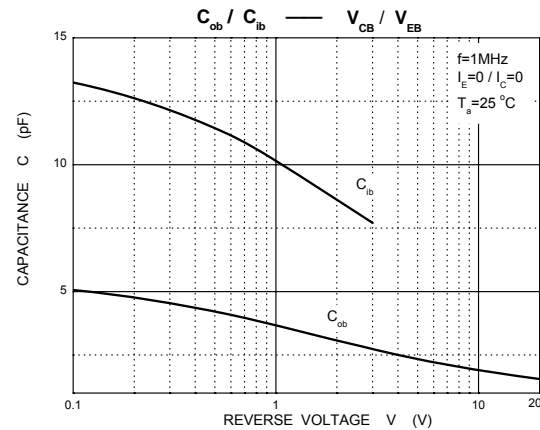
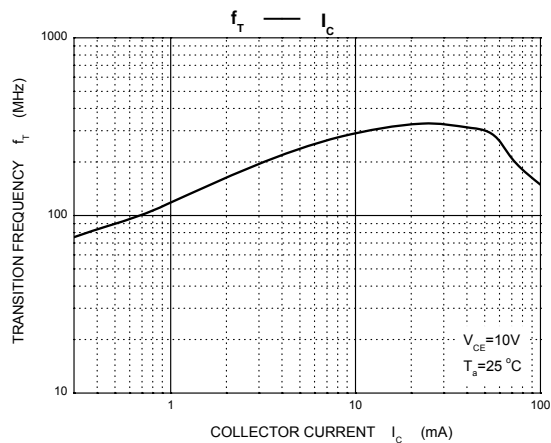
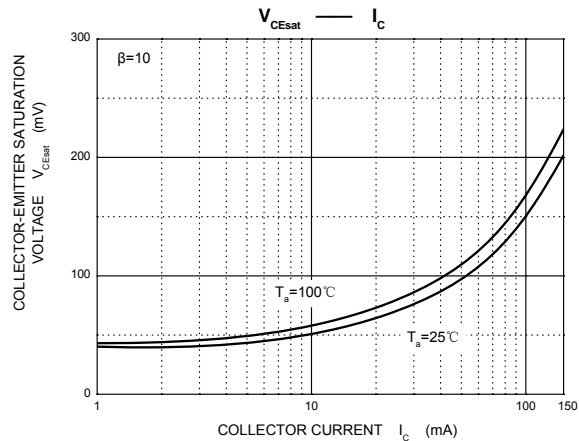
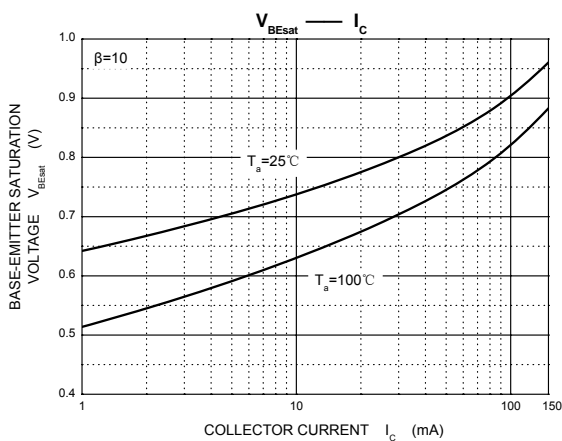
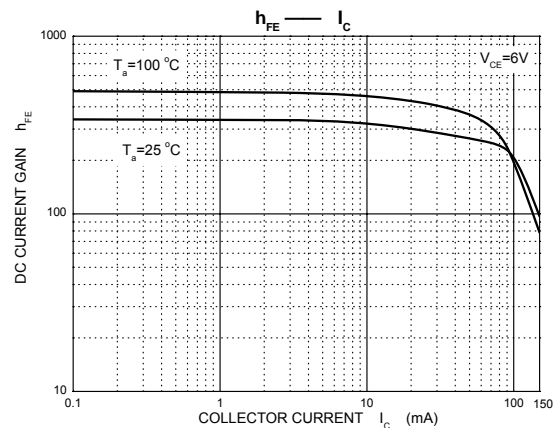
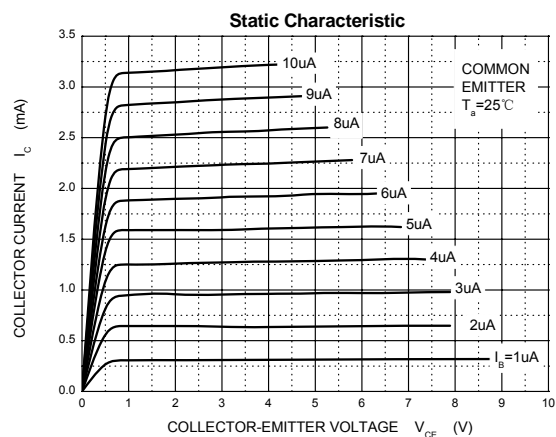
$T_a = 25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\ \mu\text{A}, I_E = 0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\ \mu\text{A}, I_C = 0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 60\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = 6\text{V}, I_C = 2\text{mA}$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	0.1		0.25	V
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	80			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$			3.5	pF
Noise figure	NF	$V_{CE} = 6\text{V}, I_C = 0.1\text{mA},$ $f = 1\text{KHz}, R_g = 10\text{K}\ \Omega$			10	dB

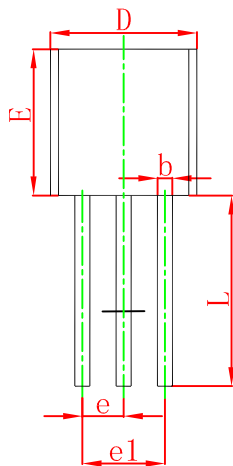
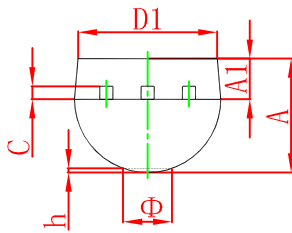
### CLASSIFICATION OF $h_{FE}$

Rank	O	Y	G	L
Range	70-140	120-240	200-400	300-700

# Typical Characteristics

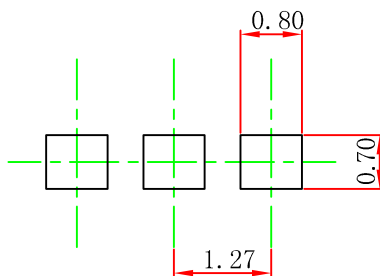


## TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

## TO-92 Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.