

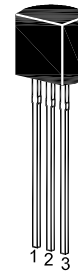
# 2SC2001

## NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into three groups, O, Y and G, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	30	V
Collector Emitter Voltage	$V_{CEO}$	25	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	700	mA
Power Dissipation	$P_{tot}$	600	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit		
DC Current Gain at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$  at $V_{CE} = 1\text{ V}$ , $I_C = 700\text{ mA}$	Current Gain Group	O Y G	$h_{FE}$	90	-	180	-
			$h_{FE}$	135	-	270	-
			$h_{FE}$	200	-	400	-
			$h_{FE}$	50	-	-	-
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$		
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$		
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V		
Collector Emitter Saturation Voltage at $I_C = 700\text{ mA}$ , $I_B = 70\text{ mA}$	$V_{CE(sat)}$	-	0.2	0.6	V		
Base Emitter Saturation Voltage at $I_C = 700\text{ mA}$ , $I_B = 70\text{ mA}$	$V_{BE(sat)}$	-	0.95	1.2	V		
Base Emitter Voltage at $I_C = 10\text{ mA}$ , $V_{CE} = 6\text{ V}$	$V_{BE}$	0.6	-	0.7	V		
Gain Bandwidth Product at $V_{CE} = 6\text{ V}$ , $I_C = 10\text{ mA}$	$f_T$	50	170	-	MHz		
Output Capacitance at $V_{CB} = 6\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	13	25	pF		

