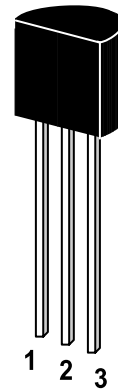


# ST 2SC3330

**NPN Silicon Epitaxial Planar Transistor**  
for switching and AF amplifier applications.

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

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

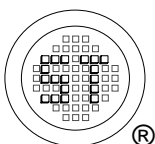


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package  
Weight approx. 0.19g

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

	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	60	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	200	mA
Power Dissipation	$P_{tot}$	300	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150	$^\circ\text{C}$



**SEMTECH ELECTRONICS LTD.**

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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 71116



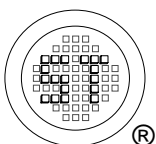
ISO 9001:2000  
Certificate No. 0506098

Dated : 07/12/2002

# ST 2SC3330

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

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6\text{V}$ , $I_C=1\text{mA}$					
Current Gain Group R	$h_{FE}$	40	-	80	-
O	$h_{FE}$	70	-	140	-
Y	$h_{FE}$	120	-	240	-
G	$h_{FE}$	200	-	400	-
L	$h_{FE}$	350	-	700	-
Collector Base Breakdown Voltage at $I_C=100\mu\text{A}$	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C=10\text{mA}$	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $I_E=10\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $V_{CB}=40\text{V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter Cutoff Current at $V_{EB}=3\text{V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
Collector Saturation Voltage at $I_C=100\text{mA}$ , $I_B=10\text{mA}$	$V_{CE(sat)}$	-	0.15	0.3	V
Gain Bandwidth Product at $V_{CE}=6\text{V}$ , $I_C=10\text{mA}$	$f_T$	-	200	-	MHz
Output Capacitance at $V_{CB}=6\text{V}$ , $f=1\text{MHz}$	$C_{OB}$	-	2.5	-	pF
Noise Figure at $V_{CE}=6\text{V}$ , $I_E=0.5\text{mA}$ $f=1\text{KHz}$ , $R_S=500\Omega$	NF	-	4	-	dB



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