

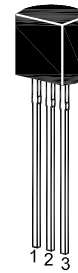
2SC2002

NPN Silicon Epitaxial Planar Transistor

for use in driver stage of high voltage audio equipments.

The transistor is subdivided into three groups, M, L and K, according to its DC current gain.

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



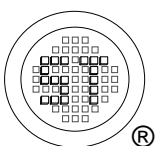
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	300	mA
Base Current	I_B	60	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 $V_{CE} = 1\text{ V}$, $I_C = 50\text{ mA}$ at $V_{CE} = 2\text{ V}$, $I_C = 300\text{ mA}$ Current Gain Group M L K	h_{FE}	90	-	180	-
	h_{FE}	135	-	270	-
	h_{FE}	200	-	400	-
	h_{FE}	30	80	-	-
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 300\text{ mA}$, $I_B = 30\text{ mA}$	$V_{CE(sat)}$	-	0.15	0.6	V
Base Emitter Saturation Voltage at $I_C = 300\text{ mA}$, $I_B = 30\text{ mA}$	$V_{BE(sat)}$	-	0.86	1.2	V
Base Emitter Voltage at $I_C = 10\text{ mA}$, $V_{CE} = 6\text{ V}$	V_{BE}	600	645	700	mV
Gain Bandwidth Product at $V_{CE} = 6\text{ V}$, $I_E = -10\text{ mA}$	f_T	50	140	-	MHz
Collector to Base Capacitance at $V_{CB} = 6\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	7.0	15	pF



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 ISO 9001 : 2008 Certificate No. 5070410
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