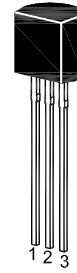


## NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications

The transistor is subdivided into five groups, L, M, N, O and P, according to its DC current gain.

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



1. Emitter 2. Base 3. Collector  
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	$I_C$	1	A
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 $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$ Current Gain Group	L	$h_{FE}$	132	-	189	-
	M	$h_{FE}$	170	-	233	-
	N	$h_{FE}$	213	-	300	-
	O	$h_{FE}$	263	-	370	-
	P	$h_{FE}$	333	-	476	-
Collector Base Cutoff Current at $V_{CB} = 20\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	0.5	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.7	V	
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$	$f_T$	-	100	-	MHz	
Output Capacitance at $V_{CB} = 5\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	12	-	pF	

