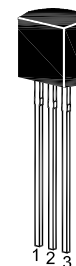


# 13002A

## NPN Silicon Epitaxial Planar Transistor

High voltage power transistor



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	$V_{CBO}$	700	V
Collector Emitter Voltage	$V_{CEO}$	400	V
Emitter Base Voltage	$V_{EBO}$	9	V
Collector Current	$I_C$	0.3	A
Collector Current (Pulse)	$I_{CP}$	0.5	A
Total Power Dissipation	$P_{tot}$	0.6	W
Operating 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.	Max.	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$ , $I_C = 10\text{ }\mu\text{A}$ at $V_{CE} = 10\text{ V}$ , $I_C = 100\text{ mA}$ at $V_{CE} = 10\text{ V}$ , $I_C = 280\text{ mA}$	$h_{FE}$ $h_{FE}$ $h_{FE}$	15 25 12	40 40 30	- - -
Collector Base Cutoff Current at $V_{CB} = 700\text{ V}$	$I_{CBO}$	-	10	$\mu\text{A}$
Emitter Base Cutoff Current at $V_{EB} = 7\text{ V}$	$I_{EBO}$	-	10	$\mu\text{A}$
Collector Base Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CBO}$	700	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	400	-	V
Emitter Base Breakdown Voltage at $I_E = 1\text{ mA}$	$V_{(BR)EBO}$	9	-	V
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$ , $I_B = 10\text{ mA}$ at $I_C = 200\text{ mA}$ , $I_B = 20\text{ mA}$	$V_{CEsat}$	- -	1 1.5	V
Transition Frequency at $V_{CE} = 10\text{ V}$ , $I_C = 100\text{ mA}$	$f_T$	4	-	MHz

