

## TO-92 Plastic-Encapsulate Transistors

### Features

- PNP silicon epitaxial planar transistor for switching and Amplifier applications

### MECHANICAL DATA

- Case style: TO-92 molded plastic
- Mounting position: any

## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector- Base Voltage	$V_{CB0}$	-40	V
Collector - Emitter Voltage	$V_{CE0}$	-40	V
Emitter - Base Voltage	$V_{EB0}$	-5	V
Collector Current- Continuous	$I_c$	-0.2	A
Collector Dissipation	$P_c$	0.625	W
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to 150	°C

### PACKAGE INFORMATION

Device	Package	Shipping
2N3906	TO-92	2000/Tape&Reel

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector - base breakdown voltage	$V_{CB0}$	$I_c = -100 \mu A, I_E = 0$	-40			V
Collector - emitter breakdown voltage	$V_{CE0}$	$I_c = -1 mA, I_B = 0$	-40			V
Emitter- base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{cBO}$	$V_{CB} = -40 V, I_E = 0$			-0.1	$\mu A$
Collector cut-off current	$I_{cEO}$	$V_{CE} = -40 V, V_{BE(off)} = -3V$			-50	nA
Emitter cut-off current	$I_{eBO}$	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = -1V, I_c = -10mA$	100		400	
		$V_{CE} = -1V, I_c = -50mA$	60			
		$V_{CE} = -1V, I_c = -100mA$	30			
Collector- emitter saturation voltage	$V_{CE(sat)}$	$I_c = -50 mA, I_B = -5mA$			-0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = -50 mA, I_B = -5mA$			-0.95	V
Delay time	$t_d$	$V_{CC} = -3.0V, V_{BE} = 0.5V$			35	ns
Rise time	$t_r$	$I_c = -10mA, I_{B1} = -1.0mA$			35	
Storage time	$t_s$	$V_{CC} = -3.0V, I_c = -10mA$			225	ns
Fall time	$t_f$	$I_{B1} = I_{B2} = -1.0mA$			75	
Transition frequency	$f_T$	$V_{CE} = -20V, I_c = -10mA, f = 100MHz$	250			MHz