

TO-92 Plastic-Encapsulate Transistors

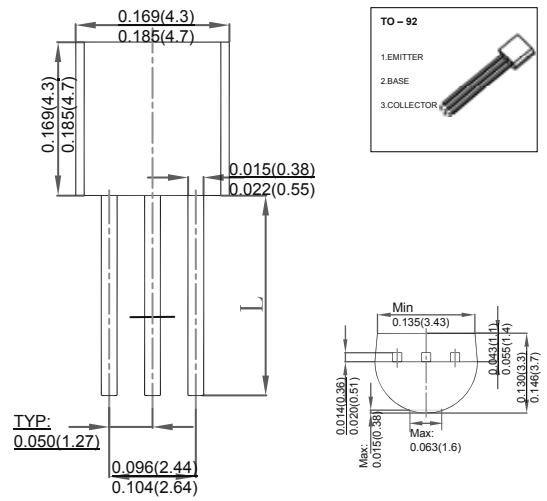
Features

- PNP silicon epitaxial planar transistor for switching and Amplifier applications

MECHANICAL DATA

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

TO-92



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

Parameter	Symbol	Testconditons	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	μA
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	μA
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

CLASSIFICATION OF h_{FE1}

Rank	O	Y	G
Range	100-200	200-300	300-400

Typical Characteristics

2N3906

