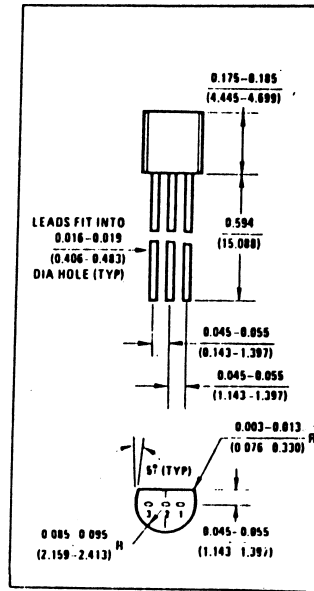


2N3391

NPN Silicon Transistors

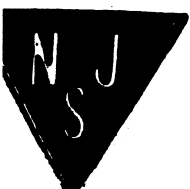


PIN	T
1	B
2	C
3	E

absolute maximum ratings (25°C) unless otherwise specified

Voltages			
Collector to Emitter	V_{CE0}	25	V
Emitter to Base	V_{EB0}	5	V
Collector to Base	V_{CB0}	25	V
Current			
Collector (Steady State) ⁽¹⁾	I_C	100	mA
Dissipation			
Total Power (Free Air @ 25°C) ⁽²⁾	P_T	360	mW
Temperature			
Storage	T_{stg}	-55 to +150	°C
Operating	T_J	+125	°C
Lead Soldering, $\frac{1}{16}$ " \pm $\frac{1}{32}$ " from case for 10 seconds max.	T_L	+260	°C

⁽¹⁾ Determined from power limitations due to saturation voltage at this current.
⁽²⁾ Derate 3.6 mW/°C increase in ambient temperature above 25°C.



electrical characteristics (25°C) unless otherwise specified

		Min.	Typ.	Max.	
Collector Cutoff Current ($V_{CB} = 25V$) ($V_{CB} = 25V, T_A = 100^\circ C$)	I_{CBO} I_{CBO}			.1 10	μA μA
Emitter Cutoff Current ($V_{EB} = 5V$)	I_{EBO}			.1	μA
Forward Current Transfer Ratio ($V_{CB} = 4.5V, I_C = 2 mA$)	h_{FE}	250		500	
SMALL SIGNAL CHARACTERISTICS					
Forward Current Transfer Ratio ($V_{CB} = 10V, I_C = 100 \mu A, f = 1 KHz$)	h_{fe}	170 ^(a)	200		
Input Impedance ($V_{CB} = 10V, I_C = 2 mA, f = 1 KHz$)	h_{ib}		15		ohms
Output Capacitance ($V_{CB} = 10V, I_E = 0, f = 1 MHz$)	C_{cb}	2.0	7	10	pF
Gain Bandwidth Product ($I_C = 2 mA, V_{CB} = 5 V$)	f_t		120		MHz
NOISE (wide band—15 Hz to 10 KHz, Equivalent Noise Bandwidth = 15.7 KHz)					
Noise Figure ($I_C = 100 \mu A, V_{CB} = 4.5V, R_g = 5000 ohms$)	NF		1.9	5	db

^(a) Typically a minimum of 95% of the distribution is above this value.