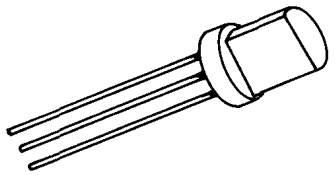
Silicon Transistors

NPN

2N2923,4,5

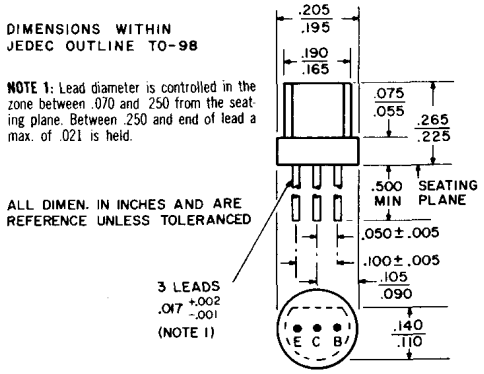
The General Electric 2N2923, 2N2924 and 2N2925 are a family of planar passivated NPN silicon transistors intended for general purpose applications. The planar passivated construction assures excellent device stability and life. These high performance, high value devices are made possible by utilizing advanced manufacturing techniques and epoxy encapsulation.



absolute maximum ratings: (25°C) (unless otherwise specified)

Voltages		
Collector to Emitter	V_{CEO}	25 V
Emitter to Base	V_{EBO}	5 V
Collector to Base	V_{CBO}	25 V
Current		
Collector (Steady State)*	I_C	100 mA
Dissipation		
Total Power (Free air at 25°C)**	P_T	360 mW
Total Power (Free air at 55°C)**	P_T	250 mW
Temperature		
Storage	T_{stg}	−55 to +150°C
Operating	T_j	+125°C

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



electrical characteristics: (25°C) (unless otherwise specified)

		Min.	Typ.	Max.	
D-C CHARACTERISTICS					
Collector Cutoff Current ($V_{CB} = 25V$)	I_{CBO}			0.1	μA
($V_{CB} = 25V$, $T_A = 100°C$)	I_{CBO}			15	μA
Emitter Cutoff Current ($V_{EB} = 5V$)	I_{EBO}			0.1	μA
Forward Current Transfer Ratio ($V_{CE} = 4.5V$, $I_C = 2$ mA)	h_{FE}				
2N2923			115		
2N2924			155		
2N2925			215		
SMALL SIGNAL CHARACTERISTICS					
Forward Current Transfer Ratio ($V_{CE} = 10V$, $I_C = 2$ mA, f = 1kHz)	h_{fe}				
2N2923		90		180	
2N2924		150		300	
2N2925		235		470	
Input Impedance ($V_{CE} = 10V$, $I_C = 2$ mA, f = 1kHz)	h_{ib}		15		ohms
HIGH FREQUENCY CHARACTERISTICS					
Collector Capacitance ($V_{CB} = 10V$, $I_E = 0$, f = 1MHz)	C_{cbo}	4.5	7	10	pF
Gain Bandwidth Product ($I_C = 4$ mA, $V_{CB} = 5V$)	f_T		160		MHz
NOISE					
Noise Figure ($I_C = 100$ μA, $V_{CE} = 5V$, f = 10kHz, BW = 1 Hz, Rg = 2000Ω)	N. F.		2.8 (2N2925 only)		dB