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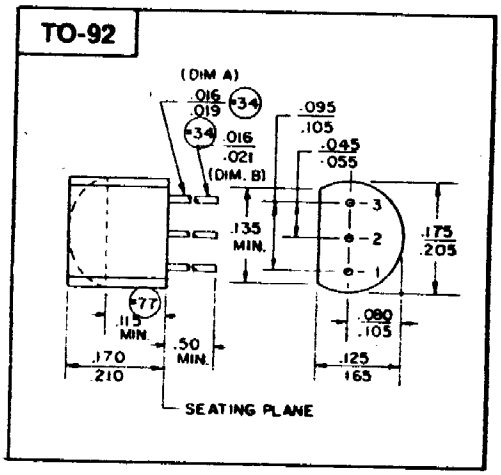
2N5249

NPN SILICON TRANSISTOR

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

Voltages		
Collector to Emitter	V_{CEO}	50 V
Emitter to Base	V_{EBO}	5 V
Collector to Base	V_{CBO}	70 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	260 mW
Temperature		
Storage	T_{stg}	−55 to +150°C
Operating	T_J	+125°C
Lead Soldering, 1/16" ± 1/32" from case for 10 seconds maximum	T_L	+260°C



*Determined from power limitations due to saturation voltages at this current.
†Derate 3.3 mW/°C increase in ambient temperature above 25°C.

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

		Min.	Typ.	Max.	
Static Characteristics					
Collector Cutoff Current ($V_{CB} = 50V$)	I_{CBO}			30	nA
($V_{CB} = 50V$, $T_A = 100°C$)	I_{CBO}			10	μA
Collector Cutoff Current ($V_{CE} = 50V$)	I_{CES}			30	nA
Emitter Cutoff Current ($V_{EB} = 5V$)	I_{EBO}			50	nA
Forward Current Transfer Ratio ($V_{CE} = 5V$, $I_C = 2$ mA)	h_{FE}	400		800	
($V_{CB} = 5V$, $I_C = 100$ μA)	h_{FE}		300‡		
Collector Emitter Breakdown Voltage ($I_C = 10$ mA)	$V_{(BR)CEO}$¶	50			Volts
Collector Base Breakdown Voltage ($I_C = 10$ μA)	$V_{(BR)CBO}$	70			Volts
Emitter Base Breakdown Voltage ($I_E = 10$ μA)	$V_{(BR)EBO}$	5			Volts
Collector Saturation Voltage ($I_C = 10$ mA, $I_B = 1$ mA)	$V_{CE(sat)}$¶			.125	Volts
Base Saturation Voltage ($I_C = 10$ mA, $I_B = 1$ mA)	$V_{BE(sat)}$¶			.78	Volts
Base Emitter Voltage ($V_{CB} = 10V$, $I_C = 2$ mA)	V_{BE}	0.5		0.9	Volts
Dynamic Characteristics					
Forward Current Transfer Ratio ($V_{CE} = 5V$, $I_C = 2$ mA, $f = 1$ kHz)	h_{fe}	400		1200	
Output Capacitance, Common Base ($V_{CB} = 10V$, $I_E = 0$, $f = 1$ MHz)	C_{ob}			4.0	pF

‡Typically, a minimum of 95% of the distribution is above this value.
¶Pulse conditions: 300 μsec. duration, 2% duty cycle.