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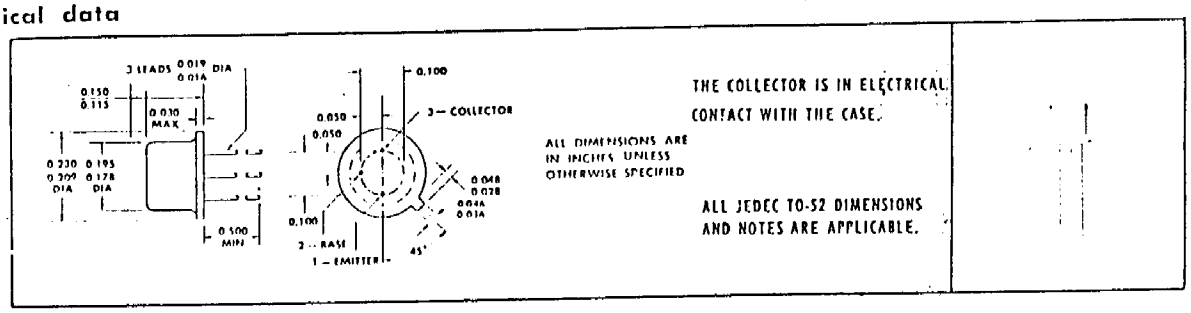
2N3829
PNP Silicon Transistor

*mechanical data



*absolute maximum ratings at 25°C free-air temperature (unless otherwise noted)

Collector-Base Voltage	−35 v
Collector-Emitter Voltage (See Note 1)	−35 v
Collector-Emitter Voltage (See Note 2)	−20 v
Emitter-Base Voltage	−5 v
Continuous Collector Current	−200 ma
Peak Collector Current (See Note 3)	−500 ma
Continuous Device Dissipation at (or below) 25°C Free-Air Temperature (See Note 4)	360 mw
Continuous Device Dissipation at (or below) 25°C Case Temperature (See Note 5)	1.2 w
Storage Temperature Range	−65°C to +200°C
Lead Temperature 1/16 Inch from Case for 10 seconds	300°C

*electrical characteristics at 25°C free-air temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS		MIN	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\ \mu a$, $I_E = 0$		−35		v
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10$ ma, $I_B = 0$,	See Note 6	−20		v
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$I_C = -100\ \mu a$, $V_{BE} = 0$		−35		v
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -100\ \mu a$, $I_C = 0$		−5		v
I_{CES}	Collector Cutoff Current	$V_{CE} = -20$ v, $V_{BE} = 0$			−0.3	μa
		$V_{CE} = -20$ v, $V_{BE} = 0$, $T_A = 125°C$			−40	μa
I_B	Base Current	$V_{CE} = -20$ v, $V_{BE} = 0$			0.3	μa
h_{FE}	Static Forward Current Transfer Ratio	$V_{CE} = -0.4$ v, $I_C = -10$ ma,	See Note 6	25		
		$V_{CE} = -0.4$ v, $I_C = -30$ ma,		30	120	
		$V_{CE} = -1$ v, $I_C = -100$ ma,		25		
		$V_{CE} = -0.4$ v, $I_C = -30$ ma, $T_A = -55°C$		12		
V_{BE}	Base-Emitter Voltage	$I_B = -1$ ma, $I_C = -10$ ma,	See Note 6	−0.75	−0.85	v
		$I_B = -3$ ma, $I_C = -30$ ma,		−0.75	−0.95	v
		$I_B = -10$ ma, $I_C = -100$ ma,			−1.20	v
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_B = -1$ ma, $I_C = -10$ ma,	See Note 6		−0.18	v
		$I_B = -3$ ma, $I_C = -30$ ma,			−0.18	v
		$I_B = -10$ ma, $I_C = -100$ ma,			−0.35	v
		$I_B = -3$ ma, $I_C = -30$ ma, $T_A = 125°C$			−0.25	v

NOTES: 1. This value applies when the base-emitter diode is short circuited.
2. This value applies between 0 and 10 ma collector current when the base-emitter diode is open circuited.
3. This value applies for PW ≤ 10 μsec, Duty Cycle ≤ 40%.
4. Derate linearly to 175°C free-air temperature at the rate of 2.4 mw/C°.
5. Derate linearly to 175°C case temperature at the rate of 8 mw/C°.
6. These parameters must be measured using pulse techniques, PW = 300 μsec, Duty Cycle ≤ 2%.

*Indicates JEDEC registered data.