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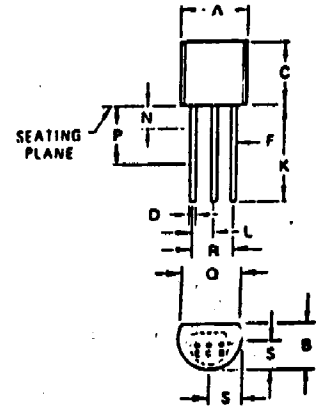
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Silicon Transistors 2N4424,5

FEATURES:
Low Saturation Voltage
High Beta
900 mW @ 25°C Case ... 2N4424
360 mW @ 25°C Free Air 2N4425

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

	2N4424	2N4425	
Voltages			
Collector to Emitter	V _{CEO}	40	40 V
Emitter to Base	V _{EB0}	5	5 V
Collector to Base	V _{CB0}	60	60 V
Current			
Collector (Steady State)*	I _C	500	500 mA
Dissipation			
Total Power (Free Air at 25°C)**	P _T	360	560 mW
Total Power (Free Air at 65°C)**	P _T	250	380 mW
Total Power (Heatsink at 25°C)***	P _T	—	900 mW
Temperature			
Storage	T _{stg}	-55 to +150	°C
Operating	T _J	+150	°C
Lead soldering, 1/16" ± 1/32" from case for 10 sec. max.	T _L	+260	°C



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.450	5.200	0.175	0.205
B	3.180	4.150	0.125	0.165
C	4.320	5.330	0.170	0.210
D	0.407	0.533	0.016	0.021
F	0.407	0.482	0.016	0.019
K	17.700	—	0.500	—
L	1.150	1.390	0.045	0.055
N	—	1.270	—	0.050
P	6.350	—	0.250	—
O	3.430	—	0.135	—
R	2.410	2.670	0.095	0.105
S	2.030	2.670	0.080	0.105

*Determined from power limitations due to saturation voltage at this current.

**Derate 2.88mW/°C increase in ambient temperature above 25°C.

***Derate 7.2 mW/°C for rise in heatsink temperature above 25°C.

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

DC CHARACTERISTICS

	Min.	Max.	
Collector Cutoff Current (V _{CB} = 40V)	I _{CB0}	30	nA
(V _{CB} = 40V, T _A = 100°C)	I _{CB0}	10	μA
(V _{CB} = 40V)	I _{CS}	30	nA
Emitter Cutoff Current (V _{EB} = 5V)	I _{EB0}	100	nA
Forward Current Transfer Ratio (V _{CB} = 4.5V, I _C = 2 mA)	h _{FE}	180	540
Collector Emitter Breakdown Voltage (I _C = 10 mA)	V _{(BR)CEO}	40	V
Collector Base Breakdown Voltage (I _C = 10 μA)	V _{(BR)CBO}	60	V
Emitter Base Breakdown Voltage (I _E = 0.1 μA)	V _{(BR)EBO}	5	V
Collector Saturation Voltage (I _B = 3 mA, I _C = 50 mA)	V _{CE(sat)}	.30	V
Base Saturation Voltage (I _B = 3 mA, I _C = 50 mA)	V _{BE(sat)}	.85	V

SMALL SIGNAL CHARACTERISTICS

Forward Current Transfer Ratio Collector Voltage (V_C = 4.5V, I_C = 2 mA, f = 1 kHz) h_{FE} 180

	Typical	
Forward Current Transfer Ratio	h _{FE}	180
Input Impedance	h _{ie}	5100
Output Admittance	h _{oe}	14
Voltage Feedback Ratio	h _{re}	.27
		ohms
		μmhos
		×10 ⁻³