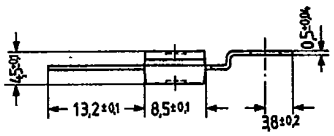
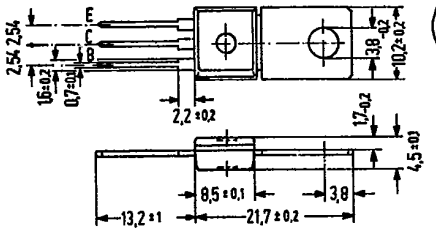
PNP Silicon Planar Transistor **BD 430**

BD 430 is an epitaxial PNP silicon planar transistor in a plastic package similar to TO 202. Together with its complementary transistor BD 429 it is particularly suitable for use in complementary output stages of medium performance (e.g. car radios).

Type	Ordering code
BD 430	Q62702-D1070



Available upon request also with bent fixing plate.



Approx. weight 15 g. Dimensions in mm

Maximum ratings

Collector-emitter voltage	$-V_{CES}$	32	V
Collector-emitter voltage	$-V_{CEO}$	20	V
Emitter-base voltage	$-V_{EBO}$	5	V
Collector current	$-I_C$	3	A
Emitter current	$-I_E$	3	A
Base current	$-I_B$	1	A
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	–55 to +150	°C
Total power dissipation (T_{case} = 25°C)	P_{tot}	10	W
(T_{amb} = 25°C)	P_{tot}	2	W

Thermal resistance

Junction to ambient air	R_{thJA}	≤62,5	K/W
Junction to mounting area	R_{thJC}	≤12,5	K/W

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Static characteristics (T_{amb} = 25 °C)			
Collector-emitter saturation voltage ($-I_C$ = 2 A; $-I_B$ = 200 mA)	$-V_{CEsat}$	≤0.5	V
Collector cutoff current ($-V_{CB}$ = 32 V)	$-I_{CBO}$	≤10	µA
Collector cutoff current ($-V_{CB}$ = 32 V; T_j = 150 °C)	$-I_{CBO}$	≤1	mA
Emitter cutoff current ($-V_{EB}$ = 5 V)	$-I_{EBO}$	≤10	µA
Base-emitter voltage ($-V_{CB}$ = 10 V; $-I_C$ = 5 mA)	$-V_{BE}$	0.6	V
($-V_{CB}$ = 1 V; $-I_C$ = 2 A)	$-V_{BE}$	≤1.2	V
DC current gain $-V_{CE}$ = 10 V; I_C = 5 mA	h_{FE}	>50	–
$-V_{CE}$ = 1 V; I_C = 0.5 A	h_{FE}	85 to 375	–
$-V_{CE}$ = 1 V; I_C = 2 A	h_{FE}	>40	–
Dynamic characteristics (T_{amb} = 25 °C)			
Transition frequency ($-V_{CE}$ = 5 V; $-I_C$ = 50 mA)	f_T	100	MHz

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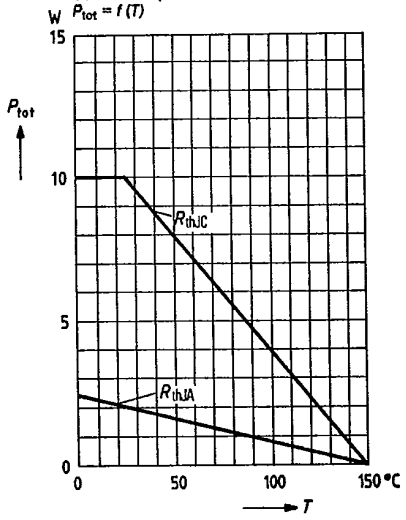
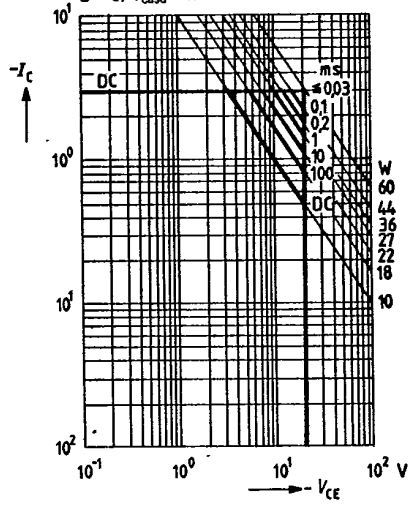
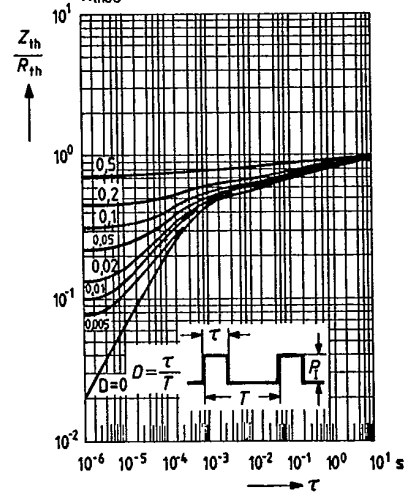
Total perm. power dissipation versus temperature
$P_{tot} = f(T)$



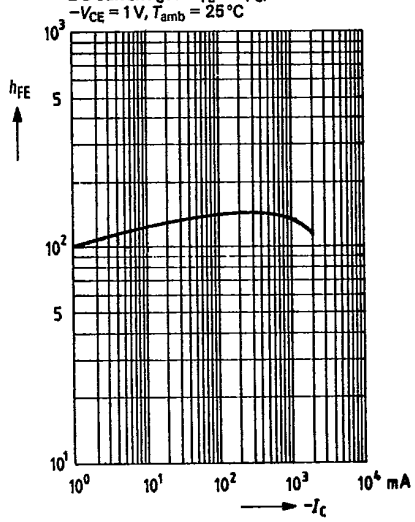
Permissible operating range $I_C = f(V_{CE})$
D = 0; T_{case} = 25 °C



Permissible pulse load
$\frac{Z_{thJC}}{R_{thJC}} = f(\tau)$



DC current gain $h_{FE} = f(I_C)$
$-V_{CE}$ = 1 V, T_{amb} = 25 °C



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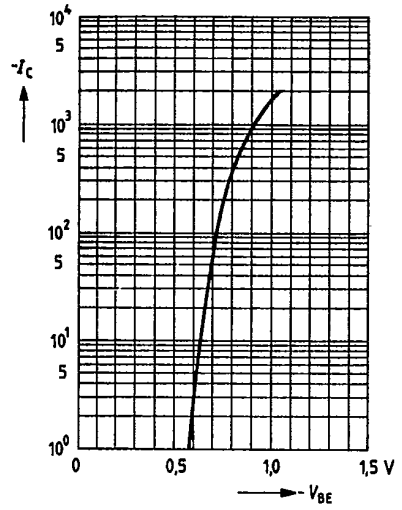
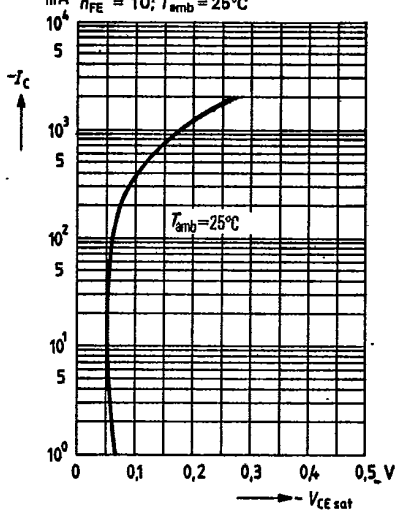
Collector current $I_C = f(V_{BE})$
$-V_{CE}$ = 1 V; T = 25 °C



Collector-emitter saturation voltage $V_{CEsat} = f(I_C)$
h_{FE} = 10; T_{amb} = 25 °C



Collector cutoff current versus temperature $I_{CBO} = f(T_{amb})$
$V_{CB} = V_{CBmax}$