

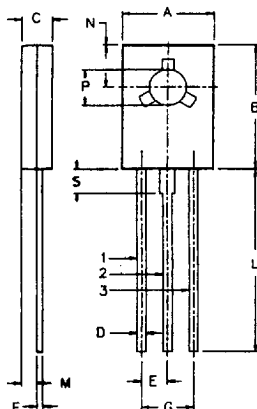
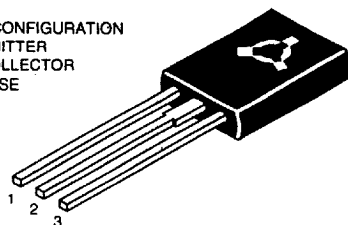
CSD1506 NPN PLASTIC POWER TRANSISTOR

Complementary CSB1065

Low frequency Power Amplifier

PIN CONFIGURATION

1. EMITTER
2. COLLECTOR
3. BASE



DIM	MIN.	MAX.
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 TYP.	
F	0.49	0.75
G	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3.0	3.2
S	2.5 TYP.	

ALL DIMENSIONS IN MM

ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)

 V_{CBO} max. 60 V

Collector-emitter voltage (open base)

 V_{CEO} max. 50 V

Collector current (DC)

 I_C max. 3 ATotal power dissipation up to $T_C = 25^\circ\text{C}$ P_{tot} max. 10 W

Junction temperature

 T_j max. 150 $^\circ\text{C}$

Collector-emitter saturation voltage

 $I_C = 2\text{A}; I_B = 0.2\text{A}$ V_{CEsat} max. 1.0 V

D.C. current gain

 $I_C = 0.5\text{A}; V_{CE} = 3\text{V}$
 h_{FE} min. 56
max. 390
RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)

 V_{CBO} max. 60 V

Collector-emitter voltage (open base)

 V_{CEO} max. 50 V

Emitter-base voltage (open collector)	V_{EBO}	max.	5.0 V
Collector current (DC)	I_C	max.	3.0 A
Collector current (Pulse) (1)	I_C	max.	4.5 A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	10 W
Total power dissipation up to $T_A = 25^\circ\text{C}$	P_{tot}	max.	1.2 W
Junction temperature	T_j	max.	150 $^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150 $^\circ\text{C}$

CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified

Collector cutoff current

$I_E = 0$; $V_{CB} = 40\text{V}$

I_{CBO}	max.	1.0 μA
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Emitter cutoff current

$I_C = 0$; $V_{EB} = 4\text{V}$

I_{EBO}	max.	1.0 μA
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Breakdown voltages

$I_C = 1\text{ mA}$; $I_B = 0$

V_{CEO}	min.	50 V
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$I_C = 50\text{ }\mu\text{A}$; $I_E = 0$

V_{CBO}	min.	60 V
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$I_E = 50\text{ }\mu\text{A}$; $I_C = 0$

V_{EBO}	min.	5 V
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Saturation voltages

$I_C = 2\text{A}$; $I_B = 0.2\text{A}$

V_{CEsat}^*	max.	1.0 V
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V_{BEsat}^*	max.	1.5 V
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D.C. current gain

$I_C = 0.5\text{A}$; $V_{CE} = 3\text{V}^{**}$

h_{FE}^*	min.	56
	max.	390

Output capacitance at $f = 1\text{MHz}$

$I_E = 0$, $V_{CB} = 10\text{V}$

C_o	typ.	40 pF
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Transition frequency $f = 30\text{ MHz}$

$I_C = 0.5\text{A}$, $V_{CE} = 5\text{V}$

f_T^*	typ.	90 MHz
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(1) Single pulse $P_W = 100\text{ms}$

* Pulse test.

** h_{FE} classification: N: 56-120 P: 82-180 Q: 120-270 R: 180-390