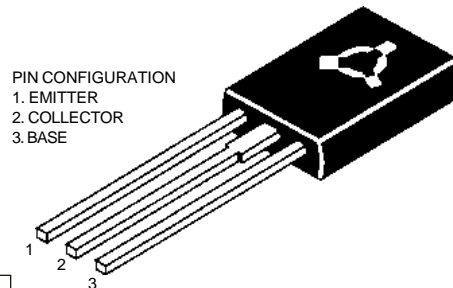


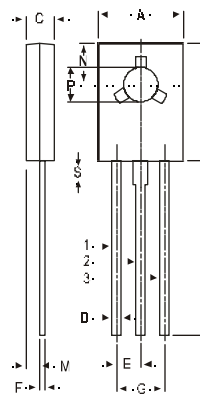
TO-126 (SOT-32) Plastic Package

**CSB631, CSB631K
CSD600, CSD600K**

*CSB631, 631K PNP PLASTIC POWER TRANSISTORS
CSD600, 600K NPN PLASTIC POWER TRANSISTORS
Low frequency Power Amplifier and Medium Speed Switching Applications*



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

		631 600	631K 600K
Collector-base voltage (open emitter)	V_{CBO}	max. 100	120 V
Collector-emitter voltage (open base)	V_{CEO}	max. 100	120 V
Collector current	I_C	max. 1.0	A
Total power dissipation up to $T_C = 25^\circ C$	P_C	max. 8.0	W
Junction temperature	T_j	max. 150	$^\circ C$
Collector-emitter saturation voltage $I_C = 0.5 A; I_B = 50 mA$	V_{CEsat}	max. 0.4	V
D.C. current gain $I_C = 50 mA; V_{CE} = 5 V$	h_{FE}	min. 60 max. 320	

RATINGS (at $T_A=25^\circ C$ unless otherwise specified)

Limiting values			
Collector-base voltage (open emitter)	V_{CBO}	max. 100	120 V
Collector-emitter voltage (open base)	V_{CEO}	max. 100	120 V

**CSB631, CSB631K
CSD600, CSD600K**

		631 600	631K 600K	
Emitter-base voltage (open collector)	V_{EBO}	max.	5.0	V
Collector current	I_C	max.	1.0	A
Collector current (peak)	I_{CP}	max.	2.0	mA
Total power dissipation up to $T_A = 25^\circ\text{C}$	P_C	max.	1.0	W
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_C	max.	8.0	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

		631 600	631K 600K	
Collector cutoff current $I_E = 0; V_{CB} = 50\text{ V}$	I_{CBO}	max.	1.0	μA
Emitter cut-off current $I_C = 0; V_{EB} = 4\text{ V}$	I_{EBO}	max.	1.0	μA
Breakdown voltages				
$I_C = 1\text{ mA}; I_B = 0$	V_{CEO}	min.	100	120 V
$I_C = 10\ \mu\text{A}; I_E = 0$	V_{CBO}	min.	100	120 V
$I_E = 10\ \mu\text{A}; I_C = 0$	V_{EBO}	min.	5.0	V
Saturation voltages				
$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	V_{CEsat}	max.	0.4	V
	V_{BEsat}	max.	1.2	V
D.C. current gain				
$I_C = 50\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}^*	min.	60	
		max.	320	
$I_C = 500\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}	min.	20	
Transition frequency				
$I_C = 50\text{ mA}; V_{CE} = 10\text{ V}$	PNP NPN	f_T	typ.	110 130 MHz
Output capacitance				
$V_{CB} = 10\text{ V}; I_E = 0; f = 1\text{ MHz}$	PNP NPN	C_{ob}	typ.	30 20 pF

* h_{FE} classification: **D60 - 120, E = 100 - 200, F 160 - 320**

Disclaimer

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Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com