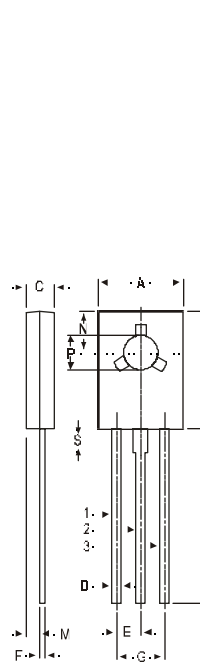


**TO-126 (SOT-32) Plastic Package**

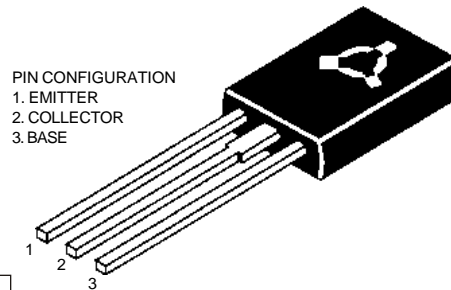
**CSB631, CSB631K  
CSD600, CSD600K**

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



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



PIN CONFIGURATION  
1. EMITTER  
2. COLLECTOR  
3. BASE

**ABSOLUTE MAXIMUM RATINGS**

		<b>631 600</b>	<b>631K 600K</b>
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**

		<b>631 600</b>	<b>631K 600K</b>	
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

		<b>631 600</b>	<b>631K 600K</b>	
Collector cutoff current $I_E = 0; V_{CB} = 50\text{ V}$	$I_{CBO}$	max.	1.0	$\mu\text{A}$
Emitter cut-off current $I_C = 0; V_{EB} = 4\text{ V}$	$I_{EBO}$	max.	1.0	$\mu\text{A}$
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				
$I_C = 50\text{ mA}; V_{CE} = 10\text{ V}$	<b>PNP</b> <b>NPN</b>	$f_T$	typ.	110 130 MHz
Output capacitance				
$V_{CB} = 10\text{ V}; I_E = 0; f = 1\text{ MHz}$	<b>PNP</b> <b>NPN</b>	$C_{ob}$	typ.	30 20 pF

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

## Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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