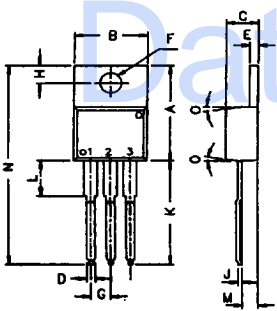
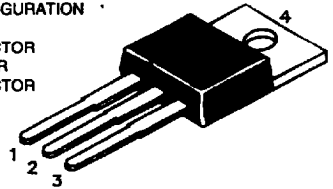


CSB857, 858 PNP PLASTIC POWER TRANSISTORS
CSD1133, 1134 NPN PLASTIC POWER TRANSISTORS
Low frequency Power Amplifier

PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR



ALL DIMENSIONS ARE IN M.M.

DIM	MIN	MAX
A	14,42	16,51
B	9,63	10,67
C	3,56	4,83
D	-	0,90
E	1,15	1,40
F	3,75	3,88
G	2,29	2,79
H	2,54	3,43
J	-	0,56
K	12,70	14,73
L	-	6,35
M	2,03	2,92
N	-	31,24
O	7	DEG

ABSOLUTE MAXIMUM RATINGS

		857	858
		1133	1134
Collector-base voltage (open emitter)	V_{CBO}	max. 70	70 V
Collector-emitter voltage (open base)	V_{CEO}	max. 50	60 V
Collector current	I_C	max.	4.0 A
Total power dissipation up to $T_C = 25^\circ C$	P_{tot}	max.	40 W
Junction temperature	T_j	max.	150 $^\circ C$
Collector-emitter saturation voltage	V_{CEsat}	max.	1.0 V
$I_C = 2 A; I_B = 200 mA$			
D.C. current gain	h_{FE}	min.	60
$I_C = 1 A; V_{CE} = 4 V$		max.	320

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

Limiting values		857	858
		1133	1134
Collector-base voltage (open emitter)	V_{CBO}	max. 70	70 V
Collector-emitter voltage (open base)	V_{CEO}	max. 50	60 V
Emitter-base voltage (open collector)	V_{EBO}	max.	5.0 V

Collector current	I_C	max.	4.0	A
Collector current (Peak value)	I_C	max.	8.0	A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	40	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

			857 1133	858 1134	
Collector cutoff current					
$I_E = 0; V_{CB} = 50\text{V}$	I_{CBO}	max.	1.0		μA
Breakdown voltages					
$I_C = 50\text{ mA}; I_B = 0$	V_{CEO}	min.	50	60	V
$I_C = 10\ \mu\text{A}; I_E = 0$	V_{CB0}	min.	70		V
$I_E = 10\ \mu\text{A}; I_C = 0$	V_{EBO}	min.	5.0		V
Saturation voltage					
$I_C = 2\text{ A}; I_B = 0.2\text{ A}$	V_{CEsat}^*	max.	1.0		V
Base emitter on voltage					
$I_C = 1\text{ A}; V_{CE} = 4\text{ V}$	$V_{BE(on)}^*$	max.	1.0		V
D.C. current gain					
$I_C = 0.1\text{ A}; V_{CE} = 4\text{ V}$	h_{FE}^*	min.	35		
$I_C = 1.0\text{ A}; V_{CE} = 4\text{ V}^{**}$	h_{FE}^*	min. max.	60 320		
Transition frequency					
$I_C = 0.5\text{ A}; V_{CE} = 4\text{ V}$					
	PNP	f_T	typ.	15	MHz
	NPN		typ.	7.0	MHz

** h_{FE} classification: B: 60-120 C: 100-200 D: 160-320

* Pulse test