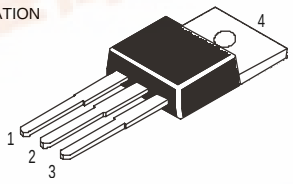
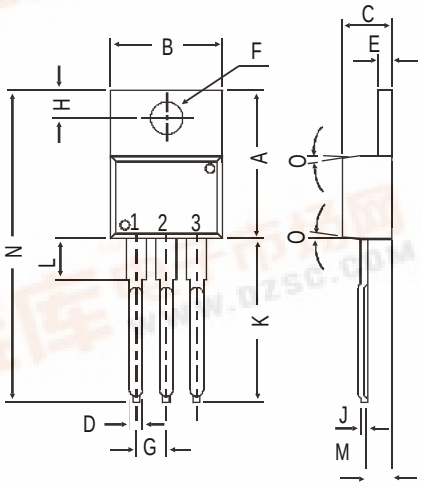
TO-220 Plastic Package **CSB507, CSD313**

CSB507 PNP PLASTIC POWER TRANSISTOR
CSD313 NPN PLASTIC POWER TRANSISTOR
Low frequency Power Amplifier Applications

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





All diminsions in mm.

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	2.80	4.07
M	2.03	2.92
N		31.24
O	DEG 7	

ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CBO}	*max.*	*60 V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*60 V*
Collector current	I_C	*max.*	*3.0 A*
Total power dissipation up to T_C = 25°C	P_{tot}	*max.*	*30 W*
Junction temperature	T_j	*max.*	*150 °C*
Collector-emitter saturation voltage			
I_C = 2A; I_B = 0.2A	V_{CEsat}	*max.*	*1.0 V*
D.C. current gain			
I_C = 1A; V_{CE} = 2V	h_{FE}	*min*	*40*
		max.	*320*

RATINGS *(at T_A=25°C unless otherwise specified)*

Limiting values			
Collector-base voltage (open emitter)	V_{CBO}	*max.*	*60 V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*60 V*
Emitter-base voltage (open collector)	V_{EBO}	*max.*	*5.0 V*

Collector current	I_C	*max.*	*3.0 A*
Collector current (Peak value)	I_{CM}	*max.*	*8.0 A*
Total power dissipation up to T_C = 25°C	P_{tot}	*max.*	*30 W*
Junction temperature	T_j	*max.*	*150 °C*
Storage temperature	T_{stg}		*–65 to +150 °C*

THERMAL CHARACTERISTICS

From junction to case	$R_{th\ j-c}$	=	*4.17 °C/W*

CHARACTERISTICS

T_{amb} = 25°C unless otherwise specified

Collector cutoff current			
I_E = 0; V_{CB} = 20V	I_{CBO}	*max.*	*0.1 mA*
I_B = 0; V_{CE} = 60V	I_{CEO}	*max.*	*5.0 mA*
Emitter cut-off current			
I_C = 0; V_{EB} = 4V	I_{EBO}	*max.*	*1.0 mA*
Breakdown voltages			
I_C = 1 mA; I_B = 0	V_{CEO}	*min.*	*60 V*
I_C = 1 mA; I_E = 0	V_{CBO}	*min.*	*60 V*
I_E = 1 mA; I_C = 0	V_{EBO}	*min.*	*5.0 V*
Saturation voltage			
I_C = 2 A; I_B = 0.2 A	V_{CEsat}*	*max.*	*1.0 V*
Base emitter on voltage			
I_C = 1A; V_{CE} = 2V	$V_{BE(on)}$*	*max.*	*1.5 V*
D.C. current gain			
I_C = 0.1A; V_{CE} = 2V	h_{FE}*	*min.*	*40*
*I_C = 1A; V_{CE} = 2V***	h_{FE}*	*min.*	*40*
		max.	*320*
Transition frequency			
I_C = 500 mA; V_{CE} = 5V	f_T	*typ.*	*8 MHz*

** Pulse test: pulse width ≤ 300 µs; duty cycle ≤ 2.0%.*

***** h_{FE} classification: C: 40-80 D: 60-120 E: 100-200 F: 160-320***

Customer Notes

Disclaimer

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