

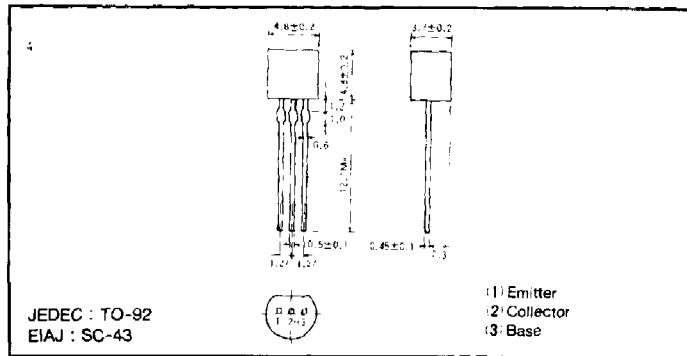
Transistors

2SB737

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Low r_{bb} Low Noise Amp. Epitaxial Planar PNP Silicon Transistor

Dimensions (Unit : mm)



NF=2.5dB Typ.
(at $f=10\text{Hz}$, $R_g=10\Omega$, $V_{CE}=-6\text{V}$,
 $I_C=-3\text{mA}$)
 $r_{bb}=2\Omega$
 $e_n=0.55\text{nV}/\sqrt{\text{Hz}}$ (at 10Hz, 10mA)
2SD786

● Features

- 1) Ultra-low noise. (Excellent noise response at low R_g):
NF=2.5dB Typ.
(at $f=10\text{Hz}$, $R_g=10\Omega$, $V_{CE}=-6\text{V}$,
 $I_C=-3\text{mA}$)
- 2) Low base resistance: $r_{bb}=2\Omega$
- 3) Low voltage noise: $e_n=0.55\text{nV}/\sqrt{\text{Hz}}$
(at 10Hz, 10mA)
- 4) Complementary pair with 2SD786.

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Symbol	Limits	Unit
V_{CBO}	-50	V
V_{CEO}	-40	V
V_{EBO}	-5	V
I_C	-300	mA
P_C	250	mW
T_j	125	$^\circ\text{C}$
T_{stg}	-55~125	$^\circ\text{C}$

Electrical Characteristics ($T_a=25^\circ\text{C}$)

Symbol	Min.	Typ.	Max.	Unit	Conditions
V_{CE0}	-40	-	-	V	$I_C=-1\text{mA}$
V_{CBO}	-50	-	-	V	$I_C=-50\mu\text{A}$
V_{EBO}	-5	-	-	V	$I_E=-50\mu\text{A}$
I_{CBO}	-	-	-0.5	μA	$V_{CB}=-30\text{V}$
I_{EBO}	-	-	-0.5	μA	$V_{EB}=-4\text{V}$
$V_{CE(sat)}$	-	-0.06	-0.5	V	$I_C/I_B=-50\text{mA}/-5\text{mA}$
h_{FE}	120	-	560	-	$V_{CE}/I_C=-6\text{V}/-10\text{mA}$
f_T	-	100	-	MHz	$V_{CE}=-6\text{V}$, $I_E=10\text{mA}$
r_{bb}	-	2	4	Ω	$V_{CE}=-6\text{V}$, $I_C=-1\text{mA}$, $f=30\text{MHz}$
NV_1	-	-	150	mV	FLAT AMP ($G_v=80\text{dB}$) $V_{CE}=-10\text{V}$, $I_C=-1\text{mA}$ $R_g=100\text{k}\Omega$

Item	Q	R	S
h_{FE}	120~270	180~390	270~560

Type	h_{FE}	T91	T92	T93
2SB737	QRS	○	○	○

