2SD1010

Silicon NPN epitaxial planer type

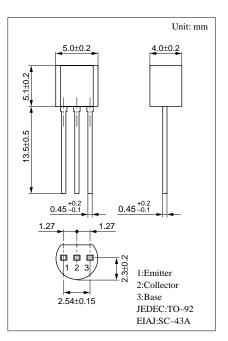
For low-frequency amplification

Features

- High foward current transfer ratio h_{FE}.
- Low collector to emitter saturation voltage V_{CE(sat)}.
- High emitter to base voltage V_{EBO}.
- Low noise voltage NV.

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	50	V
Collector to emitter voltage	V _{CEO}	40	V
Emitter to base voltage	V_{EBO}	15	V
Peak collector current	I _{CP}	100	mA
Collector current	I _C	50	mA
Collector power dissipation	P _C	300	mW
Junction temperature	Tj	150	°C
Storage temperature	T _{stg}	-55 ~ +150	°C

Absolute Maximum Ratings (Ta=25°C)

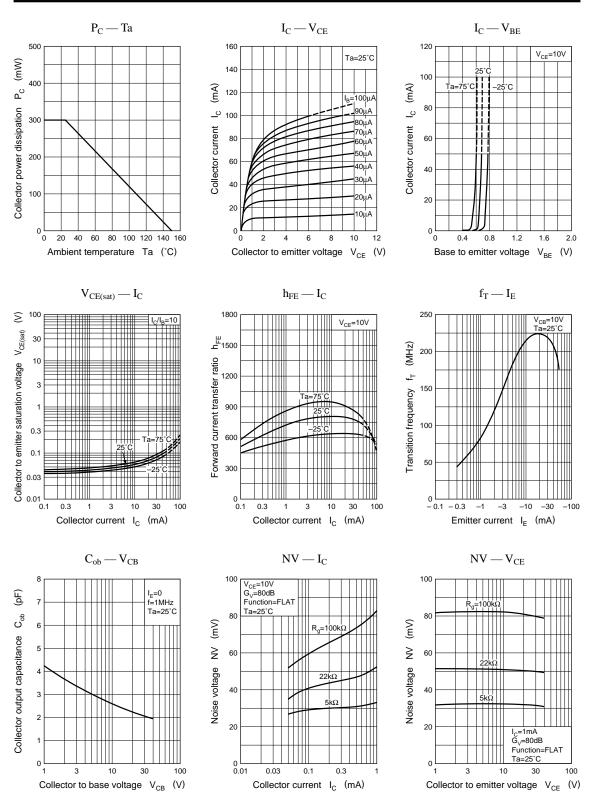


Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I _{CBO}	$V_{CB} = 20V, I_E = 0$			100	nA
	I _{CEO}	$V_{CE} = 20V, I_B = 0$			1	μΑ
Collector to base voltage	V _{CBO}	$I_C = 10\mu A$, $I_E = 0$	50			V
Collector to emitter voltage	V _{CEO}	$I_C = 1 \text{mA}, I_B = 0$	40			V
Emitter to base voltage	V _{EBO}	$I_{\rm E} = 10 \mu A, I_{\rm C} = 0$	15			V
Forward current transfer ratio	h _{FE} *	$V_{CE} = 10V, I_C = 2mA$	400	1000	2000	
Collector to emitter saturation voltage	V _{CE(sat)}	$I_C = 10mA$, $I_B = 1mA$		0.05	0.2	V
Transition frequency	f _T	$V_{CB} = 10V, I_E = -2mA, f = 200MHz$ 200			MHz	
Noise voltage	NV	$V_{CE} = 10V, I_C = 1mA, G_V = 80dB$ $R_g = 100k\Omega$, Function = FLAT		80		mV

*hFE Rank classification

Rank	R	S	Т
h _{FE}	400 ~ 800	600 ~ 1200	1000 ~ 2000



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