2SD0814A (2SD814A)

Silicon NPN epitaxial planar type

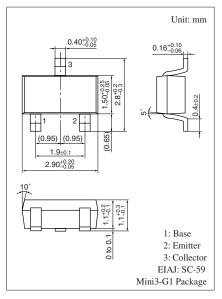
For high breakdown voltage low-frequency and low-noise amplification

■ Features

- High collector-emitter voltage (Base open) V_{CEO}
- Low noise voltage NV
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	185	V	
Collector-emitter voltage (Base open)	V _{CEO}	185	V	
Emitter-base voltage (Collector open)	V_{EBO}	5	V	
Collector current	I_C	50	mA	
Peak collector current	I_{CP}	100	mA	
Collector power dissipation	P_{C}	200	mW	
Junction temperature	T_{j}	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	



Marking Symbol: L

■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

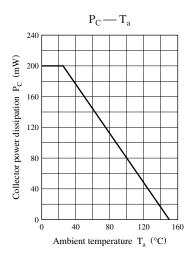
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 100 \ \mu A, I_B = 0$	185			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 100 \text{ V}, I_{E} = 0$			1	μΑ
Forward current transfer ratio *	h _{FE}	$V_{CE} = 5 \text{ V}, I_{C} = 10 \text{ mA}$	90		330	_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 30 \text{ mA}, I_B = 3 \text{ mA}$			1	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_{E} = -10 \text{ mA}, f = 200 \text{ MHz}$		150		MHz
Collector output capacitance (Common base, input open circuited)	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		2.3		pF
	NIX7	V 10 V I 1 A C 00 ID		150		3.7
Noise voltage	NV	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}, G_{V} = 80 \text{ dB}$ $R_{g} = 100 \text{ k}\Omega, \text{ Function} = \text{FLAT}$		150		mV

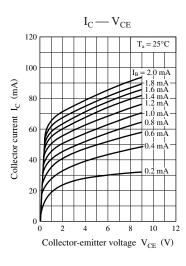
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

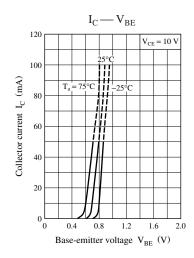
2. *: Rank classification

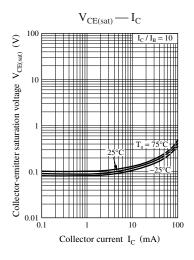
Rank	Q	R	S	
h_{FE}	90 to 155	130 to 220	185 to 330	

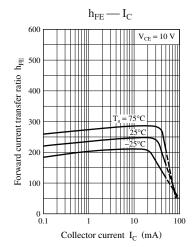
Note) The part number in the parenthesis shows conventional part number.

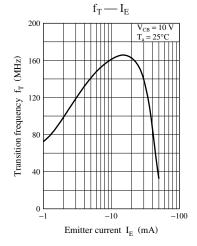


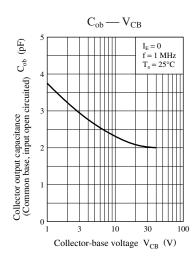












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